

Canon of Medicine

Book II Materia Medica

by Hakim Ibn-Sina

English translation of the critical Arabic text

With Index to Latin and English plant names

**Department of Islamic Studies
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Canon of Medicine

Book II Materia Medica

Hakim Ibn Sina

This English translation is based on an Arabic critical edition compiled by a team of scholars at Hamdard University, India, by comparing early copies of original Arabic source materials. This is the first translation appearing in English or any European language based on an Arabic original. For the translation into English, the scholars prepared a glossary of 15,000 Arabic words appearing in the *Canon*, with 50,000 English equivalents. The task of preparing the critical edition and the glossary took the team more than 5 years, under the supervision of Hakeem Abdul Hameed of Hamdard University. After compiling the full five volumes of the Canon in Arabic, he and his team completed English translations of Book I and Book II. This English text of the Hamdard translation, as well as Arabic and Persian versions for side-by-side comparison are available at this [Persian website](#)

For assignment of English names and Latin Binomials, the team consulted a group of 13 modern floras and other botanical references from the region. From the author's notes on the assignment of Latin binomials to the plants of Avicenna: In many cases identification based on their description in the text is not possible. In some cases, the common name, Greek name, or names in other languages is not the same in all parts of the world. In some cases the plants differ regionally in their properties due to different climates. In other cases, Ibn Sina quotes only the description and opinion of older ancient authors. Finally, for some of the medicines, the plant is completely unknown in the modern world.

We owe a debt to these scholars for making this information available in an accurate English translation for the first time. The five-volume Canon is one of the most influential medical books in history, and its medical theories, observations, materia medica, and formulary, which inspired physicians throughout Europe, the Middle East, and South Asia for half a millennium, are of great potential interest to contemporary practitioners of natural medicine and medical herbalism. The potential benefits are practical, not simply of historical curiosity. The ancient systems of Chinese and Ayurvedic medicines are currently influencing the health care throughout Europe and the Americas; practical information from Greco/Unani medicine may do the same.

Recently the full five volumes of the Canon have been translated by Laleh Bakhtiar and are available on the book market in North America. Bakhtiar states that she based her translation of Book II on the Hamdard version, and expresses gratitude for the efforts that produced it. In only a few cases, the Bakhtiar version of Book II assigns different Latin binomials to the plants in the Hamdard version.

We have added an Index by Latin genus or binomial, or the English common name of substances without binomials.

See the Hamdard translation of the Canon Book I: Principles of Medicine here:

<http://naimh.com/canon/CANON-Book-I-Hamdard.pdf>

Paul Bergner
Director
[North American Institute of Medical Herbalism](#)

AL-QĀNŪN FI'L-ṬIBB

AL-SHAIKH AL-RA'ĪS ABU 'ALĪ AL-ḤUSAIN
BIN 'ABDULLĀH BIN SĪNĀ

BOOK II

ENGLISH TRANSLATION OF THE CRITICAL ARABIC TEXT



DEPTT. OF ISLAMIC STUDIES
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Total number of simple drugs beginning with the following letters :

<i>Alphabets</i>	<i>No. of Drugs</i>	<i>Page</i>
<i>Alif</i>	73	39
<i>Bā</i>	59	84
<i>Tā</i>	18	120
<i>Thā</i>	7	133
<i>Jīm</i>	32	136
<i>Hā</i>	58	154
<i>Khā</i>	37	181
<i>Dāl</i>	26	203
<i>Dhāl</i>	4	219
<i>Rā</i>	25	221
<i>Zā</i>	29	232
<i>Sīn</i>	53	252
<i>Shīn</i>	32	281
<i>Ṣād</i>	12	296
<i>Ḍād</i>	7	302
<i>Ṭā</i>	32	304
<i>Zā</i>	2	316
<i>°Ain</i>	33	316
<i>Ghain</i>	10	334
<i>Fā</i>	33	340
<i>Qāf</i>	53	356
<i>Kāf</i>	42	379
<i>Lām</i>	23	403
<i>Mīm</i>	46	423
<i>Nūn</i>	26	449
<i>Wāw</i>	8	459
<i>Hā</i>	11	464
<i>Yā</i>	5	469

Total number of these drugs are 796 (Seven hundred ninty six only)

(ii)

FOREWORD

Abū 'Alī Al-Ḥusain Ibn 'Abd Allah Ibn Sīnā, known to the West as Avicenna, was born at Bukhara in A.D. 980, and died at Hamadan in A.D. 1037. From his childhood, he gave promise of outstanding achievements. At the early age of eighteen, Ibn Sina's reputation as an outstanding physician culminated in his appointment as the court physician to the Samanid Prince Nuḥ Ibn Manṣūr. Consequent of the overthrow of the Samanid rulers, Ibn Sina wandered through Persia and braved hazards to continue his unquenchable quest of knowledge and power. The first period of his travails was ended by Prince Shams al-Dawla of Hamadan when he appointed Ibn Sina as his court physician. It is here that he wrote his monumental work *Al-Qānūn fi'l-ṭibb*, or the 'Canon of Medicine'.

In Ibn Sina's days, knowledge did not recognize any barriers. He considered all sciences as his domain. His was a very powerful intellect and an encyclopaedic mind. Although his genius produced outstanding works in prose on different subjects, he was no stranger to poetry which also marginally claimed his creative attention. His poetic talent may be substantiated by citing the example of his medical treatise *al-urjūza fi'l ṭibb*. The versatile genius of Ibn Sina mastered and transcended astronomy, physics, chemistry, medicine, mathematics, natural-sciences, logic and Qur'anic exegesis. After making lasting contributions to all these, he turned to the art of peace and war: he assisted his patrons not only in civil administration but also in military campaigns, during one of which he died of colic and exhaustion. He combined with his creative pursuits, administrative responsibility and love for good things of life. Judged by the most exacting standards, he is a towering figure as a scientist and philosopher and a prolific writer.

Ibn Sina acquired great distinction in science, medicine and philosophy. His contributions to these disciplines won recognition and admiration not only in the Middle-East but also in Europe. Apart from science, medicine and philosophy, his works include religious tracts and stories with a mystical significance. He shaped philosophy into a powerful force that gradually penetrated Islamic theology and mysticism and Persian poetry and gave them universality and theoretical depth. He evolved an original system based on Aristotle's philosophy which he made more systematic and coherent. Expanding on

Aristotle's theory of the threefold soul, viz., vegetative, sensitive, intellectual, he developed a psychology based on external and internal senses. Although greatly influenced by Neo-Platonists, Ibn Sina drew directly both on Plato and Aristotle.

Ibn Sina's greatest contribution, however, is in the field of medicine where he is rated among the all-time great. His *magnum opus* is *al-Qānūn fi'l-ṭibb*. It exceeds one million words and contains all about medical science that was known upto the 10th century. *Al-Qānūn* soon rose to the position of primacy in medical literature. It was taught as a text in the universities in Europe and the Middle East until the 17th century. It is the most authoritative and comprehensive codification of the Greco-Arab system of medicine. It is a compendium that not only distilled medical knowledge inherited from Greece but also added significantly to it in the light of subsequent thinking, experience and experimentation. It is the one book that influenced European medical thought profoundly over half a millennium and still continues to be studied by thousands of scholars in the East and West.

Al-Qānūn is divided into five books. The first book is on general principles of medicine, physiology, pathology, etiology, hygiene, symptomatology, general rules and methods of treatment, regimen and anatomy; the second book is concerned with *materia medica*; the third book deals with particular diseases; the fourth relates to general therapy and fifth book is a formulary of compound drugs.

Written originally in Arabic *al-Qānūn* was first translated into Latin by Gerard of Cremona (A.D. 1114-1187). This Latin translation introduced *al-Qānūn* to the West. A study of this translation, however, leads one to the conclusion that the manuscript on which it is based was defective. Quite a few words appeared out of context; diacritical marks were used incorrectly; and at many a place complete passages found in other manuscripts appear to have been omitted. Moreover, the translation, being in a medieval language, and containing many abbreviations, has presented difficulties in comprehension to the modern reader. This appears to have led Prof. E.G. Browne to remark that the translation "swarms with barbarous words" and is "almost unintelligible".

A Russian translation was published at Tashkent during 1954 and 1960. Between these two (Latin and Russian) translations a number of whole or part translations of *al-Qānūn* appeared in French, German, Hebrew and Greek, besides such oriental languages as Persian and Urdu.

The Latin translation, however, is the only European version based directly on the original Arabic. An English translation of the first book of *al-Qānūn* was prepared by Dr. O. Cameron Gruner and

The Aya Sofia manuscript was made the basis of our critical edition, and for corrections the four printed editions were given the following rating.

1. The Nami edition
2. The Bulaq edition
3. The Tehran edition
4. The Rome edition

Wherever the text in Aya Sofia manuscript is at variance with the text of other manuscripts or printed editions, but can be construed as correct, the text of the Aya Sofia manuscript has been kept undisturbed. Where the texts of other copies appeared more appropriate, they were incorporated in the critical edition in place of the original text of Aya Sofia manuscript and text substituted have been indicated in the footnotes.

After preparing an authentic and complete critical edition of *al-Qānūn*, our team set about producing a faithful English translation of all its five books direct from the Arabic text. The editors and translators have done their best to put forth Ibn Sina's medical theories in appropriate and readable language. To facilitate the work, a comprehensive glossary of *al-Qānūn* comprising about 15,000 Arabic terms and their 50,000 English equivalents, was compiled and published at the outset.

The first volume of *al-Qānūn*, already translated into English and published recently, deals with the fundamental theories and problems of Greco-Arab medicine and serves as the basis of all diagnosis and treatment.

Here we have the translation of the second volume of *al-Qānūn* which deals with simple drugs, i.e. *materia medica* of botanical, animal and mineral drugs. Ibn Sina has described more than seven hundred simple drugs in this volume out of which about eighty percent are of botanical origin. A systematic and complete study of these drugs has been made by the author. Each simple drug is described in the following order:

- (a) Common name and synonyms
- (b) Nature, biological and geographical description
- (c) 'Temperament', i.e. whether it is hot, cold, dry and moist or their combinations
- (d) Method of selection
- (e) Properties
- (f) Cosmetic use

- (g) Effects on head, eye, chest, joints, and alimentary, respiratory and excretory organs and the impact of the drug on ulcers and swellings
- (h) Toxic effects, if any
- (i) Effects in case of fever
- (j) Substitute, if any.

The author, generally, gives information about the country or place where a drug was currently found. In some cases the original native places are also mentioned. The history of a drug provides useful information about (a) how the drug was discovered, (b) where it grew originally and, (c) how it was tested and introduced as a drug. He mentions different parts of the plant used as a drug, e.g. flower, seed, fruit, leaf, bark and root etc. Some unorganised drugs like gums, dried juice, latex and dried extracts have also been described by him. Identifying features of the parts have also been discussed. In the morphological description of these parts, the size, shape, outer surface, taste, colour, odour are described. Similarly, organoleptic characters of various parts of the plant are subjected to a thorough discussion. In leafy drugs the surface descriptions, pattern of margins, arrangements of their attachment and hairy structures on leaf-surfaces have been included as identifying features. Substitutes receive detailed mention.

Numerous drugs belonging to the various divisions of zoological kingdom are also discussed. The drugs obtained from animals are used either as a whole, e.g. lizard, earthworm and flies etc. or as an extract, e.g. liver or meat extracts etc. Similarly, fish liver-oil, musk, honey, bee wax, blood, flesh, urine, excreta, skin, rennet, hoof, hair, gall-bladder, brain, milk, fat and saliva are also used as drug obtained from animal sources.

Ibn Sina has described a number of mineral and metallic substances which were in use as drugs. Various oxides, sulphates, sulphides, mineral water, earth from different places and precious stones have been inventoried.

Ibn Sina has generally adopted the nomenclature of drugs as found in the early literature. However, in case of some of these drugs, definitive identification on the basis of their description is not now possible. Vernacular and Greek names of a drug also create confusion. In many cases, a particular drug is not the same in all parts of the world. Most of them differ from each other in different places because of changing climatic conditions. This is the reason why these drugs are identified with separate names in different floras. Ibn Sina has described simple drugs of various countries like India, Persia, Turkey and

Syria, etc. Attempt has been made to identify these drugs with the help of different floras and modern literature.

In some cases the description of the drugs is inadequate making it very difficult to identify them with correct scientific and English names, e.g., *zūfā ratīb*, *sisārūn*, *shābābak*, *shāhmānaq*, *ṭīqāqawāwūn*, *fāt* and *qaiqhan* etc. Sometimes, while describing a drug, Ibn Sina has quoted only the opinion of other authors and eschewed his own views. There are some drugs still untraceable. These drugs might have been available freely at the time of Ibn Sina, but today they are unknown to us, particularly with these names mentioned by him. Such drugs are treated now as controversial and unidentified drugs.

In this difficult situation, our first task was to prepare a comprehensive glossary of simple drugs mentioned by Ibn Sina in his *al-Qānūn* with their correct scientific and English names. A team of experts compiled this glossary with the help of the following sources:

1. Pharmacographia Indica, William Dymock, Vol. I to III, London, 1890
2. Indian Materia Medica, A. K. Nadkarni, Vol. I & II, Bombay, 1976
3. A Dictionary of Economic Products of India, George Watt, Delhi, 1972
4. Flora of Syria, Palestine and Sinai, George E. Post & John Edward Dinsmore, Vol. I & II, Beirut, 1932
5. Indian Medicinal Plants, K. R. Kiritkar & B. D. Basu, Vol. I to IV, Delhi, 1975
6. Encyclopaedia of Islamic Medicine, Dr Hassan Kamal, Cairo, 1975
7. The Greek Herbal of Dioscorides, Robert T. Gunther, New York, 1959
8. Dictionary of Modern Written Arabic, John Milton Cowan (Hans Wehr), Otto Harrassowitz, Wiesbaden, 1966
9. The Oxford Universal Dictionary, Illustrated, William Little, Vol. I & II, London, 1970
10. A Comprehensive Persian-English Dictionary, F. Steingass, London, 1963
11. *Muḥīṭ-i A^ʿzam*, Hakeem Mohammad A^ʿzam Khan, Vol. I to IV, Kanpur, 1315 A.H.
12. Animal Origin Drugs used in Unani Medicine, S. B. Vohora and M.S.Y. Khan, IHMMR, Tughlaqabad, New Delhi-62, 1978
13. Flora of British India, J. D. Hooker, L. Reeve & Co., London, Vol. I-VII, 1872-1897.

The same problems were faced in case of weights and measures. Ibn Sina used terms like *mithqāl*, *raṭl*, *ūqiah*, *dāning*, *qīrāt*, and *qūṭlī*, etc. which were prevalent as units of weight for medicinal purposes in author's time. Therefore, for the convenience of the readers, we have tried to convert them in grams according to modern metric system. On consulting several references and sources we have arrived at the conclusion that each writer has adopted different rules of conversion and thus the calculations vary. To solve this problem we have set our own pattern and followed it throughout the book.

It is a matter of great pleasure to acknowledge the hard work and labour my colleagues have rendered in translation and revision of this historical and classical medical book, particularly Maulana A.H. Farooqi, Reader in the Deptt of Islamic Studies who has undertaken the painstaking translation work of this volume; Dr. S. B. Vohora, Reader in the Deptt. of Medical Elementology & Toxicology, Faculty of Science; who revised the English manuscript and made valuable suggestions; Dr. Javed Ahmad, Reader in Botany, who has revised and checked the glossary of simple drugs and S. Riaz Ali Perwaz, Research Officer, who has compared and checked the manuscript. These scholars have completed their job under my personal supervision. Lastly, I commend the efforts put in by Mr. S. Waris Nawab, Senior Press Superintendant of Jamia Hamdard, in executing satisfactorily the assiduous task of printing such a difficult text.

Hakeem Abdul Hameed
Chancellor
Jamia Hamdard

New Delhi, 1998

Table of transliteration

Arabic words and names have been transliterated as per the table given below:

ا	<i>Alif</i>	a
آ	Long Alif	ā
ب	<i>Bā</i>	b
ت	<i>Tā</i>	t
ث	<i>Thā</i>	th
ج	<i>Jīm</i>	J
ح	<i>Hā</i>	ḥ
خ	<i>Khā</i>	kh
د	<i>Dāl</i>	d
ذ	<i>Dhāl</i>	dh
ر	<i>Rā</i>	r
ز	<i>Zā</i>	z
س	<i>Sīn</i>	s
ش	<i>Shīn</i>	sh
ص	<i>Ṣād</i>	ṣ
ط	<i>Ḍād</i>	ḍ
ظ	<i>Ṭā</i>	ṭ
ع	<i>Zā</i>	z
ع	<i>'Ain</i>	'(Inverted apostrophe)
غ	<i>Ghain</i>	gh
ف	<i>Fā</i>	f
ق	<i>Qāf</i>	q
ک	<i>Kāf</i>	K
ل	<i>Lām</i>	l
م	<i>Mīm</i>	m
ن	<i>Nūn</i>	n
و	<i>Wāw</i>	w
و	Long vowel	ū
و	diphthong	au
ه	<i>Hā</i>	h
ی	<i>Yā</i> consonant	y
ی	long vowel	ī
ے	diphthong	ai

For the *hamza* an apostrophe (') and an inverted apostrophe (') for the '*ain*' is used.

INTRODUCTION BY THE AUTHOR

BOOK II

ON

Simple Drugs (Materia Medica)

All praise is due to God and peace be on those servants of His whom He has chosen. After praising God and praying for His prophet Muhammad and his descendants, (we say that) this Book is the second in the series of books which we have compiled on the science of medicine. The first book which deals with general principles of medicine is already complete. The second is this compendium which deals with simple drugs. And we have divided it into two discourses; the first deals with natural laws, to be known in connection with drugs used in medicine and the second is on the knowledge of the specific potencies of simple drugs. Again, the first discourse is divided into six sections as follows:

Section-I	Temperaments of simple drugs
Section-II	Determination of temperaments of simple-drugs, through experiment
Section-III	Determination of temperaments of simple-drugs through analogy
Section-IV	Effects of potencies of simple drugs
Section-V	Rules applying to extrinsic properties of drugs
Section-VI	The collection and storage of drugs

The second discourse is divided into a number of Tables and a Rule which are as follows:

Table-I	Actions and properties
Table-II	Cosmetics
Table-III	Swellings and pustules
Table-IV	Wounds and ulcers
Table-V	Joints
Table-VI	Organs of the head
Table-VII	Occular organs
Table-VIII	Respiratory organs and chest
Table-IX	Alimentary organs
Table-X	Excretory organs
Table-XI	Fevers
Table-XII	Poisons

The Rule is divided into two sub-rules. The first sub-rule has a preface in which I have presented tables for simple drugs and each table is given in a particular colour, so that it may be located with ease. The second sub rule consists of twenty eight sections.

FIRST DISCOURSE

Section I

Temperaments of simple drugs

We have already explained in the First Book what we mean by saying: 'this drug is hot', 'this is cold', 'this is humid' and 'this is dry'. We have stated that all these qualities are in respect to our bodies. We have also indicated that all the vegetable, mineral and animal compounds are based on four elements. When these (elements) intermingle, interaction ensues. The elements either maintain equipoise or dominate another one and when these are established in the state of equipoise, it is called 'real temperament'. When a compound acquires a temperament, it is prepared to receive the faculties and qualities which suit it. We have already made a mention of the different kinds of temperaments and explained what is meant by moderate temperament in human beings as well as in drugs. Consequently, as soon as a drug comes in contact with the human body it is affected by the innate heat of the body and the drug does not produce coolness, heat, moisture or dryness more than what already exists in the body. We do not, however, mean to say that the temperament of a drug is the same as that of man, for the temperament of man is exclusively his own.

You should know that the temperament is of two kinds: Primary and Secondary. The Primary temperament emanates from elements, while the secondary temperament emerges from things which have their own temperament; for example, the temperament of compound drugs and that of antidotes. Hence every simple drug which is used in the formulation of an antidote (theriaca) has a temperament exclusive to itself. When these simple drugs are put together they are on their way to be compounded so as to become one, they acquire a second temperament. This second temperament is not wholly the result of artifice; but it may be a natural product. Milk is, in fact, a mixture of aqua, cheese and butter and each one of them is not simple by nature; but is a compound having a temperament of its own. The secondary temperament is the act of Nature rather than that of artifice. (It is contrary to antidote). The secondary temperament has two aspects (a) cohesive temperament and (b) lax temperament. The cohesive temperament is one in which each of the two elements so intermingle that

it is difficult for innate heat to isolate them even by the heat of fire, for example gold. This is because the temperament of gold lying between moist and dry components, has reached a stage where even fire fails to separate the one from the other. When fire melts gold to sublimate its aqueous particles, they cohere together with the earthy particles in such a way that fire fails to sublimate the aqueous particles and precipitate the earthy particles as it does in case of wood and even lead and zinc. When the stability of temperament is such, it is not unthinkable that such a temperament should emit the elements which cannot be isolated by the innate heat we have. And such a temperament is called "stable temperament". If it is equable it would remain diffused in the body till it is transformed so as to restore its equable condition. But if the temperament is inclined towards domination, it will continue to be dominant in the body and lead to malformation. However, only a single action can proceed from it. If the temperament is not cohesive but lax and liable to disintegrate, the components of such a temperament may, as well, disintegrate because of the action of physis on it and some components of a temperament may be eliminated by other components so as to come to possess different powers. As a result, if one acts in one way, the other acts in an opposite direction.

When physicians declare that certain drugs carry different potencies they are not to be understood to mean that one and the same ingredient of the drug bears heat and coolness and each of them is acting by itself as a separate entity, because this is hardly possible. But they are found in the two different ingredients of which the drug is composed. Let us not imagine that apart from this drug, there is no other drug which is not composed of opposing potencies. Actually all drugs are composed likewise of opposing potencies. What the physicians mean by their above statement is that the drug bears opposing potencies in its action. As the drug has various ingredients which do not act completely on one another so as to make it a completely homogeneous whole, they do not as yet cohere together, nor are they united together in the sense that if any of them reaches any other part of the organ it is necessary for the other to reach them. Hence, if the ingredients of a drug were of homogeneous potencies, their action in the body would never have been different. On the other hand if these were of heterogeneous potencies, their effects in the body would have been logically different. When a part of certain drug reaches an organ, the other ingredients having an affinity with the former, would follow it. Thus by their conjunction an effect is produced which diffuses equally into all parts of this organ. Every component of the drug forms an obstacle which is so dominant that

it does not allow the action to be completed. Of course, this happens only when certain part of an organ can receive any one of the two components. Very often the physis accepts the one and rejects the other.

We are not, however, concerned with such cases here. We are talking about a particular group of drugs which have divergent intrinsic effects not mediated through any extraneous factor. The reason is that the fusion of drug components is so feeble that their dispersion takes place by the influence of heat. So the simple drugs which we are going to describe, have contrary potencies. They comprise of those drugs in which total fusion is not found. Some of them are so strong in fusion that even coction and washing do not disperse their potencies, for example, chamomile has both resolvent and astringent properties. When it is cocted so as to be applied in poultice, both of its potencies remain undispersed. There are other type of drugs the potencies of which can be dispersed through coction, for example, cabbage which is composed of two kinds of matter, one earthy and astringent and another tenuous, detergent and boraceous. When it is cocted in water, its detergent boraceous matter is dissolved in water while the earthy astringent matter remains undissolved. The cabbage water is purgative while its remaining undissolved part is astringent. The same is the case with lentil, chicken and garlic. Garlic possesses detergent and burning power in addition to much humidity. Coction separates the two powers. The same is the case with onions and radish etc. Because of this fact it is said that radish acts as a digestive but is itself not digestible, as it digests not through all its ingredients but through its rarefied substance alone. When this substance is separated from it a heavy substance remains there which by virtue of being viscous hinders the action of digestion power. The other substance which is rarefied, eliminates this viscosity.

Included in the same category are drugs whose components are separated by washing like endive and most of the vegetables. Their substance is mostly composed of such matter as is aqueous, earthy and intensely cold and rarely they are composed of a rarefied matter. So their action of cooling is due to the former while the latter is mostly responsible for opening and removing obstructions. Most of the tenuous matter rising upward spreads on the surface of endive. When it is washed its tenuous substance is dissolved in water and nothing remains in it to be taken note of. This explains why it is not allowed both by religion as well as medically to wash endive. That is why there are many drugs which when taken orally by a human being, produce intense cold but, when applied as a poultice, act as resolvents. For example coriander generates intense cold on oral use but its plaster resolves swellings (e.g. in scrofula), particularly when mixed with

SECTION II

sawiq. This is because coriander is composed of two substances (a) an earthy, watery and intensely cold substance and (b) a rarefied and resolvent substance. When it is used orally, the innate heat rises and resolves the fine substance. The latter does not remain in quantity to influence the temperament. While dispersing into the body, it is almost vanished completely. Its refrigerent substance remains paramount when coriander is used in the form of a poultice, the earthy substance being unable to pass through the pores, will exercise no effect, while the fine igneous substance infiltrates through the pores of the body and performs its maturing functions. On such occasions if some part of the cooling substance is combined with it, the composition may prove to be useful in repelling and subduing the foreign heat. This is virtually what we have stated in our first book regarding onion which produces burning sensation when used in poultice but is fully safe when taken orally. In the interest of clarity earlier statement regarding similar diseases must be repeated.

There are some drugs that appear to contain two substances having different temperaments viz:

(a) those which are perceptible like the parts of citron and

(b) those which are relatively more concealed. For example, the peel of spogel seeds together with its mucilage may be very strong in its cooling effect while its internal part is so strong in its heating effect that it may act as a rubefacient and ulcerating drug. The skin serves as a covering separating the two substances. If unbroken spogel seeds are taken the hard covering will not allow the property of the concealed part to act and produce ulcers. The drug will act only with its peel and mucilage. On being powdered, however, it is likely to act as a poison, as is generally believed; manifestation of the effect of the inner particles being the cause. It is for this reason that the powdered spogal seeds may split abscesses while the intact spogel seeds repel the (putrid) matter from it without allowing it to ripen. What we have said so far is enough for this section.

Section II

Determination of temperaments of simple drugs through experiment

The potency of drugs can be determined in two ways (1) by analogy and (2) by experiment. Let us begin with the latter (i.e. experiment). We say that experiment can give us an authentic account of the potency of a drug if certain rules are observed:

1. The drug should be free from an extensive alteration, whether it be accidental heat or cold or a quality which is due either to some

sort of transformation taking place in the drug or it may be the combination of something else with it. You may observe that water, though intrinsically cold, becomes hot when placed on fire. On the other hand, gum euphorbium is intrinsically hot, yet it may turn out to be cold when it is cooled. Almond is intrinsically moderate and rarefied, but when rotten, becomes very hot. Fish is basically cold but when salt is applied to it, it becomes very hot.

2. The experiment should be based on simple diseases; if the disease is the result of two causes demanding two different treatments and the experiment of a drug on both of them has become successful, it would be difficult to determine the (exact) cause of success. Suppose a man has phlegmatic fever, give him white agaric and the fever is controlled. In this case we would never say that white agaric is cold, because it has cured a hot disease i.e. fever, It is quite possible that white agaric should have melted the phlegmatic substance and expelled it through vomiting. So, when the (phlegmatic) substance was no longer there, the fever was controlled. Indeed, the property of white agaric is intrinsic but it is accidental also. It is intrinsic in relation to the substance and accidental in relation to fever.

3. The drug may be tried in heterogeneous diseases. If the drug proves to be useful in all of them, it would not be proper to say that the drug has got an opposing temperament, for it might have been useful in the case of a particular disease intrinsically and in the case of another disease extrinsically. Scammony is an example. If tried in a cold disease, it is likely to be useful by its heating effect. If however, it is tried in a hot disease, like tertian fever, it may prove useful through the removal of bilious humours. Such being the case our experiment would not assure us of the hot or cold nature of the drug unless we are in a position to distinguish between the intrinsic act of the drug from its extrinsic one.

4. The drug should be, both qualitatively and quantitatively, in proper proportion to the nature and severity of the disease. There are some drugs the degree of the heat of which falls short of the degree of cold of certain diseases. How can such drug be able to affect the diseases concerned? Of course, such drugs could be useful, in so far as they are hot, in diseases with lesser degree of cold, It is, therefore, necessary to try a drug initially in milder degrees and then gradually proceed till the potential of the drug is known.

5. The time when the drug has proved effective should be noted. If the effect appears soon after the administration of the drug, one may unhesitatingly conclude that the effect is natural to the drug. On the other hand, if the effect observed in the beginning is in sharp contrast to that observed in the last round of the experiment, or the drug

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remains inactive at the outset but acts at the end only, then it would be a doubtful and difficult case. Here it may be assumed that the effect of the drug was only accidental. This doubt or confusion regarding the potency of the drug and the hypothetical inference that the effect is accidental, gains strength when the effect appears after separating the drug from the affected organ. It is argued, the effect had been intrinsic, it remained there when the drug was in contact with the organ. It is impossible for a drug not to affect an organ when attached with it and to produce effect when detached therefrom. The above proposition, however, is not absolute. In most cases some substances produce their main effect after they have produced their first accidental effect. This generally happens when such substances acquire a foreign property which overrides the physical (original) one. For example, hot water warms at that time but next day or another time it loses heat (which was merely accidental) and it is sure to cause coolness in the body. This is because the remaining ingredients of water would now return to the natural condition of water i.e. to coolness—a property which is inherent in water.

6. The action of the drug should be constantly watched to find out whether the action is one and the same in all or in most of the cases. If it is not so, the action may be regarded as temporary and accidental because innate qualities of a substance do emanate therefrom perpetually or at least in most cases.

7. The experiment should be made on human body. If it is made on some other (animal) body, the result may be different for two reasons: (i) The drug which is hot in relation to human body may possibly be cold in respect of the body of a lion or a horse; the drug may be warmer than human body but colder than the body of a lion or a horse. Therefore Himalyan rhubarb which, I think, is very cold for the body of a horse though it is hot for the human body. (ii) A drug may have one property in relation to one body and quite another in regard to another body. For example, aconite is a poison for the human body but it is not so for that of a starling. These are the rules which must be observed while investigating into the properties of drugs through experiment.

Section III

Determination of temperaments of simple drugs through analogy

There are certain rules which are based on these observations. Immediate transformation of a drug into fieriness and warmth by (a) slow transformation; (b) rapid transformation; (c) rapid congelation; (d) slow congelation.

Some rules are based on odours, some on tastes, some on colours as well as on actions and the known faculties which, through some positive evidence, throw light on unknown ones.

The first method is to determine which one, out of the substances that are equal to each other in respect of their constitution (i.e. porosity and density), swiftly inclines towards warmth and is hot. In the same manner the substance which inclines towards cooling, is cold. This is due to the fact that sometimes a substance becomes hot more rapidly than the other while the agent is the same. The reason is that, though it was cold temporarily (owing to its coming under the influence of something cold), it is hot by nature. When it comes in contact with something which warms outwardly, the opposing factor (cold influence) is removed. Nevertheless, the latent warm faculty was an additional factor in the substance on account of which it surpassed the other thing in matter of warmth. This is also true about the drug which becomes cold more rapidly. It may be surmised that apart from what we have said, much has already been said in this connection by scholars of Physics and Medicine. However, when one of the drugs is extremely rarefied and the other is extremely dense, the former would be more sensitive to an effect because of the weakness of its substance; though both are equal in warmth and coolness.

As for the substances which are likely to congeal and those which are apt to inflame, they may be compared with each other. Thus in spite of a similar constitution, the substance which is apt to congeal more swiftly, would be colder. Similarly, a substance which is more inflammatory, though its constitution is like that of the other, would be warmer. This we have already explained. Further, we say: this is hot and this is cold, only in view of the effect which the innate-heat produces on the substances concerned. Therefore, when a substance is far from being congealed and more capable of getting implanted, we would attribute that condition of the substance to the amount of the impact of our innate heat on it. These principles have been elaborately discussed in Physics.

When hundreds of substances differ from one another in rarefaction and density and if you find the denser substance more sensitive to inflammation and slower in congelation, you must declare that the substance concerned has a higher degree of warmth by virtue of its physical constitution. Similarly, if you find the rarefactory substance slower in producing inflammation, you must realise it to be extremely cold. But if you find the rarefactory one more inflammatory, you can not be sure of the above proposition to declare it as warmer. This is because very often rarefaction becomes the cause of inflammation. Likewise, if you find a rarefactory body more prone to congeala-

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tion you need not declare, on the basis of the above proposition, that the substance concerned is very cold; the reason is that rarefaction often becomes the cause of swift congelation due to the weakness of the body and its sensitive nature. Wine may be taken as an example. Though wine is warmer than the oil of pumpkin, yet it is congealed more rapidly than the latter. Sometimes the oil of pumpkin coagulates and does not freeze while the wine does. There are many substances which do not freeze without coagulation, and there are many substances which do not coagulate without freezing. This can be learnt from Physics.

Out of the substances that are liable to coagulate but are equal to each other in constitution, the one which is most prone to coagulation would be the coldest. Many substances freeze even in heat. All substances which freeze due to heat, get dissolved in cold. Similarly the substances which congeal in cold, dissolve in heat. This is because heat freezes by dehydration and cold dissolves itself by its act of hydration. This is the opinion of Galen. Aristotle holds a partly different opinion. A comprehensive discussion of this problem may be had from another science. If some drugs are more warm and at the same time more dense, it is possible that their capacity for coagulation may be greater than those which are more cold and dense. When some drugs are more cold and more tenuous, their receptive capacity may be greater than those which are warmer and more tenuous. Coagulation and freezing are not, however, the sure indicators of intensity of cold or heat, because sometimes the earthly substances coagulate because of their earthiness and abundance of moisture and air, when both of them are shaken. Very often it happens that the airy substances become cold and condense to form watery substances. Such compositions are cold. Similarly, watery and cold substances expand, become rarefied, get evaporated into airy substances and coagulate. This happens to the sperm when semen is coagulated. When fiery substances (vapours) are separated, it (the sperm) becomes thin. It may be noted that earthiness does not prevent intense fiery substances (vapours) from accompanying it. Hence, it is possible for the first kind of substances to become intensely hot. And as moisture does not prevent airiness from interfering with it, the second kind of substances would be intensely cold if moisture has not been reduced. If it has been overpowered by fieriness, the substance concerned would be immensely hot.

As for other rules, one which must be known to physicians, is that a salty, sweet, bitter or pungent tastes must necessarily be of warm substances. Whereas the tastes that are astringent, sour or acrid must belong to cold substances. Likewise, strong and acute odours

can exist with a warm substance only. White colours of thickened bodies with some humidity would always be found in cold substances. If these colours belong to dry and husky bodies, they must be associated with hot substances. For black colour, in both cases mentioned above, the condition would be opposite because cold whitens the most and blackens the dry whereas heat blackens the moist and whitens the dry. This sounds perfectly true but other factors partly contradict this contention in some aspects of odour and colour. So it is argued that, as we have already explained, the bodies of drugs are composed of different elements. They combine, sometimes, to make the first temperament and sometimes to make another temperament which should be termed as the second temperament. At this latter stage any one of the two constituent elements may possibly be having a temperament which endowed it with a particular kind of odour, taste and colour, in sharp contrast to those claimed by other elements, having a different type of temperament; or the temperament may not at all be affected by colour, taste or odour. However, when the second element has got a particular colour which is opposite to that of the first element and if both of them are equal in quantity, the resultant colour would be composed of the said two colours. But if the two elements are different (in quantity) the second composition will tend towards one of the two colours (the colour of the dominant element). If the second element does not possess any colour, taste or odour and the two are equal in intensity, only one colour and odour (belonging to the first element) would be present. If the two elements break owing to the conjunction of colourless and divergent particles and the colour of the element has no effect at all, it will also break. Now the substance would appear as white, though its whiteness would not be consistent with that of a genuinely white substance, and it will only be a quality as opposed to the other. When one substance combines with another substance which has no colour at all and both are equal in quantity and quality, the resultant change in quality would be moderate. If the colourless element is dominant over the coloured one, the quality opposing the quality of the white element would be more effective. As such, the temperament of the substance would be warm inspite of the fact that whiteness naturally demands it to be cold provided both components (white and coloured) are quantitatively equal to each other. If, for instance, the element which is colourless or has an opposite colour quantitatively less than that of the other component (rich in quality and strength), the former would never be able to influence the colour of the latter. It would, instead, be overwhelmed by it as if it had no power at all. For example, if you mix up a *rafl* (450 gms) of milk with two *mithqāl* (9 gms) of gum euphorbium,

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the composition will not be extremely hot and the gum euphorium will never be detected by its colour (or without colour if it is colourless); only whiteness would be perceptible. Hence our proposition: this whiteness is due to the coldness of the substance is true only if we presume the milk to be cold. On the other hand it would be wrong to suggest that the temperament of the drink itself was cold. This is because the whiteness is not the colour of its composition, rather it is the colour of one of its two components which is dominant in quantity and subdued in quality and which alone is detectable of the two. So far we discussed an artificial compound. It should be noted that the same applies to something which is a natural compound and white in colour and as such we expect it to be cold, for example white pepper. Thus what is true in respect of artificial compositions is also true in respect of natural ones. Among the perceptible qualities, some are influenced by the opposite qualities which interact with them. As long as these qualities remain intact and perceptible, the opposite qualities are not perceived (because of their meagre quantity) inspite of their dominant quality. This happens mostly in case of tastes but not always. Odours which come next to tastes in importance and colours (to which the above rule could be applied) occupy the last place.

One of the reasons why tastes override odours is that the former are felt just when they meet the faculty of perception. As such, these are the best of all constituents of a drug to communicate a quality while odours and colours show their effect even when these are not in contact with the constituents of the drug. It is possible that some vapours emanating from the rarefied parts of the drug is felt; whereas no vapour arises from the heavy parts of that drug. Similarly, a colour which is perceptible may possibly be the colour of the dominating exterior and not of the hidden dominated part of the drug. Sometimes odours indicate taste, as for instance, sweet odour, sour odour, pungent or bitter odour. All such odours follow tastes. This shows that tastes are the most precise in giving out (its nature), then come odours and colours. Again, if the tastes might not be in the order mentioned above the opium would not have tasted bitter, inspite of its profound coldness. It is not true that this discrepancy in tastes is more evident in cold than in heat. Frequently a drug having a particular taste, appears to be warm while actually it is cold. Conversely a drug which indicates cooling effect is often hot. It is due to the fact that a hot substance is generally more impressive, more active and more effective. Therefore if a hot (tempered) substance interacts with a cold tempered substance, the power of the former would suffice to dissipate the cooling effect of its partner. As such, the taste of the former will also suppress

the taste of the latter, because a hot substance in all respects is more effective and dominant and so it carries the tastes and odours with it. That is why you will hardly find a substance that is hot in all probability, sour and astringent, having no conceivable temperament, whereas a substance that is cold, could as well be bitter and irritating in taste. This though occurring frequently, is not an absolute rule.

Now, when you have known this rule, we must tell you what the physicians have said about the topic of tastes, odours and colours. They have classified simple tastes into nine kinds; eight real tastes and the ninth kind presenting tasteless substances such as water. According to physicians, the taste is a sensation which can be immediately felt and described in actual terms or feeling. Taste can never be passive. A passive taste is not taste at all. Apparently tasteless substances may be of two kinds; (1) those which in reality are tasteless and (2) those which have got a taste but the taste is imperceptible because of the high density of the substance which does not permit any thing to emanate from it. This taste may be felt or recognised only when by some process the ingredients of the substance are dispersed and refined e.g. copper and iron. Tongue cannot feel any kind of taste from these metals because nothing comes out from them which might stimulate or moisten the uppermost layer of the tongue whose function is to feel the taste. The substance will, however, develop a strong taste if it is made to split into small particles. There are many other substances like the metals described above.

The eight tastes, as described by physicians, (with the exclusion of tastelessness) are the real tastes. These are:—

1. Sweet, 2. Bitter, 3. Pungent, 4. Salty, 5. Sour, 6. Acrid, 7. Astringent and 8. Greasy.

Explaining this classification, they state that a substance which bears a certain taste would be either dense and earthy, tenuous or moderate in these attributes. In potency it would be either hot, cold or moderate. Now if the substance is dense and earthy it would be bitter; if it is cold, it would be acrid; if it is moderate, it would be sweet. In case of a substance being tenuous, if it is hot, it would be pungent; if it is cold, it would be sour and if it is moderate, it would be greasy. If the substance, being hot, is of moderate density and tenuity it would be saltish; if it is cold, it would be astringent, if moderate, according to physicians, it would possibly be insipid. Pungent taste is hotter than bitter and salty tastes respectively, since it is more capable of dissolving, diluting and cleansing. So far as a salty substance is concerned, it appears to be bitter, the heat of which is dissipated by its cold and moist nature. We have already dealt with it. Similarly, a salty substance turns out to be bitter because of the warmth of the sun or

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fire or because of the disappearance of moisture which causes reduction in the degree of heat. Likewise borax and bitter salt are warmer than the edible salt. Normally an acrid substance is the coldest; astringent and sour substances come next in this respect. This explains the fact that sweet fruits, when unripe, are acrid and intensely cold, but when these are slightly reduced in moisture content and air to become little more moderate through the heat of the sun, which ripens them, they tend to become sour, such as the green grapes, whereas during the intervening period the taste inclines towards mild astringency and not acidity. Later on, the taste shifts to be sweet when the ripening heat operates. A taste generally changes from acidity to sweetness without (passing through the stage of) sourness, e.g. olive. Nevertheless, though sour is less cold than acrid it is mostly colder than that because of its tenuity and penetrability.

Moreover, acidity and astringency are fairly similar to each other in taste except that astringency acts on the surface of the tongue only while acidity holds and irritates both the outer and inner parts of the tongue. The capacity of acrid dense substances to irritate externally is attributed to their inability to split into minute particles swiftly and because different parts of the substance are wedged to each other rapidly. On account of these two conditions the effect of an acrid substance varies from one part of the tongue to the other. However, the parts of the tongue differ in porosity and density. This also helps acidity in its action. An acrid taste is more sharp and more penetrating. Both pungent and bitter substances scratch the tongue with a solitary difference viz: while the former gets deeper because it is substantially sharp and penetrating, the latter scratches the surface alone because it is heavy and dry. Consequently, a purely bitter substance is neither capable of accepting stench which can produce germs nor does it provide food to them. It is because of its dryness that the bitter substance elicits a coarse scathing effect. One of the causes why the heat of a pungent substance is stronger than that of bitter substance is that the former is so piercing that it causes severe damage and discomfiture, almost to the extent of corroding and putrefying, which sometimes results in the destruction (of the tissue).

Both the sweet and greasy tastes give pleasure to the tongue and lubricate it, facilitating the food to get liquified smoothly. These (sweet and greasy substances) remove coarseness of the tongue. While greasiness brings this about without perceptible heating the sweetness does the same with a warming effect. That is why sweetness is more ripening.

Physicians uphold that the sweet is delicious as it rectifies a dense substance by cleansing, softening, generating fluidity and removing

the density without eroding it and rectifies loss of continuity and without handling it violently. It produces a heat which is not harmful but pleasing, such as the soothing effect of warm water poured over the back. However, more eminent physicians should be in a better position to comment authoritatively on this subject. It is not necessary that the more sweet a substance is, the more nutritive it would be. A very delicious thing is not essentially nourishing. According to physicians there must be some sort of sweetness in every food but food requires something more than the sweet taste we are discussing. Greasiness is consistent with sweetness. Nevertheless, a dense substance converted into these two through proper heat would transform it into the sweetness if the tenuity of the substance is based on moisture and a little of airiness. It would tend to be greasy if the tenuity of the substance is due to its pure aquosity and air content, the intervention of which is very much prone towards aquosity. The bitter and salty tastes cause some irritation to the tongue. However, the salty affects slightly, washes the tongue and do not bring about coarseness. This action is due to the fact that generally the sweeter substance are more nutrient. similarly it is not necessary that more nutritious substance are sweeter. Salty tastes affect all parts of the tongue equally because of their tenuity, though harmful to the cardiac orifice (of stomach). The bitter taste, on the contrary, causes severe irritation resulting in coarseness because of its diverse action.

The pungent and sour tastes cause irritation to the tongue; the former irritates it with severe inflammation and the latter acts moderately without inflammation. The salty taste is formed when something bitter is diluted with something insipid and tasteless like water. This, when congealed like an alkaline solution, becomes salty. Sour taste is formed by transformation of sweetness due to lack of heat or by the maturity of acidity due to abundance of moisture and heat. Its constitution, in any case, is moist. The same is true about the sweet taste. Its constitution tends towards humidity whereas the bitter and acrid tastes tend toward desiccation.

ACTION ASSOCIATED WITH DIFFERENT TASTES

TASTE	ACTIONS
Sweet	Ripening, softening and nutritive. Human nature is fond of it and it is absorbed by the absorbing faculty.

TASTE		ACTIONS
Bitter		Cleansing and coarsening
Acrid	a. Weak b. Strong	Astringing Squeezing
Astringent		constipating, thickening, hardening and retentive.
Greasing		Softening, sliding and slightly maturing.
Pungent		Dissolving, lacerating and putrefying
Salty		Cleansing, flushing, desiccating, and resistant to putrefaction.
Sour		Cooling and lacerating

Sometimes two tastes gather together in one substance. For instance, bitterness and astringency combine in the extract of ophthalmic barberry and the taste thus produced is described unpleasant; as bitter salty water in arid ground exhibits 'brininess'. Cooked honey has both pungency and sweetness; brinjal is bitter, pungent and astringent at the same time and endive is both bitter and insipid. Two tastes combine together, in most cases, to an additional effect. Sharpness and pungency co-exist in vinegar in a larger degree than in wine and make it very cold since these two tastes open up pores enabling the cold effect to be felt. If they have not reached a considerably warm stage, the cold effect of vinegar would be more intense. Sometimes the combination of two tastes prevents individual component tastes to be perceived, e.g. when sour and acrid tastes combine in unripe grapes, it prevents the former against eliciting a severe penetrating cooling effect. Sometimes the combination proves helpful and sometimes it is adverse to the quality (of the substance).

It is helpful when tenuity combines with sourness and makes it (substance) cooler. The adverse effect may be illustrated by another example viz; when they become dense, its cooling capacity is reduced. Sometimes certain tastes are impure in the beginning but, with the passage of time, get purified, e.g. the juice of unripe grapes becomes pure in sour taste after a length of time due to profuse sedimentation of acrid objects. Some tastes are pure initially but later on (because of the effect of time on them) become sour and bitter e.g. honey. Time

enhances the bitterness and pungency of the taste. For instance, the initial bitterness of grape juice is transformed into pungency with the passage of time. When acidity combines with bitterness, it acquires cleansing and slightly astringent property which is useful for healing wounds (flabbiness) and for treating all kinds of diarrhoea caused by obstructions. Everything having this quality is useful for the stomach, spleen and the liver, but absolute bitterness and absolute pungency are harmful to viscera.

Acridity and bitterness together with astringency form a useful combination since bitterness cleanses and astringency strengthens the viscera. Let us remember that an astringent-cum-bitter substance (only slightly bitter) has a power, which through squeezing effect, serves to expel bilious humours and water. This substance has no power to purge out viscous phlegm, particularly when astringency in it is stronger than bitterness as in the case of absinth.

All sweet substances having a tinge of astringency are desirable for the viscera because these are delicious and tonic. These are also useful in dryness of the lungs because they are moderate substances. All substances which are desiccative because of their acridity or astringency and have also greasiness or insipidity or sweetness, resist irritation and promote growth of flesh. The substances which have astringency in addition to acridity and bitterness result in the combination of the two i.e. earthy and fiery substances and are useful for wounds which are congested with pus and increase their healing process. These qualities are formed in accordance with their constitution and tastes as we have stated earlier and this statement is generally accepted by others. This is what we wanted to tell you about tastes in the light of the principle expounded by the physicians. A more scholarly discussion on the subject can be carried on with the experts of physical sciences. What we have described here is enough for a physician.

Now let us take up odours. Odours are sometimes born out of heat and sometimes out of cold. It is, however, heat which mostly conveys an odour to the faculty of smelling. Generally it is the tenuous and vaporous substance of the air which enables the odour to reach the faculty of smelling. It also happens that the air itself is transformed into the odour without dissolving the substance of the odour. But the former (process) is more frequent. All odours, which cause irritation or are more inclined towards sweetness, are hot while the odours that are felt sour, mouldy or moist (substances) are cold. Most of the perfumes are warm except those which emanate from the moist (substances), and soothe the soul and the mind, such as camphor and waterlily. Their substances are not devoid of a cold matter that accompanies the odour upto the brain. All

perfumes are, however, warm. The same is true for all aromatic spices. That is why they cause headache.

Colours; we have already discussed them stating that in most cases they differ and, unlike odours, guide us only in one particular aspect. When a certain class has a number of sub-classes different from one another, some of them incline towards whiteness and some to redness and blackness. Those which are inclined toward whiteness and have also a cold temperament, would be very cold while those inclined toward red or black colours, would be less cold. If the temperament is warm, the position would be contrary. Though different substances behave differently, we have described the most frequently occurring situations. Let us now take up the actions of the potencies of simple drugs.

Section IV

Actions and potencies of simple drugs

It may be stated that the simple drugs have the following actions:

- A. General actions: Such as warming, cooling, absorbing, repulsing, ulcerating and healing wounds etc.
- B. Specific actions: Such as, usefulness in cancer, piles and jaundice etc.
- C. Actions resembling general actions: Such as, causing diarrhoea and promoting discharge of urine etc.

The specific actions take place in particular parts or organs of the body. General actions are those whose usefulness or harmfulness is general and the entire body reacts virtually to them directly. Now we propose to discuss the general actions of simple drugs and those which are similar to them.

The general actions are of two kinds:

(A) Primary and (B) Secondary. The primary actions are of four types: cooling, warming, moistening and desiccating. The secondary actions are grouped under two categories: (i) Those similar to primary actions but these are measurable and can be described as 'intense' or 'mild' for instance, burning, putrefying congealing and maturing. These actions are nothing but various grades of warming and cooling which are measurable and comparable. (ii) The second category comprises another set of actions but these also emerge from the former e.g. anaesthetization, cicatrization, absorption, adhesive deobstruction and agglutination etc. Actions which resemble the general action cause diarrhoea, promoting discharge of urine and

perspiration etc. Now let us discuss the intrinsic properties of simple drugs before we deal with their actions. These are of four known types. Some of them are related to odours and colours while some others are also well-known; such as tenuity, density, viscosity, fragility, congealation, fluxion, salivariness, oiliness, absorption, lightness and heaviness

A tenuous drug is one which under the influence of our physical power, splits into very small particles and spreads throughout our bodies, for instance, saffron and cinnamon. Such drug is highly useful because of its effectiveness for its desiccative power shall be similar to the power of a strong and irritant substance without causing irritation.

A dense drug is one which does not have the aforementioned qualities, such as white pumpkin and gypsum.

A viscous drug is a drug which acts virtually or potentially, when influenced by the innate heat. When stretched it remains suspended and does not break. If stretched from both sides, the distance between the two ends of such a drug will go on increasing without break as honey.

A fragile drug is one which, even under a slight pressure, is apt to split into small particles in state of its dryness and density, such as aloe of superior quality.

A coagulant drug is one the ingredients of which are naturally fit to be expanded on a surface to adopt any position though actually it retains its form as well as its position. This is due to its extreme coldness e.g. wax. In short, in nature, it is fluid but not so actually.

A liquid drug is one that can not possibly retain its particular form and position when placed on a hard substance, since its higher parts move downward in all possible directions it may take. All liquids may be taken as examples of such a drug.

A mucilaginous drug is one whose extreme constituents become distinct when it (the drug) is soaked in water or a watery substance, and which as a whole tends to be viscous, e.g., ispaghula and marsh mallow. Seeds with such qualities may serve as laxatives because of their viscosity but when roasted their viscosity turns to be agglutinant and they become astringent.

An oily drug is one which contains within its substance some kind of oil, e.g. seeds.

An absorbing drug is a drug which is actually dry and earthy but when it meets water or any other liquids, it absorbs water invisibly through its pores, e.g. unslaked lime. As for the light and heavy drugs, the terms are self explanatory.

Now we take up the actions of drugs. We must give an account of only those actions which are popular on the basis of their aforementioned conditions. We shall explain them along with their names and forms. One group comprises of the following:

- (1) Warming (2) Rarefying/Attenuant (3) Solvent (4) Detergent
(5) Roughening (6) Deobstruent (7) Relaxant (8) Coctive (9) Erosive
(10) Carminative (11) Absorbent (12) Irritant (13) Rubefacient
(14) Pruritic (15) Ulcerative (16) Corrosive (17) Caustic (18) Lithotriptic
(19) Putrefactive (20) Pyrotic (21) Peeler (22) Digestive.

These are twenty two actions. The next group consists of the following:

- (1) Cooling (2) Tonic (3) Repellent (4) Inspissant (5) Immaturative
(6) Anaesthetic

These are six actions. The next group consists of the following:

- (1) Moistening (2) Flatulent (3) Abluent (4) Polluting wounds
(5) Lubricant (6) Smoothing.

These are six actions. The next group comprises the following:

- (1) Desiccant (2) Constricting (3) Astringent (4) Obstruent
(5) Agglutinant (6) Healing (7) Flesh-growing (8) Cicatrizing.

These are eight actions. The last group is classified according to its actions into:—

- (1) Fatal (2) Poisonous (3) Antidote (4) Bezoar (5) Purgative
(6) Diuretic (7) Diaphoretic.

In all, there are forty nine actions which we have choosen for discussion.

Now we give an account of all these actions and define them.

- (1) Attenuant drug is a drug which, through its moderate heat, greatly attenuates the humour e.g. hyssop, wild thyme and chamomile.
- (2) Dissolving drug is a drug which, by the intensity of its heat, is capable of dispersing the humour by gradually evaporating and dislodging it after a continuous struggle till it eliminates, through its energy, whatever humour is left e.g. castoreum.
- (3) Detergent drug is a drug which is capable of moving viscous and congealed fluids from the pores of the surface of an organ for their removal e.g. honey water. It may be noted that every detergent drug may serve as a laxative though there is no purgative power in it and naturally every bitter drug is detergent.
- (4) Roughening drug is a drug which makes the surface of an organ uneven (making the level irregular) The abundance of astringency combined with the density of its substance or intense pungency together with the tenuity of its substance removes the evenness. Or it may cleanse the rough surface which in fact was previously smooth. So when the rough and uneven surface of an organ of dense consistency is cleansed, the viscous fluid flows over it and a new smooth surface appears and original roughness is removed. The example is sweet melilote. The

roughening action of such a drug is exhibited mostly in bones and cartilages and rarely in skin.

- (5) Deobstruent drug is a drug which agitates the humoral matter lying deep in the cavity or orifice and opens the passage. These drugs are stronger than the detergent ones e.g. rock-parsley.

These drugs function in this manner because of their following properties:—

(a) They are either tenuous and solvent or (b) tenuous and erosive (the definition of an erosive medicine will be described later) or (c) tenuous and abluent. (the meaning of 'Abluent' is explained later). All the pungent drugs are deobstruent and all the bitter ones are tenuous and deobstruent. All the tenuous and liquid drugs are deobstruent, provided they tend to be hot or moderate (in temperament). In the same way all the tenuous and sour drugs are deobstruent.

- (6) Relaxant drug is a drug which softens the texture of organs, having dense pores. The pores become wider through its heat and fluidity and facilitate expulsion of superfluous matter deposited there, for example the plaster of dill and linseed.

- (7) Coctive drug is a drug which maturates the humour because of its moderate calorific and astringent properties which retain the humour till it is ripe and do not dissolve it rapidly. It separates its fluidity from its dryness. This process is called the oxidization of blood.

- (8) Digestive drug is a drug which helps in the digestion of food and this has been already described.

- (9) Carminative drug is a drug which through its heat and act of desiccation, dilutes the consistency of the gas by giving it more gaseous nature. The gas is thus dissolved and removed, for example, seeds of common rue.

- (10) Erosive drug is drug which, because of its tenuity, penetrates the surface of an organ and the attached viscous humour and separates the latter from the former. It provides variant surface for the parts of the humour so that they may be conveniently expelled from the place where they are entrenched, for example, mustard and oxymel. An erosive drug stands in sharp contrast with a sticky viscous drug just as solvent and attenuant drugs are incompatible with inspissant ones and attenuant drugs are the reverse of dense drugs. It is not necessary for an erosive drug to affect the consistency of the humour but it very often divides the humour into parts with every part retaining its original consistency.

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- (11) Absorbent drug is a drug which, due to its tenuity and heat, stirs the fluids as soon as it comes across them at a place...e.g. castoreum. A strong absorbing drug which absorbs (matter) from the depth, is very useful in sciatica. Its application in the form of plaster (after purification) is useful in chronic rheumatism. Such a drug helps extrusion and expulsion of thorns and spines.
- (12) Irritant drug is drug which is so penetrative, and tenuous that it splits (a compact matter) into numerous particles which are similar in shape but different in quantities. These particles are so small that they are not perceptible individually but only when taken as a whole, such as the plaster of mustard with vinegar or the vinegar alone.
- (13) Rubefacient drug is a drug which warms an organ so intensely that blood is attracted towards it (the organ) and it appears red from outside, for example mustard, figs and mint. The effect of the rubefacient drug is nearly that of cautery.
- (14) Pruritic drug is a drug which, due to its intense heat and absorption, causes the irritating itching humour to move towards pores, but it does not ulcerate. Such drugs are generally assisted in their function by their imperceptible and hard tiny thorns as wild celery.
- (15) Ulcerative drug is a drug which destroys and dissolves the aqueous humours formed in the structure of skin and attracts the injurious matter towards it causing an ulcer e.g. marking nut.
- (16) Caustic drugs is drug which dissolves the tenuous humours of the organs leaving behind the ashy matter e.g. gum euphorbium.
- (17) Corrosive drug is a drug with strong solvent and ulcerative properties causing severe damage to flesh e.g. verdigris.
- (18) Putrefactive drug is a drug which pollutes the temperament of the pneuma of an organ and also the temperament of the fluid to such an extent that they cease to be parts of the organ, but not to an extent where these are burnt or corroded. It dissolves the aqueous humours though there remain some polluted parts which act with out innate heat and thus putrefaction sets in. e.g. arsenic and wild sue etc.
- (19) Lithotriptic drug is a drug which comes across the petrified humour, reduces it into small pieces and crushes it, e.g. the calculifragous drug like jewish stone.
- (20) Cauterizing drug is drug which desiccates, burns and hardens the skin giving it an appearance of burnt coal. Such skin blocks the flow of a liquid humour (if it is there) and is called slough. These drugs are used to prevent blood from oozing out of veins e.g. white vitriol and yellow vitriol.

- (21) *Peeler drug* is a drug which by its intense cleansing property cleans the parts of the decayed skin such as *costus arabicus*, Indian birth-wort and all other drugs which are useful in ptyriasis and freckles.
- (22) *Cooling drugs* are well-known. (The term is self explanatory).
- (23) *Tonic* is a drug which moderates the disposition and temperament of an organ to an extent so that it resists the superfluous matter and disorders moving towards it. This action is elicited either by its inherent property, e.g. sealing clay and theriaca or by its moderate temperament which cools what is warm and warms what is cold. Galen explained the action of rose oil on these lines.
- (24) *Repellant drug* is a drug which is reverse of the 'absorbent one' which, by its own cold nature, creates some cooling effect in an organ making it dense, narrowing down its pores, breaking its absorbing heat and condensing the fluid flowing towards it or coagulating it and thus preventing it from reaching the organ e.g. garden night shade is used in case of swellings.
- (25) *Inspissant drugs* is a drug, opposite to an attenuent one. It makes the consistency of fluid denser either by its property of condensing or coagulating or merely by its physical contact.
- (26) *Immaturative drug* is a drug opposite to the digestive and maturative drugs. It is a drug which, by its very cold nature, renders the action of innate and extraneous heat on food and humours ineffective to an extent that they are left indigested and immature.
- (27) *Anaesthetic drug* is a cold drug which, by its cooling effect dissolves the pneuma of an organ to an extent that its motor and sensory power acquires a cold temperament and its substance becomes dense. It desensitises the temperament of the organ so much that it does not respond to the effect of psychic faculties e.g. opium and the henbane.
- (28) *Moistening drugs* are well-known.
- (29) *Flatulent drug* is a drug having foreign and dense humours. When innate heat acts on it, it does not dissolve swiftly but is transformed into wind e.g. the kidney beans. All flatulent substances produce headache and are harmful for the eye. But humours of some of the drugs and foods are transformed into wind in the first phase of the digestion producing flatulence in the stomach. This flatulence is reduced when it reaches the intestines. That substance (drug or food) which has superfluous humour contains flatulent matter. Its reaction takes place not in the stomach but in the veins or is not complete in the stomach but remains only partial, the rest being completed in the veins. That (drug or

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food) the reaction of which is to complete in the stomach is transformed into winds but that which has no reaction in the stomach its reaction takes place in the veins retaining the airiness. In short, every drug having superfluous foreign humour is flatulent e.g. dried ginger and rocket seeds and all those drugs which produce flatulence in the veins are erective.

- (30) *Abluent drug* is a drug which serves as a detergent not by its active but passive power which is helped by motion. The passive power here means the passive fluid power and 'Motion' means flow. When a rarefied flowing substance flows over the pores of the veins, it removes the superfluous matter with its moisture and flow, such as barley water and the pure water.
- (31) *Wound polluting drug* is a moist drug which, when applied, increases the secretions of the wound. The drying and healing of the wound is thus prevented.
- (32) *Lubricant drug* is a drug which, while meeting the surface of the body, makes it wet to flow what is confined within it (the body) capable of flowing. It softens and propels it out of its place by its natural gravity or repulsive power as is the action of Bukhara plums in diarrhoea.
- (33) *Smoothing drug* is a viscous drug which spreads over the surface of a dry organ and completely smoothens it. The external surface of that body becomes smooth and the dryness is concealed beneath some fluid which flows and spreads over it.
- (34) *Desiccant drug* is a drug which destroys fluids through its quality of dissolving and rarefying.
- (35) *Astringent drug* is a drug which because of its excessive movement creates density in the parts and state of an organ and closes the channels.
- (36) *Constricting drug* is a drug which by its astringency and condensing (quality) forces the thin fluids which have collected in the interstices of the organ, to be compressed and removed.
- (37) *Obstruent drug* is an anastaltic drug which, because of its dense, dry or agglutinating properties, is retained in the openings (of the body) and thus obstructions are formed there.
- (38) *Agglutinant drug* is a dry drug with some viscous fluid with which it adheres to the openings (in the body), and plugs them and blocks the flow of the substance. When the viscous and lubricant (drugs) are warmed they become agglutinant, obstruent and anastaltic.
- (39) *Healing drug* is dry which dries up and thickens the fluid collected between the two layers of a wound to such an extent that it (the fluid) becomes agglutinant and viscous and both the ends of the

wound adhere to each other, for example, dragon's blood and small aloes.

- (40) *Flesh growing drug* is a drug which converts the blood, congested on the face of a wound, into flesh by moderating the temperament of the blood and thickening it through desiccation.
- (41) *Cicatrizant drug* is a desiccant drug which dries up the surface of a wound and forms slough. This slough provides protection against injuries until the natural skin regenerates. All drugs which are moderate in two actions (heat and cold) are desiccant without causing irritation.
- (42) *Fatal drug* is a drug which excessively corrupts temperament e.g. gum euphorbium and Opium.
- (43) *Poisonous drug* is a drug which corrupts the temperament not because of its antagonistic (action) but by specific inherent property e.g. aconite.
- (44) *Antidote and Bezoar* drugs preserve the pheuma, maintain its vitality and soundness enabling it to remove the harmful effect of the poisons. The name theriaca is more appropriate for manufactured drugs and bezoar for simple natural ones. It seems that for the simple drugs, natural herbs are most suitable as antidotes and the minerals as bezoar. Although as a matter of fact no marked difference exists between the two.
- (45) *Purgative, Diuretic and Diaphoretic drugs* are well-known. It should be noted that every drug which is purgative is astringent as well, for example, *hermodactyle*, is greatly beneficial for rheumatism, because the purgative power of the drug absorbs the matter while the power of astringency facilitates the passage of matter. Thus the matter would neither move towards (joints) nor replace any other matter. It may further be noted that:
- (a) All solvent drugs having the quality of astringency, are moderate drugs which are very useful in flabbiness of the joints, phlegmatic swellings and convulsions. Each one of astringency and dissolution, helps in desiccation.
- (b) When astringency and the solvent power combine together dryness becomes intense.
- (c) Purgative and diuretic drugs are often opposite in their actions. In most cases a diuretic drug desiccates sediment (faeces) and the purgative reduces urine.
- (d) Drugs with both of heating and cooling qualities are beneficial for inflammatory swellings in so far as they stop them from being aggravated. Such drugs cause repulsion by their astringency and dissolution by their quality of heating.

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- (e) Drugs, which have antidotic properties and are cold, generally prove very beneficial in hectic fever while those having the same properties but hot are more useful than any other drug in coldness of the heart. Above all there is a power which distributes and provides a kind of temperament to all (medicines) which is suitable for it. So the dissolving power is not assigned to the matter which falls upon an organ. Similarly the cooling is not assigned to the matter which descends from an organ. This is an inspiration from God, the Glorious and the Magnificent.

Section V

Rules applying to extrinsic properties of drugs

Sometimes the drugs are subjected to rules which are followed when they are put into use as cooking, grinding, burning, washing and freezing or placing them in the vicinity of some other drugs.

There are drugs which do not follow the rules already mentioned. Their rules also undergo a change due to their mixing with some other drugs. More appropriately such a discussion should have been dealt with the discussion of drug composition. Therefore we state:

- (a) Some drugs are so dense that their properties are not manifested on cooking unless the cooking is very hard, e.g root of caper, Indian birth wort and long zedoary and similar other drugs.
- (b) Some drugs are so immoderate in temperament that only a moderate cooking is enough for them. If they are cooked hard their properties would be vanished and lost such as diuretic seeds, lavender and similar other drugs.
- (c) There are drugs which do not require even a moderate cooking; a light cooking is enough for them. If they are cooked hard their properties would be lost and the residual part would be ineffectual such as epithyme which loses its properties when cooked fairly well.
- (d) There are drugs which loose properties on grinding as scammony. These should, therefore, be ground mildly so that the heat generated by grinding, does not destroy their properties. Mostly gums have this characterstic. It is better to dissolve them in fluids rather than grinding.

All drugs which are ground excessively their properties are eliminated. When a substance is split into pieces, the pieces do not essentially retain the properties of the substance according to the proportion of their volume as compared with that of the whole

(substance). But the substance might have possibly been decreased in its potency to such an extent as to render the substance completely incapable of functioning in its own way. (As a matter of fact) when certain power in a substance causes movement, it is not necessary that the half of the substance may produce half of the said effect. Suppose ten persons carry a load in a day to a distance of one *farsakh* (3/14 miles), it is quite possible that five persons may absolutely be unable to lift up the load for half a *farsakh*. It is also not possible that half of the load is separated from the other half and it is to be carried separately by five persons. The power responsible for movement may be indivisible, as such it would be effective when taken as a whole and completely ineffective when divided. That is why, a drug is effective and operative when taken as a whole. According to one group the division of a drug into small parts destroys its potency and form. However we should not reject this opinion strongly so far as compound medicines are concerned.

Drugs which have some specific properties may, when ground excessively, acquire a different property. For example a drug which is capable of evacuating a humour or other superfluous matter may lose this capability and may evacuate only aqueous humour because of the loss of its (original) property. These (particles), because of their minute size, become more penetrating and reach an organ rapidly though this was not possible earlier. It happens particularly when quantity is abundant. It has been narrated by Galen that once he excessively ground the ingredients of (*majun*) *Kamūni*, it acquired a diuretic property though by nature it is a purgative. Therefore it is necessary that drugs which are tenuous in constitution should not be ground excessively. On the other hand drugs which are dense in their constitution and slow in movement should be ground thoroughly so that they can penetrate into remote parts of the body. Such medicines are used for lung diseases and contain coral, pearl, hematite and similar other drugs.

Burning of drugs

Some drugs are burnt to reduce and some to enhance their efficacy. Pungent, tenuous and moderate drugs when burnt reduce their pungency and heat since the inherent fiery substance of such a drug is dissolved e.g. vitriol and red vitriol. Drugs which are dense and neither hot nor intense in their potency enhance their intensity when burnt e.g. lime which is a mere stone but when burnt acquires intensity. It may be noted that drugs are burnt for five reasons: (i) to reduce their intensity, (ii) to enhance their potency, (iii) to attenuate

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their dense substance, (iv) to prepare them for grinding and (v) to eliminate corruption in their substance.

Example of the first is vitriol and yellow vitriol, of the second, quick lime, of the third, crab and burnt stags horn. The fourth may be exemplified by silk pod which is useful for strengthening the heart. It is better to use it after cutting it into pieces than to use it after it is burnt. Since to cut it into small pieces is difficult, it may be used when burnt. Example of the fifth is the burning of scorpion for use in calculi.

Now we take up the washing of the drugs. Washing deprives a drug of its intense and delicate substance and makes it a soothing medicine. It cools down the intense heat of some drugs. Washing removes fieriness from all those earthy drugs in which it (fieriness) is produced by burning, for example lime which (by washing) loses its heat and becomes moderate. Cooling down the heat of drugs is not the sole purpose of washing. By it a drug is broken into small pieces and thoroughly cleansed; for example, tutty in water. Washing also removes the unwanted side effects of a drug, for example, it removes the nauseating property from the armenian bole and *lapis lazuli*.

Next we take up congealation. It renders the tenuous property of all drugs ineffective and increases the degree of coldness in those drugs whose substance is already cold.

Now we take up the storing of some drugs in close proximity with others. By such storage drugs develop in them new qualities to an extent that their (original) actions undergo a change. Many cold drugs become hot in effect when kept with asfoetida, gum euphorbium, castoreum and misk. Many hot drugs become cold in effect when kept with camphor and sandal wood. It is essential to acquire this knowledge. One should abstain from keeping such different drugs in close proximity with one another.

Let us now take up the rules for admixture. Admixture enhances effects of some drugs while in some others it destroys them. Sometimes it serves as a corrective for drugs and removes their harmful effects. Example of the first type: some drugs have a mild purgative action and need a helping (drug) which when added to it heightens the action, e.g. turpeth root. It (turpeth) has a weak purgative action and is incapable of dissolving strongly. Hence it removes what is thin in the phlegm but when dried ginger is added to it, with the help of its intensity, it quickly evacuates a humour which is highly viscous and vitreous. Similar is the case with epithyme which is slow in purgation but when mixed with pepper and other tenuous drugs, purgates swiftly since, then, it helps dissolution. Similarly Himalayan rhubarb which has a strong astringent and at the same time a deobstruent

property, corrupts its action. When mixed with armenian bole or *acacia arabica*, it renders the constipation even more severe. Sometimes mixing (of drugs) is done to make them penetrative or serve as a vehicle. For example saffron is mixed with rose, camphor or coral to make it more penetrating (effective) for the heart. Sometimes drugs are mixed for a contrary purpose for example radish seeds are mixed with penetrative rarefying drugs so that they may be retained by the liver till the objective of their use is achieved. The objective will be lost if the drugs penetrate the liver, because of their tenuity, before the desired action is completed. The radish seeds create a tendency for vomiting. With their contrary action, they obstruct absorption by veins.

Medicines which lose their properties on mixing are those which have a common action but opposite or nearly opposite properties. If on mixing of two drugs, one dominates the other, the action would be performed but if it does not do so, there would be an opposing action; e.g. violet and chebulic myrobalan. The violet and chebulic myrobalan act as purgatives; the former with the help of its laxative property and the latter with its property of squeezing the matter and making it dense. If they are made to act jointly, the action of one will nullify the action of the other. If chebulic myrobalan acts first and produces squeezing effect and then violet is given, action (purgation) of neither will be elicited. If the violet acts first and produces laxity and then chebulic myrobalan produces squeezing, the resultant action will be very strong. The third category consists of such drugs as aloe, gum tragacanth and Indian bedellium. The aloe produces purgation and cleanses the intestines. It also causes intestinal abrasion and opens the pores of veins (vasodilation). Gum tragacanth reduces agglutination and produces constipation. If gum tragacanth and *muqul* are used along with it (aloe), the former, by producing agglutination, would remove intestinal abrasion caused by aloe while the latter would restore strength to the pores of the veins and thus safety would be achieved. These are the rules and examples beneficial for determining the nature and uses of drugs.

Section VI

Collection and storage of drugs

Drugs are of mineral, vegetable and of animal origin.

Mineral Drugs: Among the mineral drugs, the best are those which are extracted from reputed mines; for example, green vitriol of *Qabrus* (Cyprus) and vitriol of Kirmān, and those which are free from adulteration. It is essential that the drug to be selected should

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be possessing its specific physical structure and maintaining its characteristic colour and taste. *Vegetable Drugs*: The vegetable drugs comprise of leaves, roots, seeds, branches, flowers, fruits, gums and all other plant parts:

- (a) *Leaves*: They should be plucked when they have attained their full size. They should be maintaining their form and colour and their potency should not have diminished. * Moreover fallen and scattered leaves should not be taken.
- (b) *Seeds*: They should be procured when their substance has condensed and their rawness and moisture have disappeared.
- (c) *Roots*: They should be extracted when the trees have shed their leaves.
- (d) *Branches*: They should be taken when they have reached perfection and have not started drying or crooking.
- (e) *Flowers*: They should be plucked when they have reached full bloom but have not dried up or fallen down.
- (f) *Fruits*: It is essential that they are plucked when fully matured but before they fall down.

On the whole, it is essential that the drugs to be procured should be fresh and seeds should have formed within them, their roots should not be deformed or crooked, the seeds should be mature and unshrivelled. The best fruits are those which have attained full size and weight. Nuts which are shrivelled or broken are of no advantage; better among them are those which have acquired their full weight. The drugs procured when the weather is clear are better than those which are collected when the weather is humid or the rainy season is near. The drugs growing wild are stronger than those which are cultivated; the former are generally smaller in size. The drugs growing on hills or mountains are stronger than those growing in plains. Drugs collected from forests and places which are exposed to the sun-ray are better than those from other (shady) places. Again, those collected at appropriate times are better than those collected at inappropriate times. These guidelines should, however, be followed as far as possible depending upon the prevailing conditons. All those drugs which have a deep colour, definite taste and distinct smell are stronger. The strength of herbs is weakened after three years. However, some drugs are exempted from this (rule) e.g. the two hellebores (black and white) which maintain their strength longer.

- (g) *Gums*: They should be collected when coagulated but they grow not so much hard that they begin to be frittered away. Most of the gums, especially the *farbiūn* lose their strength after

three years. The potency or strength of a drug depends upon its excellence. If it is difficult to get a fresh drug of full strength, the older and the weak may be taken in twice the amount of the fresh drug irrespective of its class.

Animal drugs: They should be chosen from the young animals trapped during the *rabi* (spring season), should be of complete body and properly built, with all organs intact and discarding all such parts which after slaughtering and purifying are normally discarded. Animals which have died of some disease should not be considered. These are the general principles which a physician ought to know with regard to simple drugs.

Now we begin the second discourse. In it, we shall describe the nature (and properties) of the known simple drugs. Such knowledge of their actions and correct characteristics shall help us in their identification. However, we shall not include those drugs about which we have no knowledge except that we know their names.

Now with the will of God Almighty and His help we shall describe tables in colour;* each of which shall be arranged according to different colours and diseases.

SECOND DISCOURSE

Division of tables and the rules governing simple drugs

In the first discourse we have referred to the arrangement of tables. Now we intend to describe the specific colour of each table and the related disease. The first four tables are quite clear. The subsequent ones, however, need detailed explanation.

Do not think that we have undertaken to investigate a number of simple drugs. We have not done so. We have only described the simple drugs given into the chapters of simple drugs mentioned by us regarding their functions and rules and which are relevant to the tables

The first table out of the ones having different colours.

Table I

Action, properties and classes of simple drugs

Rarefying drugs, Dense drugs, Viscous drugs, Cleansing drugs, Attenuant drugs, Inspissant drugs, Adhesive drugs, Solvent drugs,

*While going through these lines we may conclude that Ibn Sina might have assigned different colours to various tables in order to help the reader recognise the functions and properties of drugs. Now those coloured tables are no more within our reach except their description in words given in this volume.

Detergent drugs, Agglutinant drugs, Roughening drugs, Smoothing drugs, Deobstruent drugs (that open the mouth of veins), Relaxant drugs, Erosive drugs, Carminative drugs, Absorbent drugs, Irritant drugs, Repellent drugs, Purifying drugs, Analgesic drugs, Rubefacient drugs, Pruritic drugs, Ulcerative drugs, Corrosive drugs, Caustic drugs, Antiputrefactive drugs, Putrefactive drugs, Cauterising drugs, Coctive drugs, immaturative drugs, anaesthetic drugs, antirelaxant drugs, softening (*mutakhalkhil*) drugs, flatulent drugs, abluent drugs, lubricant drugs, constricting drugs, astringent drugs, heat extinguishing drugs, blood purifying drugs, diaphoretic drugs, styptic drugs, anti-hidrotic drugs, drugs producing fine chyme, drugs producing defective chyme. drugs removing harms caused by water, drugs which are more nourishing, drugs which are less nourishing, drugs which strengthen organs, drugs which strengthen viscera, drugs which produce bad humours, drugs which are transformed into humours, drugs which are useful for diseases of black bile, drugs which produce black bile, drugs which produce yellow bile, drugs which produce phlegm, drugs which remove harmful effects of phlegm, drugs which suit old people, drugs which have extrinsic actions, drugs which reveal their actions on coming in contact with the air and the drugs which serve as a vehicle for help in purgation.

Table II

Cosmetics

Drugs which purify, drugs which produce trubidity and roughness, drugs which remove sun burns, drugs which are useful in cases of *pityriasis nigra*, leukoderma and *pityriasis alba*, drugs which produce leukoderma, drugs which relieve of ring worm, freckles and mother's mark, drugs which produce freckles and mother's mark, drugs which remove scars, scars of small-pox, rupture of lips, cracking of the facial skin and splitting of the hair, drugs which redden the complexion. drugs which relieve of the kibes of the feet, drugs which remove tatoo marks, drugs which remove warts and the foul smell of arm-pits-and other parts of the body; drugs which are used in leprosy, drugs which produce leprosy, drugs which pull out the secoundine and thorns, drugs which brightens the teeth, drugs which extract the teeth, drugs which relieve ozena and fetid breath, drugs which produce fetid breath, drugs which fatten the body, drugs which emaciate the body, drugs which eliminate the lice, drugs which produce the lice, drugs which relieve whitlow, drugs which relieve anychorrhesis (*asnān al-fār*), drugs which stop the crooking and decay of the nails, drugs which stop the emergence of white dots on the nails, drugs

which protect breasts and testicles, drugs which improve the complexion and the drugs which improve the smell of the breath.

Drugs pertaining to the hair

Drugs which darken the hair, drugs which whiten the hair, drugs which lengthen the hair, drugs which grow hair profusely, drugs which redden the hair, drugs which curl the hair. Drugs which strengthens the hair, drugs which unroll the hair, drugs which split the hair, drugs which stop the hair from splitting, drugs which stop *Alopecia* and *Alopecia furfuracea*, drugs which stop the falling of the hair, drugs which remove baldness, drugs which cause falling of the hair, drugs which cause baldness, drugs which remove the hair and the drugs which promote growth of the hair.

Table III

Swellings and pustules

Drugs which are helpful in hot swellings, drugs which are helpful in cold swellings drugs which are helpful in internal swellings, drugs which are helpful in phlegmona, drugs which are helpful in oedema, drugs which are helpful in flatulence, drugs which are helpful in cancer.

Drugs which are helpful in hard swellings, drugs which are helpful in scrofula, drugs which are helpful in favous, drugs which are helpful in absceses, drugs which are helpful in internal abscesses, drugs which are helpful in carbuncle, drugs which are helpful in herpes, drugs which are helpful in urticaria, drugs which are helpful in *miliaria rubra*, drugs which are helpful in blisters, drugs which are helpful in eczema, drugs which are helpful in checking the spread of plague, drugs which are helpful in swelling of the wounds, drugs which are helpful in prickly heat, drugs which are helpful in acne, drugs which are helpful in neuritis, drugs which are helpful in myositis, drugs which are helpful in parotitis, drugs which are helpful in swellings of the armpit, drugs which are helpful in hydrocele, drugs which are helpful in enterocele, drugs which are helpful in physocele, drugs which are helpful in hepatitis, drugs which are helpful in splenitis, drugs which are helpful in stomatitis, drugs which are helpful in penitis, drugs which are helpful in uteritis, drugs which are helpful in cystitis, drugs which are helpful in mastitis, drugs which are helpful in swellings of the groin, drugs which are helpful in orchitis, drugs which are helpful in nephritis, drugs which are helpful in swellings of the anus, drugs which produce hot swellings, drugs which cause oedema, drugs which cause hard swellings and the drugs which cause cancer.

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Table IV

Wounds and ulcers

Drugs which are helpful in: creeping ulcers, malignant ulcers, septic ulcers and dirty ulcers, drugs which render the wounds dirty, drugs which are helpful in fistula, drugs which are helpful in callus, drugs which fill up the wounds, drugs which stimulate flesh growth, drugs which remove excessive flesh, drugs which cicatrizes, drugs which are helpful in scabies, drugs which are helpful in prurigo, *scabies pustulosa*, atrabillious scabies, burns, rodent ulcer, acne and apthra, drugs which prevent putrefaction of organs, drugs which are helpful in eczema, drugs which are helpful in deformities of bones, drugs which soften the slough, drugs which are helpful in (removing) secundine and the drugs which are helpful in pulmonary ulcers.

Table V

Joints

Drugs which are helpful in: arthralgia, sclerosis, dislocation and tearing of the muscles, sprains, bruises, fatigue, neuralgia, drugs which produce neuralgia, drugs which are helpful in tortuosity of nerve, drugs which are helpful in the stiffness of the joints, drugs which are helpful in diseases of cold (temperament of the nerves, drugs which strengthen the nerves, drugs which produce swelling in the nerves and the drugs which are harmful for the nerves. Drugs which are helpful in: sciatica, neural ulcers, dorsalgia, fall injuries, trauma, convulsions or spasms, distension, tetanus, paralysis, chorea, dislocations, hydrocele, hernia, pains due to dislocation, pain of the feet, gout and drugs which help in doing away with the crusts of bones.

Table VI

The organs of the head

Drugs which are harmful in: hot headache, cold headache, hemicrania and helmet headache, drugs which are harmful for weak brain, drugs which cause headache, drugs which strengthen the faculties of head (brain), drugs which increase the substance of the brain, drugs which 'purify' the brain, drugs which dissolve the gases produced in the head, drugs which remove obstructions from the brain, drugs which are helpful in facial paralysis, drugs which are helpful in apoplexy, drugs which cause heaviness in the head, drugs which produce coma, drugs which induce sleep, drugs which cause giddiness, drugs which reduce narcoma, drugs which are helpful in epilepsy, drugs which

produce epilepsy and drugs which are helpful in vertigo, drugs which are helpful in: giddiness, coma, melancholia, phobia, and mania, drugs which are helpful in cases in which children get frightened in the sleep and drugs which are helpful in lithargia, drugs which are helpful in: phrenitis (hot): coma, vigil, catalepsy and strengthening the memory, drugs which cause loss of memory, drugs which remove hangover (after effect of intoxication), drugs which prevent hangover, drugs which are helpful in tinnitus and sonitus, drugs which are helpful in deafness and paracusis, drugs which are helpful in ear-ache, drugs which are helpful in inflammations of the ears, drugs which are helpful in ear wounds, drugs which are helpful in cold and catarrh, drugs which are helpful in epistaxis, drugs which produce epistaxis, drugs which produce thirst, drugs which remove thirst, drugs which are helpful in stomatitis and vesicular stomatitis, drugs which are helpful in diseases of the mouth, drugs which prevent excessive salivation, drugs which are helpful in strengthening the teeth, drugs which are helpful in tooth-ache, drugs which expedite dentition in children and the drugs which are helpful in pains of molar-teeth, drugs which are helpful in: glossitis, ranula, wounds of the gums, bleeding of the gums, and dandruff.

Table VII

Ocular organs

Drugs which are helpful in: hot conjunctivitis, chronic conjunctivitis, vascular keratitis, ulcers of the eye, removing motes from the eyes, removing blood spots from the eyes, removing green spots from the eyes, removing blue spots from the eyes, removing white spots from the eyes, protrusion of the eyes and thickness of the cornea, drugs which are helpful in epiphora, drugs which produce tears, drugs which strengthen eye-sight, drugs which prevent the descending of humours, drugs which are helpful in cases of falling of the eyelashes, drugs which are helpful in constriction of the eye, drugs which are helpful in cataract, fistula lachrymalis, pterygium and white secretion of the eye and the drugs which preserve healthy condition of eyes, drugs which are helpful in: trachoma, itching of eyes, tarsitis, removing harmful hair from the eyes, iridoptosis and eye wounds.

Table VIII

Respiratory organs and chest

Drugs which strengthen the respiratory organs, drugs which harm the respiratory organs, drugs which are helpful in tonsillitis and uvulitis, drugs which are helpful in diphtheria (suffocation), drugs which are

helpful in angina, drugs which are helpful in removing the leech (stuck in the throat), drugs which are helpful in breathing afflictions, drugs which are helpful in asthma and orthopnea, drugs which are helpful in removing roughness from the chest, drugs which produce roughness in the chest, drugs which remove roughness of the voice, drugs which cause roughness in the voice, drugs which cause loss of the voice, drugs which clear the voice and drugs which render the voice clearer. Drugs which are helpful in: cough, dry cough, chronic cough, pleurisy, pneumonia, removing the pus, pyoptysis and pthisis, drugs which cleanse the wounds of the diaphragm, drugs which are helpful in haemoptysis, drugs which are helpful in rib pain, drugs which are helpful in removing the blood coagulated in the lungs, drugs which strengthen the heart, drugs which sharpen the intellect, drugs which are helpful in hot dyscrasia of the heart, drugs which are helpful in cold dyscrasia of the heart, drugs which are helpful in syncope, drugs which are helpful in cold palpitation, drugs which are helpful in hot palpitation, drugs which are helpful in diaphragmatic pain, drugs which increase the milk in the breasts and drugs which are helpful in mastitis.

Table IX

Alimentary organs

Drugs which strengthen the stomach, drugs which weaken the stomach, drugs which promote digestion, drugs which hamper digestion, drugs which reduce the appetite, drugs which cause a total loss of appetite, drugs which corrupt the appetite, drugs which are harmful for the stomach, drugs which are helpful in hiccough, drugs which are helpful in nausea, drugs which produce nausea, drugs which produce pains, drugs which are helpful in eructation, drugs which produce eructation, drugs which relax the stomach (muscles), drugs which help in the coction (of the food) in the stomach, drugs which remove the obstruction from the stomach, drugs which produce irritation in the stomach, drugs which lubricate the stomach, drugs which are helpful in the cancer of the stomach, drugs which produce thirst, drugs which soothe the stomach, drugs which cause flatulence, drugs which give relief in flatulence, drugs which are helpful in gastralgia, drugs which are helpful in stomatitis, drugs which strengthen liver, drugs which are harmful for the liver, drugs which are helpful in hepatalgia, drugs which remove liver obstructions, drugs which produce obstructions in liver, drugs which cause hot inflammations of the liver, drugs which cause cold inflammations of the liver, drugs which are helpful in sclerosis of the liver, drugs which cause sclerosis of the liver, drugs which weaken the liver, drugs which are helpful in yellow jaundice, drugs

which are helpful in black jaundice, drugs which produce jaundice, drugs which are helpful in ascites, drugs which are helpful in anasarca, drugs which are helpful in tympanitis, drugs which produce dropsy, drugs which are helpful in splenalgia, drugs which are helpful in splenitis drugs which produce sclerosis of the spleen and the drugs which produce flatulence in the spleen.

Table X

Excretory organs

Drugs which evacuate the bile, drugs which evacuate moisture and viscous humours, drugs which evacuate black bile, drugs which evacuate moisture, drugs which evacuate gases, drugs which evacuate blood, drugs which cause constipation, drugs which are helpful in diarrhoea, drugs which are helpful in sprue, drugs which produce abrasion in cases of cholera, drugs which cause cholera, drugs which are helpful in lienteric diarrhoea, drugs which slow down the action of intestines, drugs which are helpful in abrasions and intestinal ulcers, drugs which are helpful in gripes, drugs which produce gripes, drugs which are helpful in dysentery, drugs which are helpful in cold colic, drugs which are helpful in hot colic, drugs which are helpful in flatulent colic, drugs which are helpful in colic inflammation, drugs which are helpful in intestinal inflammation, drugs which are helpful in iliac passion, drugs which, are helpful in (eliminating worms from the stomach,) drugs which are helpful in intestinal colic, drugs which remove excessive foul smell of human excreta, drugs which are diuretic, drugs which help in menstruation, drugs which are diuretic as well as help in menstruation, drugs which are helpful in retention of urine, drugs which produce urethritis, drugs which cause strangury, drugs which produce enuresis, drugs which produce hematuria, drugs which produce pyuria, drugs which strengthen the kidneys, drugs which are harmful for the kidneys, drugs which are harmful in diabetes, drugs which are harmful in vesical calculus, drugs which are harmful in general calculus, drugs which are harmful in nephritis, drugs which are harmful in inflammations of the bladder, drugs which are harmful in nephralgia, drugs which are harmful in renal wounds, drugs which are harmful in vesical ulcers, pustules and prurites, drugs which are harmful in cystic pain, drugs which are harmful in cystic paralysis, drugs which strengthen the bladder, drugs which are harmful for the bladder, drugs which cause uterine pain, drugs which check leorrhoea, drugs which check (excess) menstruation, drugs which are emmenagogue, drugs which are helpful in metritis, drugs which are helpful in sclerosis of the uterus, drugs which are helpful in adhesion of uterus,

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drugs which are helpful in hysteria, drugs which give warmth to the uterus, drugs which constrict the uterus, drugs which are helpful in gases of the uterus, drugs which are helpful in pustules of the uterus, drugs which are helpful in wounds of the uterus, drugs which clean the uterus, drugs which help in conceiving, drugs which prevent conception, drugs which cause sterility, drugs which protect the foetus, drugs which protect the foetus, drugs which destroy the foetus, drugs which expel the foetus, drugs which remove the placenta, drugs which help in delivery (child-birth), drugs which cleanse the women in confinement, drugs which are aphrodisiac, drugs which produce semen, drugs which reduce the formation of semen, drugs which check the frequency of nocturnal emissions, drugs which help in excessive seminal emissions, drugs which help in erection, drugs which are helpful in priapism, drugs which are helpful in inflammation of the penis, drugs which are helpful in wounds of the penis, drugs which are helpful in *Prolapsus ani* drugs which strengthen the anus (sphincter), drugs which are helpful in inflammation of the anus and drugs which are helpful in: wounds of the anus, piles, bleeding of the anus and in the paralysis and protrusion of the anus.

*Table XI**Fevers*

Drugs which are helpful in: hot fevers, chronic cold fevers, irregular fevers, tertian fevers, burning fevers, incessant fevers, quartan fevers, paroxysmal fevers, epidemic fevers, hectic fevers, ephemeral fevers, ichthyotic-ephemeral fevers, fatigue-ephemeral fevers, inflammatory-ephemeral fevers, chronic fevers, irregular fevers, tertian irregular fevers, fevers with shivering and comatose fevers.

*Table XII**Poisons*

Theriaca, bezoar, insecticides, insect repellents. Poison lethal drugs, drugs acting as antidote to aconite, drugs acting as antidote to arsenic, drugs acting as antidote to vipers gall, drugs acting as antidote to opium, drugs acting as antidote to henbane, drugs acting as antidote to impure oxide of lead, drugs acting as antidote to thorn-apple, drugs acting as antidote to cantharides, drugs acting as antidote to wolfbane and leopards bane, drugs acting as antidote to sea-rabbit, rodenticides, drugs which act as antidote to snake bite, drugs which act as antidote to viper bite, drugs which act as antidote to scorpions sting, drugs which act as antidote to bites by trantula and spiders, drugs which act as

antidote to stinging by heavytailed scorpions. Drugs which act as antidote to bites by vulture's lice, drugs which act as antidote to dog-bite, drugs which act as antidote to human-bite, drugs which act as antidote to the bite by mad dog, drugs which act as antidote to the bite by eel (a kind of sea snake), drugs which act as antidote to weasel bite, drugs which act as antidote to mole bite, drugs which act as antidote to (the wounds caused by) the poisoned arrows, drugs which act as antidote to lethal poisons, drugs which act as antidote to the pounded spogel seeds, drugs which act as antidote to (the wound caused by) armenian arrows and drugs which act as antidote to the gall of leopard.

These are the tables which we had promised and by presenting them we have fulfilled it.

Rules

Now we take up the rules of classification adopted by us. We have divided them into two sub-rules.

First sub-rule

You should note that we have included in medicine the simple drugs (separately dealt with) which are in use. We shall give tables listing their varieties. This has been done as a law and it carries codification and is intended to facilitate comprehension by our students in the matter of selecting beneficial drugs pertaining to each organ of the body, whether external or internal. We have also described the harmful effects of drugs. These Tables are:

Table-1 is on the names of simple drugs and their properties.

Table-2 is on selection of the best drug.

Table-3 deals with the nature and temperaments of drugs.

Table-4 is on general descriptions and actions of drugs e.g. dissolution, coction, agglutination and anaesthetisation etc which we have described in the first discourse along with any other properties possessed by them. For the purpose of easy identification we have used one colour for one table.

Table-5 is on drugs which are helpful in beautification of skin and hair e.g. those which remove *Pityriasis alba*, leukoderma, warts, and which are used in cosmetics.

We have already explained with the help of colours all that occur in the skin and hair. The tables in different colours shall help in easy identification and selection of all simple drugs.

Table-6 is on the actions of drugs inflammations and pustules. You shall find a separate colour for each class of the drugs.

Table-7 which in the same way is on (drugs for) ulcers, abscess, fractures, having different colours.

Table-8 which is on (drugs for) diseases of the joints and nerves, also in different colours.

Table-9 is (on drugs) for diseases of the head, given in their specific colours.

Table-10 is (on drugs) for colour diseases.

Table-11 is (on drugs) for diseases of the respiratory organs given in their specific colours.

Table-12 is (on drugs) for diseases of the alimentary organs in their specific colours.

Table-13 is (on drugs) for diseases of the excretory organs given in their specific colours.

Table-14 is (on drugs) for fevers and allied diseases.

Table-15 relates to poisons.

Table-16 is on substitutes (of drugs) when the desired drug is not available: often one single drug will be found in each of the tables and often certain drug will not be found in a few tables".

Second sub-rule

The second principle is on the description of simple drugs with the rational order of the alphabets. Now we say that names of all the drugs falling under this class will be given in alphabetical order so that those who are engaged in this profession may easily pick up benefits of each drug for diseases of particular organs mentioned in the Tables relevant to that organ.

For this classification we have arranged twenty eight sections, each consisting of different names of drugs which have been mentioned at the end of each section. After the tables and sections which show the potency of drugs are over, we close the second chapter as well as this book.

LETTER *Alif*

1--- *Ābnūs*

Ebony

Diospyros ebenum Koenig

Nature: Ebony is well known. It is a wood of a tree obtained from zanj (Africa). According to Dioscorides it is obtained from Habsha (Ethiopia formerly Abyssinia). It is jet-black, has no layers, and when hand is passed over it, it gives the feeling as if the hand is being

passed over a perfect hern. It is said that ebony is conical. When crushed, it breaks into coarse particles which irritate the tongue.

Choice: The best obony is black, straight, without lines, gives the feeling of a conical horn when hand is passed over it. It is thickened irritating in taste and gives a pleasant smell when put on burning coal.

Temperament: It is hot and dry in second degree. Some people presume that by its intrinsic heat, it reduces the heat of the blood.

Actions and properties: When rubbed with water in the manner most stones are rubbed, it becomes attenuent and detergent.

Ocular organs: Ebony acts as a detergent in cases where membrane covers the eye and opacity of the cornea. A suppository is made of its powder. It is used as a whet stone to prepare medicines for the eyes since it is very suitable for this purpose. Its powder, when burnt on a hot plate and then washed, is very useful in chronic ulcers of the eye and trachoma.

Excretory organs: Some physicians hold the view that ebony dissolves the kidney-stone and removes flatulence of the abdomen.

2— *Ādhān al-fār*

Mouse ear

Auricula muris

Nature: Mouse ear is a grass. According to Galen its potency is almost equal to that of the grass which is used in polishing the glass. The name applies to two kinds of grasses. One of them, as mentioned by Galen, gives out the smell of country-mallow and has no hardness. According to Dioscorides it is a grass resembling lablab, has small blades, spreads over the earth and its stems are thin. The cultivated variety is good (in quality), odourless and has no strong taste, its flowers are azure in colour and the seeds resemble coriander Swallows relish it. It is pungent (in taste) especially if not grown near water. Masiḥ states that its properties are like those of absinth, but this is unlikely.

Temperament: Of the two kinds described by Galen one is cold and moist in the first degree while the other is more pungent than all the other drugs.

Actions and properties: The first kind has no astringency while the second one is desiccant and rubefacient.

Wounds and ulcers: The kind mentioned by Dioscordes removes the thorn and arrow tips and lubricates the wounds.

Organs of the head: It is useful in epilepsy if administered in the form of a drink. If snuffed it is highly useful in facial paralysis and also cleanses the brain.

3— *Ādharyūn*

Sun flower

Helianthus annuus, Linn

Temperament: It is hot and dry in the third degree.

Cosmetics: When applied after pulverizing with vinegar it is useful in alopecia.

Joints: Its ash applied with vinegar as epithem_{is} useful in sciatica.

Excretory organs: According to Dioscorides, if a (pregnant) woman touches its wild variety or uses it as a pessary, she immediately will have abortion.

Poisons: It is useful against all poisons, especially in poisoning by (animal) bites.

4— *Āzād darakht*

Persian lilac

Melia azedarach Linn

Nature: It is well known tree. Its fruit resembles that of christ thorn. In Ray people call it *Shajarah al-Ahlilaj* (tree of myrobalan) and *Kunār*, and in Ṭabaristān it is called *Ṭāhik*. It is one of the large trees.

Temperament: The buds are hot in the third degree and dry in the last of the first degree.

Actions and properties: The buds remove obstructions.

Cosmetics: The juice of its leaves kills lice and lengthens the hair, especially when its roots are used with wine.

Organs of the head: The buds remove obstructions from brain.

Respiratory organs: The fruit is very harmful, even lethal, for the chest.

Alimentary organs: The fruit is harmful for the stomach and causes pain.

Fevers: It is said that the decoction of its bark mixed with the juice of fumitory and myrobalan processed by the method of tarwīq (placing the juice on mild fire for such times as the chlorophyll separates and then filtered), is useful in phlegmatic fevers.

Poisons: The extract of the tips of its twigs, mixed with honey, serves as an antidote against all poisons but sometime its fruit causes death.

Substitutes: The leaves of hemp, myrtle and christ-thorn are its substitutes for lengthening the hair.

5— *Ās*

Myrtle

Myrtus communis Linn.

Nature: Myrtle is a well-known tree. It has bitterness along with astringency and (some) sweetness. It has some coldness because of its astringency. Small shoots of its roots are most potent. These shoots are cut in pieces by scissors, (to be used) with an acrid drink. It has an earthy and rarefied substance. The shoots appear on the stem, have the colour of the stem and in form they resemble the palm of the hand. The oil (of myrtle) has the properties which we shall describe.

Choice: The blackish myrtle is most potent, particularly its *khusrawāni* variety with round leaves and preferably the mountainous one. The fruit of black myrtle is less potent than that of white one. The flower of the white variety is the best and so is the extract of its fruit. However, this extract when becomes old, it grows weak and gathers fungus. It is necessary to make tablets (of the extract).

Temperament: It has some mild hotness though coldness is dominant. Its astringency excels its coldness. Presumably, its coldness is in the first degree and the dryness in the second degree.

Actions and properties: It stops diarrhoea, perspiration, bleeding of all kinds and any other flow towards the organs. It strengthens the body and absorbs fluids already gathered under the skin if used for massage in the bath. Its decoction when poured with some force over a (broken) bone sets it.

A charred (piece of its wood) serves as a substitute for copper sulphate in removing foul smell of the body. If used as a drink, or as plaster or epitem, it helps in (stopping) all kinds of bleeding. Similar is the property of the rob (of its wood) or fruits. Its astringency is more powerful than its coldness. It has a little nutritive value. No syrup equals that of myrtle producing constipation and relieving pain of the lungs and cough.

Cosmetics: Its oil specially its fruits, extract or decoction strengthen the roots of the hair, prevents their loss and lengthens and darkens them. The decoction of its fruit mixed with olive oil stops perspiration and acts as a corrective in intestinal abrasions. Its dry leaves remove stench of the armpits and groins. Its ash is a substitute for copper sulphate and helps in the removal of freckles and grey spots on the body and clears the scars of pityriasis.

Inflammation and pimples: When used with olive oil, it gives relief in hot inflammations, erysipelas, herpes, pimples, urticaria, wounds of the palms and burns. Similar is the action of its syrup or of the plaster made from its leaves alongwith wine and olive oil. Similarly the action of its oil or of the ointments made from its oil has the same effect. The sprinkling of its powder is useful for whitlow

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A *Qayrūfi* (a form of ointment) made from it has also this property. Its fruits cooked with wine and turned into a plaster, cure the palms and feet wounds and burns and prevents blistering. A *Qayrūfi* made from its ash acts similarly.

Joints: Its fruits, cooked with wine and turned into a plaster, are helpful in the faccidity of joints. Its (powder) when sprinkled over broken bones, which do not unite proves beneficial.

Organs of the head: It stops epistaxis, removes dandruff, dries up the wounds of head and ears. Its juice, when dropped (on the wounds) dries out the pus. The syrup is useful for flaccid gums. Leaves cooked with wine and turned into a plaster, relieve severe headache. Its syrup when sipped before taking *Nabtdh* (a kind of wine) prevents intoxication.

Ocular organs: It gives relief in conjunctivitis and protusion of the eyes. When cooked with barley flour and applied, it cures inflammation of the eyes. Its ash is included in medicines made for pterygium.

Respiratory and chest organs: It strengthens the heart and removes palpitation. The fruit, because of its sweetness, is useful in cough. Myrtle causes constipation due to its astringency, though in itself it is a purgative. The fruit as well as its pulp is useful in haemoptysis.

Alimentary organs: Myrtle, especially the rob of its fruits, strengthens the stomach and its seeds stop the flow of superfluous matter towards the stomach.

Excretory organs: The fruit extract is diuretic and useful in urethritis and burning sensation in the bladder. It is also very useful in checking excessive menses. The juice causes constipation and stops biliary and melanotic diarrhoea. When mixed with sesame oil and applied as a liniment, it drives out the phlegm thoroughly and purges it out. The decoction of its fruits is useful in leucorrhoea. Its plaster is good for piles and inflammation of testicles. The decoction is useful in *prolapsus ani* and *prolapsus uteri*.

Poisons: Myrtle is useful for the bite of trantula. Its fruit, when used with wine, has similar property. It is also useful in scorpion bite.

Substitutes: Extract of myrtle is the substitute for myrtle seeds.

6— *Alūsan*

Lupin

Lupinus termis Forsk.

Nature: Lupin is a grass resembling Egyptian (grass) *turs*. Hence it is called *tursi* also.

Temperament: It is hot and dry in the first degree.

Actions and properties: It is moderately desiccant and detergent.

Cosmetics: By moderate action it gradually removes freckles and allied disorders.

Poisons: Galen states “*Ālūsan* especially is useful in bites by mad dogs. Many persons (bitten by mad dogs) were cured by its use”. It is because of this fact that (the grass) is termed as *Ālūsan* in Greek.

7— *Āmlaj* Emblic myrobalan *Emblica officinalis* Gaertn.

Nature: *Āmlaj* is a well known tree. The *Murabba* (fruits cooked and preserved in sugar) of *Āmlaj* is weaker (in effect) than the *Murabba* of Chebulic myrobalan. When the fruits are soaked in milk, the resultant product is called *Shūr-Āmlaj* (milk of emblic myrobalan).

Temperament: According to the physician Yahūdī, it is hot. According to the Indian physician Charak *Āmlaj* is calorific. Probably the correct position is that *Āmlaj* is a little cold and dry.

Actions and properties: It reduces the heat of blood.

Cosmetics: It strengthens the roots of hair and darkens them.

Joints: It is very useful for nerves and joints.

Ocular organs: It is useful for eyes.

Respiratory and chest organs: It strengthens and purifies the heart and increases intellect.

Alimentary organs: It strengthens the stomach enabling it for better coction, satisfies the thirst, (stops) vomiting and increases appetite.

Excretory organs: It strengthens the stomach and stimulates sexual urge. A group of physicians hold it to be a styptic drug. However, its *murabba* serves as mild laxative, is good for piles and expels the phlegm and black bile.

8— *Ubbār and Ānuk* lead and burnt lead *Plumbum*

Nature: *Ubbār and Ānuk* are black lead. It has watery substance which is condensed by coldness. Besides, it has moderate airiness and earthiness. According to Galen its moisture content is evidenced by the fact that it melts quickly and its weak constitution is indicative of its airiness. When left on wet place, it grows in volume. It has an intense cooling effect on inflammations.

Temperament: It is cold and moist in the second degree.

black (plant) with plenty of leaves attached to the root. Its root has the thickness of a finger. It is of very red colour which colours the substances that come to its contact in summer. One variety has yellow leaves but the rest of it are red coloured. There are four varieties *Abū Khalsā*, *Abū Sāvīras*, *Au khālsūs* and *Iksōfānīn*.

Choice: The first two varieties are stronger (in properties).

Temperament: According to Galen its temperament is hot and dry while some other physicians hold an opposite opinion.

Actions and properties: *Abū Khalsa* variety is attenuant with some astringency and hence acrid and bitter. Remaining varieties manifest the other property of astringency. The last two varieties are more pungent and hotter than the first two. The roots are hotter (in temperament) than the leaves.

Cosmetics: When painted with winegar, it cures pityriasis and the exfoliating skin disease. The leaves are weaker than the roots.

Swellings and pimples: The roots of *Abū Khalsā* when used with barley flour, resist erysipelas. Similar is the action of the roots of *Au khālsūs*. It dissolves scrofula when applied with fat.

Ulcers and wounds: It is applied with wax and olive oil on wound, especially on the burn wounds.

Alimentary organs: The root of *Abū Khalsā* helps the stomach in coction. Its decoction with hydromel is useful in jaundice and splenalgia.

Excretory organs: The decoction with hydromel or juice of safflower is useful in nephralgia and kidney stones. A pessary made from its roots induces abortion. Its leaves cooked in wine cause constipation. However, *Abū Khalsā* dissolves (removes) bilious humour. Its yellow leaves used alongwith hyssop and mustard kill the worms of the stomach and expel them. Similar are the properties of *Shanjār* and its yellow variety, the latter is, however, stronger.

Fevers: Decoction of the root of *Abū khalsā* with hydromel is useful in chronic fevers.

Poisons: Spitting on the insects the chewed yellow fruit of *Abū Khalsā* having red leaves kills them. The last two varieties of *Abū Khalsā* when used in both forms, as a drink or paint, are useful in snake-bite.

12— *Abhal*

Juniper berry

Juniperus communis Linn

Nature: *Abhal* is juniper berry and resembles azarole. However, it is more black and fragrant than azarole. The tree is of two varieties.

The leaves of one variety resembling those of cypress, are thorny, flat and not long. The leaves of another variety resemble those of tamarisk (in shape) and its taste is like that of cypress. This variety is drier than the first but is less hot (in temperament). Cinnamon, twice in quantity (of *Abhal*) serves the same purpose as *abhal* does.

Temperament: Some physicians hold it to be hot and dry in the third degree.

Actions and properties: It is a strong dissolvent, desiccant, irritant and slightly astringent. It is mixed in oils which are—heat producing or which have sweet smell. It is mixed mostly in those oils which are prepared by the extract.

Ulcers and wounds: Its powder is useful when sprinkled with honey on corroding, putrid and spreading black ulcers. When used as a plaster, it will act as a healing agent, not because of its irritant nature or excessive heat or dryness but because it is a desiccant.

Organs of the head: Nuts of *abhal*, when cooked with sesame oil in an iron pan till the nut grows black are used as ear drops, help in deafness.

Excretory organs: When used in the form of a drink, *abhal* causes haematuria and abortion. It also induces abortion when used in the form of a pessary or as a fumigant.

13— *Abi'al*

Alfalfa

Medicago sativa Linn

Nature: It is an Arabic drug resembling *qatt* (Lucerne) and blue melilote with too many offshoots and seeds like those of carrot. It grows in spring season.

Temperament: It is hot.

Alimentary organs: It is very useful for spleen.

Excretory organs: It is a diuretic.

14— *Utruj*

Citron

Citrus medica Linn

Nature: *Utruj* is a well known drug. The oil taken from its rinds is strong in property while that from its buds is weak in all respects.

Temperament: The find of *Utruj* is hot in the first degree and dry in the last of the second degree. The pulp is hot in the first degree with some moisture. Some physicians hold it to be cold and moist

in the first degree inclining more towards coldness. Its sourness is cold and dry in the third degree. The seeds are hot in the first degree and desiccant in the third degree.

Actions and properties: The pulp is flatulent but the leaves give relief in flatulence. The buds are more tenuous; its sour portion is astringent and removes yellow bile. The seeds and rinds are dissolvent. Rinds are placed in clothes to keep the moths away. Its fragrance serves as a counter-agent against evil effects of epidemic air.

Cosmetics: The sour portion of *Utruj* clears the complexion and removes the freckles. The rinds, if burnt and applied, are very good for leukoderma. The decoction imparts good smell to the body. *Utruj* fattens the body. Its rind, when retained in the mouth, gives a pleasant odour.

Inflammations and pimples: The juice of *Utruj* if applied as a liniment, is useful against ringworm.

Joints: The oil, especially obtained from the rinds, is useful in atony of the nerves and in paralysis, but the juice is harmful for the nerves.

Organs of the head: It is useful in facial paralysis. The decoction produces a pleasant odour in the body.

Ocular organs: Collyrium made with the juice of its sour portion, helps in removing yellow tinge from the eyes (in jaundice).

Respiratory and chest organs: The juice of its sour portion has a soothing effect in hot palpitation and the *Murabba* (the fruit preserved in sugar) is useful for the throat and lungs. However the juice of its sour portion is harmful for the chest. Administration of $\frac{1}{2}$ *Uskurja* (60 gm). of the pulp cooked in vinegar, kills the leech which has slipped down the throat and drives it out.

Alimentary organs: The pulp is harmful for the stomach, causes flatulence and its digestion is slow. Hence, it is necessary to use it in the form of *Murabba*, preferably made in honey and used over a sufficiently long period. The leaves strengthen the stomach and viscera. The buds and rinds used in foods, in the manner the spices are used, help in digestion. However, the rind itself is not digestible because of its hardness. The decoction (of rinds) gives a soothing effect in vomiting. The pulp helps coction, the juice is useful for jaundice and bilious vomiting and is an appetiser. It is advisable to use *Utruj* alone (without combining it with other drugs) and not to use it immediately before or after the meals.

Excretory organs: The pulp causes colic. The juice of its sour portion produces stasis in the stomach but is useful for biliary diarrhoea. The seeds are useful in piles and are purgative. The extract of *Utruj* calms down the carnal appetite of women.

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Poisons: 2 Dirham (7 gm.) of seeds of *Utruj* converted into liniment or a drink with wine and hot water can counteract all poisons to be used orally or as a liniment, especially that of the scorpion (sting). The rind has, more or less, similar property. The extract of the rind, used as a drink or plaster, is useful in the case of viper bite.

15— *Ithmid* Antimony sulphide *Stibium antimonium*

Nature: It is a substance of the dead lead. Its potency is similar to that of the burnt lead.

Choice: The best one is that which is made of layers and which has lustrous crumps when broken. It is free from extraneous matter or any other contaminant. It is highly brittle.

Temperament: It is cold in the first and dry in the second degree, more desiccant than red vitriol specially the variety called *Sūrī*.

Actions and properties: It is astringent and desiccant without being irritant and it stops bleeding.

Ulcers and wounds: It is useful for ulcers, heals them and removes excessive flesh. When applied with fresh fat, it does not ulcerate a burnt part of the body. If that part is already ulcerated, its application with wax and white lead, heals the affected part.

Organs of the head: It stops cerebral rhinorrhagia, especially when it emanates from the meninges.

Ocular organs: It protects the eyes and removes the filth from their ulcers.

Excretory organs: When used as a pessary, it stops bleeding of the uterus.

Substitutes: Burnt lead is its substitute.

16— *Ijjās* Bukhara plum *Prunus domestica* Huds

Nature: It is well-known.

Choice: *Al-Busti* variety (of fruit) is stronger than the black one, and the yellow variety is stronger than the red one. The large white variety is heavy and slow in purgation. The Armenian variety is the sweetest of them all and is a strong purgative. The best is one which is big and thick.

Temperament: It is cold in the first of the second and moist in the last of the third degree.

Actions and properties: Gum of the tree is attenuant, diluting and agglutinant. According to Dioscorides the Damascus variety is astringent but according to Galen it is not so. The unripe plum is astringent. It has little nutrition. The plums are taken before meals and used as drink after mixing it with the hydrōmel and *nabtdh* (a kind of drink made from dates).

Ulcers and wounds: Gum of the tree with vinegar, especially when honey or sugar is also mixed therewith, heals the ulcers and removes the ring worms particularly in children.

Organs of the head: Decoction of the leaves used as a gargle, prevents the catarrh descending on (affected) tonsils and the uvula.

Ocular organs: The gum, used as a collyrium, improves eye sight.

Chest and respiratory organs: Old plums remove inflammation of the heart.

Alimentary organs: Old plums are highly expelling of yellow bile. The sweet variety, because of its sweetness and coldness, produces relaxation in the stomach. In short, plums are not suitable (for alimentary organs).

Excretory organs: The sweet variety is very strong in expelling the yellow bile. Fresh plums have a stronger action than the dried ones. The action (of expelling the yellow bile) is due to their viscosity. According to some physicians, Damascus variety is constipating. The wild variety, unless it is fully ripe, has astringency. Galen refutes the statement of Dioscorides that the Damascus variety is constipating and holds it to be a purgative. Its gum is lithotriptic. The juice of plums promotes menstruation. Small plums are less potent in causing purgation than the larger ones

17— *Adharāqī*

Nux-vomica

Strychnos nux vomica Linn

Nature: *Adharāqī* is a kind of sea-foam which is congealed and stuck to papyrus and reed. It is a very strong drug and hence is not orally used. After reducing its strength, it is used as a liniment.

Temperament: It is very hot.

Actions and properties: It transforms the cold temperament into hot. It can dare be used only as a liniment.

Cosmetics: It removes freckles.

Inflammations and pimples: It is useful in acne.

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Ulcers and wounds: It is useful for ulcerative scabies and ring-worms.

Joints: When used as a plaster, it is useful for sciatica.

18— *Idhkkhir* Bog rush *Andropogon schoenanthus* Linn

Nature: It is of two varieties: one is the Arabian variety which is fragrant and the other is *Ajāmi* (marshy) which is rare. Again, one variety is thin and hard while the other is thick but loose and odourless. According to Dioscorides *Idhkkhir* is of two kinds (1) which bears no fruit and (2) which bears black fruits.

Choice: The best is the Arabian variety which is red and fragrant. Its reddish buds turn purple when torn to pieces and cause irritation when placed on the tongue.

Temperament: Marshy variety has cooling property. Ibn Juraiḥ holds all the varieties to be of cold temperament and the root to be highly constipating. The flowers have some hotness which is more than their astringency. It seems that the Arabian variety is hot and dry in the second degree.

Actions and properties: *Idhkkhir* is astringent. That is why the flowers of *Idhkkhir* are useful in bleeding. Its oil is dissolvent and astringent. The roots are more potent and cause constipation. *Idhkkhir* maturates and softens humoural matter; opens the orifices of veins has softening effects on pain in internal organs especially that in the womb and dissolves the gases.

Ulcers and wounds: The oil of *Idhkkhir* is helpful in itches both in man and animal.

Swellings and pimples: The decoction or plaster of *Idhkkhir* is useful in hot swellings, hardness of internal organs and cold swellings of the viscera.

Joints: Four *mithqāl* (18 gm.) of *Idhkkhir* with pepper is useful in splitting of muscles and convulsions. The oil removes fatigue.

Organs of the head: *Idhkkhir*, especially its *Ajāmi* variety produces heaviness in the head, thin variety produces headache and the thick variety induces sleep. The seeds are anaesthetic. All the varieties strengthen the gums and reduce their moisture content. The flowers cleanse the brain.

Respiratory and chest organs: It is useful for pain in lungs. The flowers are helpful in haemoptysis.

Alimentary organs: The root strengthens the stomach, stimulates appetite and gives relief in nausea, specially when one *mithqāl*-(4.5 gm.)

with equal quantity of pepper is used. The flowers provide relief in gastralgia and inflammations of the stomach and liver.

Excretory organs: It is useful for uterine pains specially in hot inflammation of the uterus when the patient is made to sit in a bath of its decoction. Similar are the effects when the drug is used in the form of drops or fumigation or its juice is administered by enema. *Idhkkhir*, especially its *Ājāmi* variety is diuretic, litho-triptic, constipating and stops excess of menstruation. The flowers are useful in nephralgia and bleeding of the kidneys and in inflammation of the anus. One *mithqāl* of the root taken with pepper helps in dropsy.

Poisons: Plaster made from the fresh leaves of the thick variety, growing just above the roots, is useful in insect bites.

19— *Artad barīd*

A kind of onion

Nature: The drug resembles a split onion.

Excretory organs: It is useful for piles.

20— *Arad fanāni*

Nature: *Arad fanāni* is the name of a tree which resembles caper. It has a strong fragrance. The fruits have an outer covering.

Temperament: According to Rāhib, *Arad fanāni* is stronger than *‘inab al tha‘alab* (Garden night shade) and *Kakenj* (al-Kakenja)

Inflammations and pimples: Rāhib says that its syrup given in a dose of two *ūqia* (60 gm) is useful for inflammations of the internal organs. Liniment made from it has an extraordinary (good) effect on external hot inflammations of all organs.

Poisons: Liniment made from it, when applied on wasp sting, gives immediate relief.

21— *Aruzz*

Rice

Oryza sativa Linn

Nature: Rice is a well-known grain.

Temperament: The temperament of rice is hot and dry; the dryness being more pronounced than hotness. Some physicians, however, hold it to be hotter than wheat.

Actions and properties: Rice gives good nourishment but also causes dryness. When cooked with milk and almond oil, it gives more and better nutrition. Its properties of causing constipation and desiccation are lost when it is soaked in bran water and left over night. This process endows rice with a property to cool and cleanse.

Excretory organs: Rice produces some constipation when cooked with water. If cooked with milk, it increases the production of semen. It does not cause constipation except when boiled with its husk and an attempt is made to remove the moisture of the milk. The dryness may be removed by soaking the rice in bran-water.

22— *Armāk* A yemanite fragrant rind like Cinnamon

Nature: It is a yemanite rind with fragrance resembling that of cinnamon.

Cosmetics: *Armāk* gives a pleasant smell to the breath.

Pimples and swellings: Its plaster is useful in swellings.

Ulcers and wounds: It arrests the spreading of wounds while its dryness, which is free from irritation, heals them. The drug stops putrefaction of organs.

Organs of the head: It strengthens the brain and the gums and is useful in diseases of the mouth.

Ocular organs: *Armāk*, when taken orally, is useful in conjunctivitis.

Respiratory and chest organs: It strengthens the heart and viscera.

Excretory organs: It causes constipation.

23— *Arnab bahri* Sea hare *Aplysia depilans*

Nature: It is a shell like and inactive animal, reddish in colour and parts of it resemble the leaves of plant ash.

Cosmetics: The blood of *Arnab bahri* which is hot in temperament, is useful in freckles and pityriasis. Application of its burnt head removes alopecia and promotes the growth of hair. Burnt head mixed with the fat of bear, is very useful in alopecia and alopecia furfuracia.

Ocular organs: *Arnab bahri* clears vision when used as a plaster or collyrium.

Poisons: It is reckoned as a poisonous drug which kills by ulcerating the lungs.

24— *Arnab barri*

Land rabbit

Lepus terrist

Nature: It is a well-known animal.

Actions and properties: The rennet of *Arnab barri* has the same properties as possessed by other rennets described in our chapter on rennets. However the rennet of (*Arnab barri*) is better and more attenuant and has some additional properties.

Actions and properties-: The rennet of *Arnab barri* has the same properties as possessed by other rennets described in our chapter on 'rennets'. However the rennet of *Arnab barri* is better and more attenuant and has some additional properties.

Cosmetics: The blood of this rabbit is useful in freckles. The ashes obtained after burning its head, particularly from *Arnab bahri* (sea hare forms a very useful drug for alopecia). Burnt pulverised ash from its abdomen mixed with rose-oil, makes a good medicine for hair growth. According to Dioscorides, plaster made from the sea-hare alone or with *Qurais* (Roman nettle) is depilatory.

Joints: Roasted brain of *Arnab*, is useful in Chorea, particularly developed as a sequel to some disease.

Organs of the head: Application of the rabbit's brain on the babies' gums accelerates teething and helps in their painless appearance. This is its peculiar property. Its rennet, when dissolved in ordinary or clarified butter or honey and used with vinegar, is useful in epilepsy.

Excretory organs: Use of the rennet of *Arnab barri* with vinegar for three days after menstruation, prevents conception and stops the fluids flowing from the uterus. Use of roasted blood helps in abrasions, intestinal inflammations and chronic diarrhoea.

Poisons: The rennet of this animal used with vinegar, acts as antidote and bezoar for poisons and the roasted blood is useful to counter the poisonous effect of Armenian arrows.

25— *Asārūn*

Indian Valerian

Valeriana wallichii D.C.

Nature: It is a grass brought from China with plenty of seeds and knotted and crooked roots similar to that of *thabil* (a grass). It is

fragrant but irritant to the tongue. Its flowers are violet in colour and they are located at a place between the leaves and the roots. They resemble the flowers of henbane. Roots are its most useful part. The potency is equal to or even greater than that of *Waj* (sweet scented flag).

Choice: The most fragrant one is the best.

Temperament: It is hot and dry in the third degree. However, dryness is claimed by some to be less than its hotness.

Actions and properties: It is deobstruent and its consumption gives relief in all internal pains, especially its infusion (*naqi'* ie the juice of the drug when mixed with water and left over for a few hours and strained). This we shall discuss in our chapter on Dropsy. It is rarefying, dissolvent, detergent and it warms up cold organs.

Organs: *Asārūn*, especially its infusion (*naqi'*) which we shall discuss under our chapter on Dropsy, is useful in sciatica and coxalgia.

Ocular organs: It is useful in opacity of the cornea.

Alimentary organs: It is highly useful in obstructions and hardness of the liver and also in jaundice and dropsy. Administration of three *mithqāl* (13.5 gm.) of *asārūn* soaked in twelve *qūfūlt* (384 gm.) of the juice of grapes left over for two months and then filtered, is extremely beneficial in general dropsy (anasarca), fever and hardness of the spleen.

Excretory organs: *Asārūn* strengthens the bladder and kidneys, facilitates urination and serves as a purgative like white hellebore. The dose is seven *mithqāl* (31.5 gm.) with hydromel. It also promotes formation of semen.

26— *Uṣṭūkhuddūs*

Lavender

Lavandula stoechas Linn

Nature: It is a herb with red and fine pointed spines like those of barley. The leaves are longer than the blades of barley. Its branches are dark in colour like those of epithyme and are without flowers. It is pungent and somewhat bitter in taste. It is composed of cold earthy substance and rarefied igneous substance.

Temperament: It is hot in the first and dry in the second degree.

Actions and properties: Because of its bitterness it is rarefactive and dissolvent. Similar are the properties of its syrup. *Uṣṭūkhuddūs* is deobstruent, detergent and mildly styptic. It strengthens the body and viscera and is antiputrefactive.

Joints: Its decoction relieves neuralgia and pain in ribs. Its syrup is highly useful in cold diseases of the nerves. Hence it is necessary

that persons with weak nerves or those suffering from cold diseases of nerves, should use it regularly.

Organs of the head: It is useful in melancholia and epilepsy.

Alimentary organs: It induces pain, vomiting and thirst in persons who have excessive bile.

Excretory organs: It strengthens the urinary organs and purges out phlegm and black bile but Galen has made no reference to it. The maximum dose is twelve *Iksūnāfin** (6 gm.) together with pure wine or oxymel and with a pinch of salt.

27— *Asfānākh*

Spinach

Spinacia oleracia Linn

Nature: It is a well known (vegetable).

Temperament: It is cold and humid in the last of the first degree.

Actions and properties: It is a laxative. As a food it is far better than the goose foot (in nutritive value). We say that it is detergent and abluent and checks yellow bile. When the stomach is averse to spinach leaves, only their juice may be taken.

Respiratory and chest organs: It is useful for hot (diseases of) chest and lungs when taken internally or applied externally.

Joints: It is useful in sanguineous back-ache.

Excretory organs: It is a laxative for stomach.

28— *Isfanj*

Sponge

Spongia officinalis Linn

Nature: It is a marine substance, soft and porous like a piece of matted wool. Some people believe it to be a living substance. It moves though it remains adherent to another thing and never parts with it.

Choice: The fresh sponge is the strongest and highly desiccant due to the (effect of) temperament of sea water.

Temperament: It is hot in the first and dry in the second degree. The stone (coming out of it) has the same temperament but is less hot.

Actions and properties: It is a strong desiccant, especially when it is fresh and burnt with olives. Its ashes stop bleeding from a cut or rupture. When sponge is burnt in fire and used for cauterization,

* *Iksūnāfin* is a measurement. According to Gilāni it may mean here as *dāniq*.

its substance checks the flow of blood by twisting and closing the openings of vessels and thereby stops bleeding. Its stone is desiccant, detergent and rarefactive without being hot.

Swellings and pimples: It desiccates phlegmatic swellings.

Wounds and ulcers: It is soaked in vinegar and applied on wounds. For healing of deep wounds, it is placed on them after it has been boiled in honey. It is applied on wounds either dry or after it has been soaked in water or wine. It dries up chronic secretion and cleanses the affected area.

Respiratory and chest organs: If sponge is burnt in olive, it forms a very good medicine for haemoptysis.

Excretory organs: The stone found in the sponge dissolves bladder stones. This is the view of many physicians excluding Galen who holds that this statement is far from truth because the sponge is not so penetrative as to reach the bladder; it may, however, be effective for kidney stones.

29— *Isfīdāj*

Zinc oxide

Zinc oxide

Nature: It is the ashes of lead. When lead is burnt on fire it becomes red lead (red oxide of lead) and acquires tenuity. All kinds of lead are used with vinegar or with salt. There are other methods of using leads as described by some authors in their books.

Temperament: It is cold and dry in the second degree.

Actions and properties: The lead processed with vinegar becomes highly rarefactive and it quickly reaches the deeper parts of the body. Leads processed with other substances are not so rarefactive but are agglutinant, especially the red lead.

Swellings and pimples: It softens cold and hard swellings.

Ulcers and wounds: Lead, especially the red one, when incorporated in ointments, heals the wounds by promoting the growth of (healthy) flesh and removing the decayed flesh. The red lead is more potent in this respect.

Ocular organs: Lead is useful for pimples on inner side of eye lids.

Excretory organs: Lead is enumerated among drugs which are useful in anal rupture.

Poisons: Lead is a poisonous drug. Details are given in our chapter on Poisons.

30— *Asqanqur*

Skink

Mabuya Carinata

Nature: It is a sea monitor, caught from river Nile in Egypt. But there are people who say that it belongs to the family of crocodiles. It lives and grows even when kept out of water.

Choice: The best is one which is caught during the spring particularly when the Nile is in spate. Umbilicus is the best part (as a drug) of its body.

Joints: It is useful for cold diseases of nerves.

Excretory organs: Its salt is an aphrodisiac. This property is also found in the meat of its umbilicus, region of kidneys and specially its fat.

31— *Asyūs*

Asian stone

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Nature: It is a stone over which a kind of salt is accumulated which is called the flower of *Asyūs*. The salt is presumably accumulated by the moisture of the sea or the dew which falls upon it (the stone).

Action and properties: *Asyūs* is deobstruent, grows the flesh and produces some putrefaction. It removes the putrid flesh without causing any irritation.

Swellings and pimples: It heals the wounds when used as a plaster with gum of terebinth or pitch.

Ulcers and wounds: It heals deep, big, chronic, malignant, severe and difficult wounds.

Joints organs: In gout, a liniment made from *Asyūs* and barley flour is used. The patients get relief when they immerse their toes in its decoction.

Respiratory and chest organs: When licked with honey, it heals the pulmonary wounds.

Alimentary organs: Painting of the spleen with *Asyūs*, lime and vinegar is a useful remedy.

32— *Ushturghāz*

Camel's thorn

Echinops echinatus Roxb

Nature: It is a well-known medicinal herb. The best for use is its vinegar. In nature *Ushturghāz* is nearer to *Anjudhān* (*Ferula assafoetida*) but it is inferior in action.

Temperament: It is hot and dry in the last of the third degree.

Alimentary organs: Its vinegar is very useful for the stomach. It cleanses and strengthens the stomach and improves appetite. Because of its irritant action, the camel's thorn causes vomiting. Since it stays in the stomach (for long), it gets digested belatedly.

Fever: It is useful in tertian fever.

33— *Ushaq* Gum ammoniac *Dorema ammoniacum* D. Don

Nature: It is the gum of *ṭarthūth* (Maltesa mushroom and some time it is called *Lizāq al dhabab* (Chrysocolla) i.e. a substance which helps in painting gold or spreading very thin sheets of gold over other substances and it is used for painting of papers, parchment and card-boards with gold.

Temperament: It is hot in the last of the second degree and dry in the first degree.

Choice: The best one is that which resembles *Lubān* (Frankincense). The smell of it is similar to that of *Jund bidastar* (Castoreum). It is difficult to dissolve and is free from all extraneous matter. It is also said that the best one like *Kundur* (Frankincense), is dense, the smell of which is like that of *Kuzbara* (Coriander) and the taste is bitter.

Actions and properties: It is strong in dissolution and desiccation, and does not have a strong irritant effect and opens the pores of vessels with such force that bleeding starts. It is laxative and absorbent and is included among purgatives to rectify their ill effects.

Swellings and pimples: it is used as a plaster or paint in scrofula, hard swellings and tumours.

Wounds and ulcers: It is useful in deteriorating wounds as it removes superfluous and malignant flesh, and also grows fresh flesh.

Joint organs: If used (internally) with honey and barley water, it helps in curing sciatica, back-ache and joint pain. It softens the joints if used as a plaster with honey and pitch and removes fatigue when used alongwith vinegar, borax and henna-oil.

Ocular organs: It removes the hardness and itching of eye lashes; cleanses the opacity of the cornea and prevents the watering of the eye.

Respiratory and chest organs: It is useful in asthma, dyspnea and orthopnoea when licked with honey or barley water. It cleanses the ulcers of the diaphragm and helps in diphtheria caused by phlegm and black-bile.

Alimentary organs: If one *dirakhmi* (3.5 gm.) of it is used internally if helps in removing the hardness of spleen and liver and if painted with vinegar, it is useful in dropsy.

Excretory organs: It is so much diuretic that it causes haematuria. It kills tapeworms, is an emmenagogue and expels the live or dead foetus. Painting with vinegar softens the testes.

Poisons: If used internally with *maibakhtai* (a kind of wine) and myrtle, it serves as an antidote for the poison called *Taqsiqūn*. A massage of the body with its oil drives away insects. *Ushaq*, when mixed with Indian cypress and oil and placed near the insects, kills them.

Substitute: The dirt in the honey-comb is its substitute.

34— *Ishqil* (اشقیل) Squill *Urginea indica* Kunth

Nature: *Ishqil* is called *Baṣl al fār* also because it kills the *fār* (Mice). It is extremely pungent. Some people say that it is *‘unṣul* (wild onion=squill). Its properties are destroyed on boiling or frying. when fried, it looks like dried peach. Its colour is yellow incling towards whiteness. One variety of *Ishqil* is called *Qattāl* (Killer). Some people say that it is *Bulbūs* (a variety of wild onion) as it contains some of the properties of *Bulbūs* but they are wrong.

Choice: The best one is that which has the colour of a horn and is lustrous in appearance. It tastes sweet with somewhat bitterness and sharpness.

Temperament: It is hot in the third and dry approximating the second degree.

Actions and properties: It is dissolvent, draws blood towards the surface, burns the superfluous matter, ulcerative and makes thin the thick chyme. It is more erosive than calefacient. Vinegar made from it strengthens the weak body and is beneficial for the health.

Cosmetics: It removes the warts when applied on them as a paint. When painted or massaged with olive-oil and pine resin, it helps the hair growth in cases of alopecia and furfurecia. It cures the fissures in the heels, especially the one which is not fully ripe. Its vinegar clears the complexion.

Wounds and ulcers: *Ishqil* dries up external wounds but if administered internally it is harmful for ulcers of the viscera. Its massage is ulcerating.

Joint organs: It causes some harm to the healthy nerves. However, it is useful in neuralgia, arthritis, paralysis and sciatica. Similar are the properties of its vinegar and wine.

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Organs of the head: It is useful for epilepsy and melancholia. Its vinegar strengthens the gums, stabilises the (shaky) teeth and removes fetid breath.

Ocular organs: It improves eye sight.

Respiratory and chest organs: It is very useful in asthma, chronic cough and hoarseness of the voice. The dose is three *ubūlus* (2. 250 gm) with honey. Its vinegar strengthens and makes the throat strong.

Alimentary organs: It is useful for the sclerosis of the spleen. It is stomachic, digestive and it settles down the floating food. For spleen its vinegar and decoction are administered for forty days. It is said that *Ishqil* dissolves inflammation of the spleen when it is kept hanging on the body of the affected person for forty one days. It is useful in dropsy and jaundice.

Excretory organs: It is a strong diuretic. Same is the property of its vinegar or wine. It is helpful in dysuria. It is so strong an emmenagogue that it expels the foetus. This property is possessed by its vinegar and wine also. It is useful for hysteria and so is its vinegar.

Ishqil especially when fried, purges out thick humours for which the dose is two spoons of *Ishqil* obtained by frying it along with eight times of salt and taken in the morning. Similar is the property of the boiled *Ishqil*. The seeds (of *Ishqil*), when mildly pounded and kept in a dry vessel with honey and taken, are useful for relaxing the bowels and for painful conditions of the anus, uterus and gripes.

Fevers: Its vinegar is useful for chronic shivering fevers.

Poisons: It is said when suspended in the door of a dwelling place, it drives away the insects. It serves as an antidote against insects and kills the mice. When boiled with vinegar and applied as a plaster. it is useful for snake bites.

Substitutes: *Qardamānā* (Caraway) of the same weight or *waj* (sweet scented flag) weighing $\frac{1}{4}$ of *Squill* or Cardamon are its substitutes.

35— *Ushnān*

Alkali plant

Haloxylon multiflorum Bunge

Nature: *Ushnān* has several varieties. The best one is the white variety which is called *Khur'al-²aşāfir*. The blue variety is the most pungent.

Actions and properties: It is a strong detergent, cleaner and deobstruent.

Excretory organs: $\frac{1}{2}$ dirham ($1\frac{3}{4}$ gm) of it (as a dose) helps in dysuria and its 5 dirham (19 gm) expels the foetus, live or dead $\frac{1}{2}$ to 1 dirham ($1\frac{3}{4}$ to $\frac{1}{2}$ gm) of its Persian variety helps in menstruation while 3 dirham (10.5 gm) drives out the water in case of dropsy.

Poison: 10 dirham (35 gm) of it is fatal. Insects are averse to its green smoke.

36— *Ushnah:* Rockmoss *Parmelia perlata* Ach.

Nature: The bark (outer covering) of *Ushnah* is very thin and attenuant. It is found entwined around *bullūt* (Oak), *Sanobar* (pine or common fir) and walnut trees. It is pleasantly fragrant.

Choice: White is the best variety while the black one is not good.

Temperament: *Ushnah* has some coldness inclined to *futūr* (coldness in a very low degree tending to hotness) and is a mildly constipative drug. A group of physicians are of the opinion that it is hot in the first and cold in the second degree. Another group of physicians says that it is cold and extremely dry.

Actions and properties: It has the two properties—of dissolving and constipating—at one and the same time. It acts as a laxative also, especially the *sonobari* (that entwined with the Oak tree) variety which (though a laxative) has some constipating property also. The *Quṭrā-niah* variety is a deobstruent and strengthens the flaccid flesh.

Swellings and pimples: A paint of *Ushnah* gives relief in hot inflammation, dissolves hard inflammations and removes swellings of flaccid flesh.

Joints: It is incorporated in medicinal oils which are intended for removing fatigue and dissolving the hardness of joints. Similar are the properties of its decoction.

Organs of the head: *Ushnah* induces sleep if it has been soaked, in wine.

Ocular organs: It clears the vision.

Respiratory and chest organs: It is helpful in palpitation.

Alimentary organs: It stops vomiting, strengthens the stomach removes its flatulence, especially when soaked in some constipating wine when leaving for a while and it is used after filtration. It alleviates pain of the weak liver.

Excretory organs: Sitting of the patient in the water of *Ushnah* (i.e. water in which *Ushnah* has been boiled) removes obstructions of the uterus and helps in uteralgia and menstruation.

Substitutes: *Qardamānā* (Caraway) in equal quantity is the substitute of *Ushnah*.

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37— *Aṣābi*^c *ṣufr* Turmeric *Curcuma longa* Linn.

Nature: In shape it is like the palm of the hand having piebald colour with yellow spots. The white variety is hard and somewhat sweet. Another variety has a yellow and some-what blackish colour.

Temperament: It is hot and dry approximating to the second degree.

Actions and properties: It is a strong dissolvent for thick superfluous matter.

Cosmetics: It has the property of clearing complexion.

Joints organs: It is useful for the neural organs and saves them against injuries.

Organs of the head: It is especially helpful in mania.

Substitutes: For mania, *Hazār Jashān* (white Bryoni) in half quantity of *Aṣābi*^c *ṣufr* and *S'ad* (Indian cypress) is the substitute.

38— *Aṣābi*^c *hurmus* Fingers of hermes *Colchicum luteum* Baker.

Nature: It is the flower of *Sūranjān* (Hermodactyle), and its property is similar to that of *Sūranjān*.

39— *Aṣṭarāṭiqūs* Stellaria *Aster atticus*

Nature: *Aṣṭarāṭiqūs* is also known by the name of *Ḥālabī* (Stellaria)

Temperament: It has a little coldness but no constipating property

Actions and properties: It has a dissolvent property along with coldness.

Swellings and pimples: It is helpful in inflammation of the ureter to be used either as a plaster or it is hung over (the affected organs).

40— *Aṣṭarak* Storax *Styrax officinalis*, Linn

Nature: According to Dioscorides it is a variety of *Mai'ah* (Storax) while some others say that it is the gum of the olive (tree). Its smoke, in all respects, is a substitute for the smoke of *Kundur* (frankincense).

Choice: The best one is that which has a strong odour, but according to Dioscorides, the best one is that which is reddish and greasy and resembles the *rātinaj* (pine resin) in composition. It is whitish in colour, has a good odour and retains its properties for long. When rubbed, a fluid akin to the honey, flows out from it. The black variety which is as thin as bran, is of no use. It is a gum resembling the gum arabic. It has a clear white colour and the odour like that of myrrh and this gum is seldom found. Some people use it for dissolving fats and wax. It is kneaded with liquid storax.

Temperament: It is hot in the third and dry in the first degree.

Actions and properties: It is a strong calorifacient, coctive and very laxative drug.

Joint organs: It is included in medicine intended for removing fatigue.

Organs of the heads: It causes insomnia, heaviness of the head and headache but is useful in cold and catarrh.

Respiratory and the chest: It is helpful in cough and the hoarseness or loss of voice.

Excretory organs: Its oil is helpful in the hardness of the uterus, frees menses, opens the uterus and acts as a laxative when swallowed with a little quantity of '*ilk al-buṭm* (terebinth resin).

41— *Aṭā*

White poplar

Polulus alba Linn

Nature: *Aṭā* is the same thing which is called *Shajarat al-gharb* described under letter *Ghain*.

42— *Aṭyūṭ*

Hazel nut

Corylus avellana Linn.

Nature: It is also called *Aṭbūṭ*. Its property is akin to that of *būzidān* (Sweet pellitory).

Temperament: It is hot in the second and moist in the first degree.

Actions and properties: It is detergent.

Cosmetics: It is a powerful drug for removing pityriasis.

SECTION VI

43— *Iṭriah*

Itrium

Itrium vermicilli

Nature: It is a cooked food which is made of wheat flour and cooked with water, either with meat or alone. In our country it is named *Rishta*.

Temperament: It is hot with abundant moistness.

Actions and properties: Infact, it takes long to digest and its descent from the stomach is slow as it is made of unleavened flour paste. Some people are of the view that when cooked without meat, it is more digestible. Propably that statement is not correct. However, when black pepper and almond oil are added, they rectify it to some extent. It gives a good nourishment when digested.

Organs of the chest: It is useful for lungs, cough and haemoptysis, especially when cooked with *baqla ḥamqā* (purslane).

Excretory organs: It is a laxative drug.

44— *Aṭmāṭ*

Atmata

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Nature: It is an Indian drug with properties like those of *būzidān* (sweet pellitory). Care should be taken that *Aṭyūṭ* (or *Aṭbūṭ*—hazel nut) in place of *Aṭmāṭ* should not be confused with each other.

Temperament: It is hot and moist.

Excretory organs: It is a good aphrodisiac drug.

45— *Azfār al-ṭib*

Ungues

strombus sps.

Nature: It resembles a piece of finger nail, has a sweet smell and its smoke is used for fumigation. According to Dioscorides it is of the kind of oyster porcelain and is found in an island in the Indian ocean, where *Sunbul al-ṭib* (nard) is also found.

One variety of *Azfār al-ṭib* is *Qulzumī*, another is *Bābulī* which is black and small. Both the varieties have a pleasant smell. I feel that *Qulzumī* variety is the same which is called *Qarshia*. It is said that *Azfār al-ṭib* adheres to the flesh and skin. Sometime it is found in Abādān. One variety is that which is brought from Mecca or Jeddah. When cleansed and purified it gives fragrance.

Choice: The best variety is that which is whitish and which is imported from (areas near the) Red Sea, Yemen and Bahrain. The

Bābuli variety is black and small. Some pharmacists are of the opinion that the variety coming from Bahrain is the best one and excels that which comes from Mecca and that which is brought from Jeddah.

Temperament: It is hot and dry in the second degree, the dryness, probably, extending to third degree.

Actions and properties: It is attenuant.

Organs of the head: Its smoke is useful for epilepsy.

Excretory organs: Its fumigation brings a hysteric patient to senses. When used with vinegar it acts as a strong purgative.

46— *Aghālōgī*

Eagle wood

Aquilaria agallocha Roxb

Nature: It is an Indian or Arabian wood, has a sweet odour, its bark is spotted and is used in perfumery. It has a constipating property and some bitterness as well.

Organs of the head: Mouth wash with a decoction of *Aghālōgī* gives it a good smell.

Respiratory organs and the chest: The drinking of water in which *Aghālōgī* has been boiled, is useful for pleurisy.

Alimentary organs: It is useful for hepatalgia. One *mithqāl* (4.5 gm.) of it is useful for the viscosity of the stomach and its weakness.

Excretory organs: The drinking of water in which *Aghālōgī* has been boiled is useful for intestinal ulcers and gripes which is due to heat.

47— *Aftimūn*

Epithyme

Cuscuta epithymum Linn.

Nature: It has small and tender seeds, flowers and twigs. It is hot and acrid in taste. The seeds are red in colour. The potency of its leaves is like that of *hāshā* (wild thyme) but the latter (*hāshā*) is weaker in property. Some people claim that *Aftimūn* is a species of *hāshā*.

Choice: The varieties known as *Iqrīṭī* and *Maqdist* are the best and are reddish in colour. The most red and fragrant variety is the best of them.

Temperament: According to Galen it is hot and dry in the third degree but Hunain holds it to be hot in the third and dry in the last of the first degree.

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Actions and properties: It alleviates flatulence, suits the old and the aged one and is useful for the diseases of the black bile.

Joints: It is useful in convulsions.

Alimentary organs: It produces pain, vomiting and thirst in persons having excessive bile.

Excretory organs: 14 gm. of *afīmūn* mixed with honey and salt, acts as a strong purgative for black bile and phlegm. Some physicians say that one dose should have two *Dirhams* (7 gm.) of *afīmūn* and its decoction should be 14 gm in quantity. While it is necessary to add almond oil but boiling it for long is unnecessary.

48— *Afsantīn*

Absinth

Artimisia absinthium Linn

Nature: It is a grass, resembling the leaves of *Sa'tar* (origanum). It is bitter, astringent and pungent. According to Hunain, *afsantīn* is of many varieties. One is *Khurāsāni* (from Khurāsān), another is *Mashriqi* (from the east), yet another is procured from the hills of Lakām, one more is *Sūst* and *Tarsūst* (from Sūs or Tarsus). Beside the ancient physicians some other (physicians) believe that *afsantīn* has five varieties—*al Tarsūst*, *Sūst*, *Nabʿī*, *Khurāsāni* and the *Rūmī*. The *Nabʿī* variety has a good smell. All the varieties have an earthy substance and it is because of this they cause constipation. However, it has an attenuant substance also which acts as a purgative and deobstruent.

Afsantīn is also a kind of *Shih* (Worm wood,) and hence some physicians have given to it (i.e. *afsantīn*) the name *al-Shih al-Rūmī*. The extract of *afsantīn* is stronger than that of its leaves. It is like the extract of *afraṣiūn* (black horehound).

Choice: The *Sūst* and the *Tarsūst* varieties are the best, especially when they are ash-coloured and when rubbed, give a smell resembling that of aloe wood.

Temperament: *Afsantīn* is hot in the first and dry in the second degree. The extract is hotter. Some physicians say that *afsantīn* is dry in the second degree and their statement is quite reliable.

Actions and properties: It is astringent and deobstruent. The astringency is stronger than its bitterness. Due to this factor its presence in the stomach does not expel the phlegm and gives no relief from it (the phlegm.) It has some dissolving property also. The *Nabʿī* variety has more astringency but is less hot. One of the properties of *afsantīn* is that it protects clothes from moths and other insects; prevents the ink from fading and protects the paper from deterioration.

Cosmetics: It improves the complexion, is useful for alopecia, alopecia furfuracia, removes the violet coloured patches which may appear beneath the eyes etc.

Swellings and pimples: It is useful for urticaria when applied after mixing it with the flour.

Wounds and ulcers: It is useful for internal hardness if applied as a plaster or taken orally.

Organs of the head: It produces dryness in the head, its extract causes headache and I think it is harmful for the stomach. The vapours arising from its decoction, when inhaled soothe the earache. It is useful in intoxication if used before drinking wines. It is helpful in internal diphtheria if applied on the palate with sodium nitrate. It is used in parotitis, earache and otorrhoea and also helps in coma if administered with honey.

Ocular organs: *Afsantīn*, specially its *Nabṭī* variety is useful for chronic conjunctivitis when applied as a plaster below the eyes. It is also useful for conditions of dim vision. Its plaster prepared with addition of *Maybukhtaj* (kind of wine) is useful for soothing the (feeling of) throbbing in the eyes and their inflammations. It is also useful for phlyctenular conjunctivitis.

Respiratory organs and the chest: Syrup made from *afsantīn* is useful for spasm under the epigastrium.

Alimentary organs: It restores appetite. It shows extra ordinary effects when used in the form of decoction or extract for ten days. Its daily dose is three *obūlūs* (22.5 gm). Its syrup strengthens the stomach. Besides this property, it has several other benefits as it is beneficial for jaundice. Its extract when regularly used for ten days in a dose of three *Ūqiah* (90 gm.), helps in dropsy. Similarly the plaster made of fig, *naṭrūn* (Sodium nitrate) and powder of tars darnel has the same property. Its plaster, made of fig, orris root and *naṭrūn* is useful for spleen. *Afsantīn* when cooked alongwith lentil or rice and eaten, kills the worms. Its extract is unsuitable for the stomach while its plant as such, is harmful for the cardiac orifice because of its salty nature. However, the plant of the *nabṭī* variety is an exception. *Afsantīn* when used alongwith *Sumbul* (nard) helps in gastralgia. It is also used as a plaster on liver, stomach and the hips.

A *Qayrūṭy* (ointment) made of *afsantīn* and henna oil is useful for the pain in the liver and hips while that the *Qayrūṭy*, made of *afsantīn* and the rose oil or rose petals, is useful for the pains in the stomach. These *Qayrūṭy* (ointments) are also useful for the hardness of liver, hips and stomach.

Excretory organs: It acts as a strong diuretic or emmenagogue especially when used as a pessary with hydromel and acts as a purgative

for the yellow bile. It does not help in (removing) the phlegm or intestinal obstruction. The infusion of 5-7 *dirhams* (17.5 to 24.5 gm.) of *afsantin* (left overnight, strained and then administered) or a decoction of the same quantity or two *dirham* (7 gm.) of *afsantin* as such, gives relief in piles and anal fissures. *Afasantin*, when boiled either alone or with rice and administered with honey kills the worms and expels them with a light purgation. Similar is the action when it is used after boiling with lentil. Syrup of *afsantin* is useful for all these diseases as also for removing the aqueous and bilious humours from the vessels and makes them flow.

Fever: Afsantin: especially its extract, is useful for chronic fevers much in the same way as the extract of *ghāfit* (agrimony) is.

Poisons: Afsantin acts as an antidote for the bite of sea dragon, scorpion, myogale (mole) and for (the poisonous effect) of hemlock seeds if taken with wine. It relieves choking of the throat caused by (eating) poisonous worms, especially when used with vinegar.

Its sprinkling prevents bugs and books are not nibbled by rats if its juice is mixed into the ink.

Substitutes: Ju'dah (germander) or *Shih Armani* (Armenian worm-wood) are the substitutes. *Asārūn* (Indian valerian) with *halalij* (Chebulic myrobalan) in a quantity of the former (*asārūn*) is the substitute for strengthening the stomach.

49— *Ufyūn*

Opium

Papaver somniferum Linn

Nature: Ufyūn is the sun-dried extract of black poppy. Its dose should not exceed 2 *dāniq* (1 gm.). It is used along with *Khas barri* (wild lettuce) which itself is a weak sedative. Opium is fried on hot iron plate till it becomes red.

Choice: The best variety of opium is that which is sedative, has strong smell, is brittle, dissolves in water easily and once dissolved is not condensed. It melts under sun shine and if it is used as a fuel of a lamp, the latter remains lighted. The yellow variety of opium gives colour to water. The rough variety has a feeble smell. The opium which is bright in colour, is an adulterated one. It is adulterated with *māmithā* (horned poppy). It is also adulterated with *Khas barri* (wild lettuce) but such opium possesses a weak smell. When adulterated with gum it becomes extremely bright.

Temperament: Opium is cold and dry in fourth degree.

Actions and properties: Opium whether administered orally or used as a paint, is sedative and soothing for all types of pains. The dose is equal to the weight of a big grain of lentil.

Swellings and pimples: It is useful in hot swellings.

Wounds and ulcers: It dries up wounds.

Joints: Opium gives relief to the patient of gout when it is mixed with the fried yellow of the egg and painted over the affected parts, especially with milk.

Organs of the head: It induces sleep even if it is used with wicks or without wick. It gives relief to earache when it is dropped in the ear in liquid form along with myrrh and dissolved in rose-oil. It is useful in chronic headache also. It disturbs understanding and intellect.

Ocular organs: It relieves conjunctivitis and swelling of the eyes when mixed with human milk and painted over the eyes. Ancient physicians did not use opium in conjunctivitis since it is harmful for the sight.

Respiratory organs and the chest: It gives relief in cough and the patients who are severely affected with persistent cough.

Alimentary organs: It promotes gastric coction because it produces relaxation in the stomach. In most cases when used without *Jundbidastar* (Castoreum) it either corrupts or completely blunts the digestion.

Excretory organs: It stops diarrhoea and helps in curing abrasions and ulcers of intestines.

Poisons: It kills by hardening the organs (of the user) and *Jundbidastar* (Castoreum) is its antidote.

Substitutes: *Bazr al-banj* (henbane seeds) three times of the quantity of opium and double quantity of mandrake seeds are its substitutes.

50— *Aqāqiā*

Wild gum arabic tree

Acacia arabica Willd

Nature: It is the extract of *qaraz* (wild gum arabic tree) which is dried and turned into tablets. It has irritance which may be removed by washing it as it is composed of earthy astringent substance. Its rarefied substance causes irritation which may be eliminated by washing it. Its pungency enables it to penetrate and produce cold. Dioscorides says that the *acacia* tree which grows in Egypt and other places has thorns but they are not straight and so are its branches. It bears white flowers and fruits which resemble white *turmus* (lupin). *Aqāqiā* is collected, its leaves and fruits are pounded together and extract is obtained. It is the extract which is used. Some persons rub *aqāqiā* with water and continue the process till superfluous matters

come up which are removed. The process gives pure *aqāqiā* which is turned into pills or tablets and used in medicines.

Choice: The best one is that which is most fragrant, blackish green, unshrivelled and hard.

Temperament: *Aqāqiā*, obtained by the process of washing, is cold and dry in the second degree and that which is not so washed is cold in the first and dry approximating to the third degree.

Actions and properties: *Aqāqiā* is astringent and prevents haemorrhage.

Cosmetics: It blackens the hair, clears complexion and is useful for fissures caused by cold.

Swellings and pimples: It has all those advantages which we have described under *As* (myrtle). It is useful for whitlow (paronychia), fire burns, pimples and hot swellings when applied with the white of the egg.

Joints: It prevents flabbiness of the joints.

Organs of the head: It is useful for the ulcers of mouth.

Ocular organs: It promotes and strengthens the vision. No *aqāqiā* except the Egyptian variety is good for eyes. It gives relief in conjunctivitis and erysipelas. It is also included in medicine meant for pterygium.

Excretory organs: It causes constipation when used orally or as enema or a plaster. However, it is useful for intestinal abrasions and haemorrhagic diarrhoea. It prevents leukorrhoea and drives back the uterus and anus when they come out (prolapse of uterus and anus) and is also useful in (excessive) relaxed state of the two.

51— *Uqhuwān*

Bachlor's botton's

Pyrethrum parthenium

Nature: *Uqhuwān* has white and red varieties. The former is stronger. Its branches are thin, bear white flowers which resemble the flowers of *marw* (Egyptian Origan). Its smell and taste are strong. According to Dioscorides some people call it *as amāriūn*, some *qūrniūm* and some *arqasmūn*. The leaves are similar to those of coriander. The flowers are white, round yellow in the middle part, have a heavy smell and bitter taste.

Temperament: *Uqhuwān* is hot in the third and dry in the second degree.

Actions and properties: It is maturative and deobstruent. The red variety has astringency, prevents every kind of secretion in spite of having the property of dissolution. However, it has astringency with

desiccation. It promotes perspiration. Its oil has a similar effect when massaged, opens the pores, is dissolving and rarefying.

Swellings and pimples: It dissolves the hot swellings of the stomach and the blood coagulated therein. It is also useful for cold swellings.

Ulcers and wounds: It is useful in fistula, removes the slough from the wounds and malignant ulcers and helps in injuries to the nerves and muscles.

Joints: A little wool is soaked in its decoction and placed on the twisted nerves for relief.

Organs of the head: Its Inhalation by a patient of insomnia gives him relief. It is useful for ear-ache.

Respiratory organs and the chest: A mixture of *Uqhuwān*, *Sikanjabīn* and salt, when taken in the same way as *afīmūn*, is taken for relief in asthma.

Alimentary organs: It is harmful for the cardiac orifice because it dissolves and dries up all that descends (to it). It also dissolves the blood coagulated (in the cardiac-orifice).

Excretory organs: It is a strong diuretic, the blood coagulated in the bladder when used with oxymel and breaks the stone (in kidney etc). The flower or buds when administered with wine, acts as a diuretic and emmenagogue. When used as a pessary it acts as a strong emmenagogue. Its oil (as a pessary) dissolves the hardness of the uterus and opens it. It purges out black bile and phlegm. It is useful for hot swellings of the anus and opens the channel in piles. Its oil is useful for ruptures in hydrocele. It is helpful in colic, cystalgia and sclerosis of the spleen.

52— *Aqsūn*

White acanthus

Fagonia arabica Linn.

Nature: It is a persian drug and found in Kirmān.

Temperament: It is mildly hot in temperament.

53— *Aqfarāsfūs*A Persian drug called *dhubha* and *ḥazm*

Nature: It is a Persian drug called *Dhubha* or *Ḥazm*.

Organs of the head: It is useful for memory.

54— *Akatmakat* Bunduc nut *Caesalpinia bonducella* Flem

Nature: It is an Indian drug and in action it is similar to *Fāwāniā* (Peony).

Organs of the head: It produces evaporation when used as a paint and hence gives relief in epilepsy.

55— *Iklil al-malik* Sweet Melilote *Melilotus officinalis* Linn

Nature: It is the flower of a plant, which is of straw-colour. It is crescent shaped, has some hardness with porosity and is of two kinds—white and yellow. According to Dioscorides some people call it *aisqifūn* which is a dry grass with many blades having four angles and are whitish in colour. The blades are similar to the leaves of quince, though they are a little longer. It has some roughness which is covered by white fibres. It grows in rough places.

Choice: The best is that which is hardest. It is whitish in colour and bitter in taste having a pronounced smell. According to Dioscorides the best is of saffron colour which has a sweet smell although some of its varieties have weak smell possessing colour of fenugreek.

Temperament: It is hot in the first degree with some dryness. As white, it is a compound with heat excelling its coldness. According to Badighoras it is moderate in heat and coldness.

Actions and properties: It has some astringency with the property of dissolving and hence it produces maturation. According to Badighoras it dissolves the superfluous matter with the help of its intrinsic properties. Some physicians are of the opinion that its extract, combined with *maybukhtaj*, alleviates pain. It is a dissolvent, attenuant and a tonic for the (human) organs.

Pimples and inflammations: It is useful in hot and hard inflammations, especially when used with *maybukhtaj* and more so when applied after mixing it with the white of an egg, flour of fenugreek, linseeds and poppy seeds depending on the locus of inflammation.

Ulcers and wounds: It is useful in wet ulcers, chiefly in favus. It is to be applied with water or any other desiccant drug, e.g. gall nut, light clay and lentil.

Organs of the head: It is useful in ear-ache or inflammations (otitis and otalgia) when plastered with *maybukhtaj* with all other things mentioned earlier. It also serves this purpose when its extract is used as ear-drops. In paint of the ears it relieves quicker. It alleviates headache when used as a douche.

Ocular organs: It is useful in inflammations when plastered with *maybukhtaj* and all the things mentioned earlier.

Excretory organs: It is useful in inflammations of the anus and testicles when used as plaster made by boiling it in wine with *maybukhtaj* and all other things which we have already mentioned. The decoction of its blades and petals when administered orally serves as a diuretic, emmenagogue and for expelling of the foetus. A bath with its decoction relieves the testicular itching.

56— *Allabakh*

Lebbek tree

Balanites aegyptica Linn

Nature: It is said that *allabakh* is *sidr* (Christ's thorn). But we feel that if it had been *allabakh*, which is a big tree, it should have been included under *letter Lām*. When it was planted in Egypt, changed its temperament. Dioscorides has said, "it is a tree which grows in Egypt, bears edible fruits and sometime a species of tarantula is found on it, especially on that plant growing in upper Egypt". A group of physicians opine that it belongs to Persia and is fatal. However, when grown in Egypt its taste undergoes a change enabling its fruits to be eaten without harm.

Actions and properties: It stops bleeding when placed on the (affected) organ.

57— *Alsafāni*

Camel thorn

Echinopes echinatus Roxb.

Nature: It is said that *Alsafāni* is *ra'ial-ible* (Camel-thorn).

Excretory organs: It acts as a strong cleansing agent for the kidneys.

Poisons: It is immensely useful for rabbies.

58— *Almās*

Diamond

Adamus

Nature: It is a well-known stone.

Temperament: One school holds it to be cold and dry while another is of the opinion that by its potency it is hot and dry.

Actions and properties: It is a strong detergent. According to Dioscorides it is caustic and putrefactive.

Cosmetics: It brightens teeth.

Organs of the head: Some people are of the view that if it is kept in mouth it breaks the teeth and that this is so either because of its (intrinsic) property or possibly because there was much snake-venom at the place from where it is found. This statement has gained a wide publicity. However, they do not know the fact that the diamond on which snake-venom might have gathered may not produce this effect on external application, especially when a long period of time has elapsed (since the diamond was extracted').

Excretory organs: A group of people believe that if a particle of diamond along with a particle of 'ilke-i rūmt (mastic) be introduced into the bladder with the help of a syringe, the bladder stone is broken into pieces. However, this is an irrational statement.

Poisons: It is fatal.

59— *Amberbāris*

Barberry

Barberis aristata Schrad

Nature: It is also called *zarishk*. It has a (large) number of varieties e.g. round, red, *sahili* (coastal), black, rectangular, sandy or mountainous. The mountainous variety is the most potent.

Temerament: It is cold and dry in the last of the third degree.

Properties: It is very strong for eradicating the yellow bile.

Swellings and pimples: When applied as plaster by virtue of its property, it is highly useful for severe inflammation.

Alimentary organs: It strengthens the stomach and liver and quenches the thirst.

Excretory organs: It causes constipation, is helpful in abrasions (and) when administred orally it checks the chronic flow of fluids from the uterus. It is said that when a woman smears her belly or strikes it thrice with the root of *amberbaris*, abortion takes place. It is useful in the bleeding from lower limbs of the body.

60— *Umm ghilān*

Wild gum arabic tree

Acacia arabica willd

Nature: It is a well-known tree.

Temperament: It is cold and dry in temperament.

Actions and properties: It is astringent, stops bleeding and checks all other secretions from the body.

Respiratory organs: It stops haemoptysis.

Excretory organs: It stops the flow of fluids from the uterus.

6— *Anāghālis*

Pimpernel

Anagallis arvensis Linn

Nature: *Anāghālis* is of two kinds with yellow or blue flowers.

Wounds and ulcers: Both the kinds cleanse the wounds, stop their swellings, pull out the thorns and other foreign bodies and prevent spreading of ulcers.

Organs of the head: Gargling with water of *anāghālis* of either kind or its snuff removes phlegm from the head and relieves splitting molar pain.

Excretory organs: It is useful for nephralgia when given with wine. A group of physicians think that the kind having blue flowers with a tinge of muddiness checks the prolapse of the anus while that having red flowers increases it.

Poisons: It is useful in snake-bite when taken with wine.

62— *Anjudhān*

Asafoetida plant

Ferula assafoetida Linn

Nature: It is of two kinds—one is white which is feminine and the other is black which is masculine. The latter is stronger and is not used in food.

The taste of the root of *anjudhān* resembles that of *ushturghāz* (Camel thorn) and the temperament is airy. *Ushturghāz* is slow in digestion and so is *anjudhān* but there is a difference between the two i.e. *ushturghāz* and *anjudhān*. *Hiltit* (Asafoetida) is the gum of *anjudhān* and we shall deal with it separately (at its proper place). Decoction or vinegar made from *anjudhān* is admittedly much better than its substance.

Temperament: The temperament of *anjudhān* is hot and dry in the third degree.

Actions and properties: It is attenuant. The root is flatulent. Massage of the body with *anjudhān* especially with its milk, forcefully expels the matter.

Cosmetics: *Anjudhān* changes the odour of the body. When used as a plaster with olive oil, it removes the patches of blood occurring below the eyes.

Pimples and inflammations: It is useful in internal tumours. Its root, when included in an ointment, is useful for scrofula.

Joints Organs: It is useful for rheumatism when applied after mixing it with oil of blue lily or that of henna.

Alimentary organs: Its root produces eructation and constipation. It is (in itself) slow to digest though (as an overall effect) it improves digestion, warms up and strengthens stomach and tone up appetite.

Excretory organs: *Anjudhān*, when boiled with rinds of sweet pomegranate and vinegar, cures piles, acts as a diuretic, produces a stinking smell in foeces and gases. It is harmful for the bladder.

Poisons: It is an antidote for poisons when taken in the form of a drink.

63— *Anjura*

Nettle

Urtica urens Linn.

Nature: The seeds of *anjura* resemble the leek seeds in colour but are brighter and smaller in size. They cause irritation on coming into contact with any thing in intestines.

Temperament: *Anjura* and its seeds are hot in the first of third degree and dry in the second degree. The seeds are more dry (in temperament) than the other parts.

Actions and properties: It is absorbent, ulcerative, strongly dissolvent and caustic. According to some physicians it is not a strong calorific, is flatulent by nature, is a powerful detergent but causes no irritation in ulcers. When cooked with meat its actions become null and void.

Swellings and pimples: Its plaster with vinegar ruptures cold abscesses and is useful for removing their hardness. A plaster made from its seeds or ashes is useful in cancer.

Wounds and ulcers: Its ashes mixed with salt are useful in cases of dog bites, malignant ulcers and various types of cancer.

Joints organs: Its plaster with salt is useful in tortuosity of the nerves.

Organs of the head: Its leaves, when pounded and applied, stop epistaxis. The seeds are useful when nose becomes insensitive to smell. They also remove ethmoid obstructions. A powder of its seeds when applied (on gums) facilitates tooth-extraction. A plaster (of its seeds) is also useful for parotitis and it is also named as *Bū hathlā*.

Respiratory and chest organs: *Anjura* when used along with barley water, cleanses the chest or when decoction of its leaves is taken with it the thick humours, held up in the chest, are expelled. For such actions the seeds are more potent and cure asthma, orthopnoea and cold pleurisy.

Excretory organs: It is an aphrodisiac. The powdered seeds are used as *filā* (liniment) to stimulate sexual desire. They also open the mouth of uterus and enable it to receive the sperm. The seeds when consumed with onions and eggs elicit similar action. A suppository made from its seeds and myrrh, acts as an emmenagogue and opens the mouth of the uterus. Similar is the action of a decoction of the seeds and myrrh. The fresh leaves used in the form of a plaster, prevent the uterus from bulging out. It is the detergent and not purgative property of *anjura* which expels unripe phlegm. Its oil is a stronger purgative than the oil of *qurtum* (carthum seeds). A decoction of its leaves with oyster shall acts as a laxative. If a strong purgation is desired, the kernel (of *anjura* seeds) and flour of roasted wheat or barley is to be made into a fine powder, and the latter may be dissolved in wine and it is to be orally taken followed by sipping of a little rose oil in order to avoid burning in the throat. A suppository made of *anjura* and honey expels morbid humours.

64— *Andarūnlūin* Axe weed *Hedysarum Coronarium*

Nature: *Andarūnlūin* is also known by the name of *Fās* (thachet) since it is double-edged like a thachet.

Temperament: It has a hot temperament and it is bitter and astringent,

Actions and properties: It removes obstructions from the viscera.

Joints organs: It is useful in rheumatism.

65— *Anzarūt* Sarcocolla *Astragalus sarcocolla* Dymock

Nature: *Anzarūt* is the gum, bitter in taste, of a thorny tree which is found in Persia (Iran).

Choice: The best variety is that which is yellowish and resembles *Lubān* (olibanum).

Temperament: Some physicians say that *Anzarūt* is hot in the second and dry in the first degree. According to Ibn Juraih it has a very hot temperament.

Actions and properties: Its kernel causes no irritation. Hence it heals the wounds and is included in some ointments. It is adhesive, obstruct and bitter. Because of these factors it has the properties of maturing and dissolving.

Cosmetics: Constant use of *anzarūt* causes baldness especially among the old.

Swellings and pimples: Its plaster gives relief in swellings.

Wounds and ulcers: It removes decadent flesh and heals fresh wounds.

Joints organs: It sets the sprained organs. Application of its dry root soaked in vinegar produces the same effect.

Organs of the head: A wick made of *anzarūt* and honey, when placed in the ear which is emitting pus, heals the same in a few days.

Ophthalmic organs: It is useful in conjunctivitis and removes the sordes of the eye. It is beneficial for the catarrhal flow of eye, especially its *murabba* (preserve) with the milk of she ass helps in the removal of motes which might have fallen into the eye.

Excretory organs: It expels thick and unripe phlegm, especially from the hips and joints.

66— *Insān*

Human being

Homo sapiens

Cosmetics: It is said that the human semen acts as a detergent for pityriasis. In the same way the salt extracted from the urine of a child collected in a copper (vessel) clears freckles. The stool of a child is useful in *Pityriasis alba*.

Swellings and pimples: It is said that the sediments of human urine are useful for erysipelas and the stool is hot (in temperament). The ashes of human hair are useful for pimples and when used after mixing it with *saman* (clarified butter) prevent the creeping swellings.

Wounds and ulcers: The human urine is useful in ulcerative itches and prurigo. It also stops malignant ulcers and ring worm. Human semen is especially useful for ring worm.

Joints organs: Some (physicians) say that menstrual blood is useful for gout. Similarly, application of human semen and milk mixed with opium, wax and olive oil, is useful (for gout).

Organs of the heads: It is said that ear drops made by mixing burnt human hair with rose oil soothe earache and toothache. Sputum of a person, who is observing a fast, when dropped into ears expels the ear worms. Use of burnt human bone gives relief in epilepsy. The ear wax is useful in migraine.

Ocular organs: Human urine boiled with honey in copper vessel acts as a detergent in cases of corneal opacity and blood spots in the eye. Human hair burnt and mixed with *martak* (impure oxide of lead) is useful in scabies and the itching of the eye.

Excretory and chest organs: It is said that the urine of a child, when taken orally, alleviates dyspnoea and orthopnoea but this is a

bad treatment. Human milk is highly useful in pthisis. This is also a treatment for the bite of sea-rabbit.

Alimentary organs: According to some physicians human milk soothes irritation of the stomach. An *uskuriah* (120 gm.) of human urine especially when mixed with hydromel and gram-water, is useful for jaundice and similar is the property of human stool.

Excretory organs: Human milk is a diuretic. It is said that menstrual blood, used in the form of a pessary, prevents conception. Administration of human milk in the form of a pessary or douche is useful for wounds and ulcers of the uterus. It is also said that human urine $2/3$ *raql* (300 gm.) in quantity, when boiled with leek and used, stops diarrhoea and cleanses the uterus.

Fevers: Dry stool mixed with honey or wine is useful in intermittent fevers and prevents their recurrence.

Poisons: Human milk is an antidote for the bite of sea-rabbit. Application of human tooth, reduced to powder by the process of rubbing or burning, is useful in snake bite cases. Stool is useful for human bite when applied on the part bitten by man. First sputum at morning (i.e. when nothing has been eaten or drunk) kills scorpion and snake. If a human being is bitten by another man without having anything in the morning, the part bitten develops an ulcer.

67— *Infihah*

Rennet

Coagulum pitua

Nature: Rennets are many. We shall discuss rennet of each animal under a separate head.

Choice: The best is the rennet of a rabbit.

Temperament: All rennets are hot, dry and igneous in temperament.

Actions and properties: Rennets dissolve thick substance such as blood, curdled milk, thick humour and also coagulate melting substance. All rennets are erosive. They resist every kind of flux and leukorrhoea. They are attenuant and undoubtedly desiccant. Galen says, "I do not use sharp rennet in conditions where astringency is needed".

Organs of the head: Rennets are useful in epilepsy, the rennet of swan is especially useful in this disease.

Respiratory and chest organs: Rennets dissolve the blood congested in the lungs.

Alimentary organs: Rennet when mixed in vinegar and taken dissolves the curdled and congealed milk in the stomach. Rennet also dissolves the blood congealed in the stomach but this treatment is harmful.

SECTION VI

Excretory organs: Rennet safeguards pregnancy if used in the form of a suppository after the period of menstruation. However, it prevents conception if used orally after that period. Rennet, especially of a swan, is beneficial in hysteria. Rennet, especially of a colt, is useful for intestinal ulcers.

Poisons: All rennets are antidotes. They are useful against hemlock seeds especially those of kids, colts of camels and lambs. Three *Obūlūs* (22.5 gm.) of rennet is a dose against poisons and poisonous stings. Some physicians hold the view that one *qirāt* (250 mg.) should be the quantity of rennet when used with gold and ten *qirāt* (2.5 gm.) when used without gold. The rennet of a kid is an antidote for gum euphorbium.

68— *Antsūn*

Anise

Pimpinella anisum Linn.

Nature: Anise is the seed of the Roman fennel. Its Nabatean variety is less pungent than the Roman variety. The latter is sweet and hotter than the former.

Choice: The best variety of anise is the one which is fresh, has a strong smell, large sized seeds and its peel does not fall from it like bran. The *Iqrītushl* variety is better than the Egyptian variety.

Temperament: According to Galen anise is hot in the second and dry in the third degree but Paulos holds it to be hot and dry in the third degree.

Actions and properties: It is deobstruent with a little astringency, analgesic and carminative especially when roasted. It is hot somewhat like caustic drugs.

Swellings and pimples: It relieves against oedema and swellings of extremities.

Organs of the head: The smoke, arising from anise when placed on fire, gives relief against headache and vertigo. Ear drops prepared by its fine powder diluted in rose oil brings relief against earache associated with headache or an internal or external injury.

Ocular organs: It is useful for chronic vascular keratitis.

Respiratory and chest organs: It facilitates the respiration and the formation of milk (in breast).

Alimentary organs: It relieves the patient from the thirst felt from boraceous humours and removes the obstructions of liver and spleen caused by these humours.

Excretory organs: It is a diuretic, promotes the discharge of white fluid from the uterus and cleanses it. It acts as an aphrodisiac also. Sometimes it causes constipation because of its diuretic property. It is a deobstruent for kidneys, bladder and uterus.

Fevers: It is useful for chronic fevers.

Poisons: It removes the poisonous effects of insectbites.

Dosage: Its dose is half a dirham (1.75 gm.) when taken alone.

Correctives: *Rāzyānaj* (fennel) is its corrective.

69— *Awāftmūs*

Two-leaved squill

Scilla bifolia

Nature: *Afyūs-i ḥadaqt* is a drug resembling eyeball.

Temperament: According to Galen it is cold in the second degree, desiccant in the first degree and its fruit is hot and astringent in the beginning of the first degree and dry in the second degree.

Actions and properties: It protects the pubic region of children against the growth of hair for a long time.

Alimentary organs: Its fruit is useful in jaundice.

70— *Obūṭlūn*

Country mellow

Abutilon indicum Sweet

Nature: It is a vegetable resembling the gourd. Some physicians say that this is its well known name.

Wounds and ulcers: Some physicians say that it is the best thing for fresh wounds and when placed on them, adheres the separated parts and grows flesh.

71— *Ūsbtā*

Indian blue water lilly

Nymphaea Sps

Nature: *Ūsbtā* is a variety of the Indian blue lilly.

Temperament: According to Ibn *Māsarjawaih* it is hot and dry.

72— *Ūmālt*

Honey wine

Eleemali muslum

Nature: *Ūmālt* is a very hot oil and is viscous like honey or even more than that. The oil is extracted from the stem of the sweet-*Tadmuriyah* tree and mixed with the oil of its flower. This is called *Ūmālt* and also known honey oil.

Choice: The best one is that which is purest, thickest, oldest and highly greasy.

Temperament: *Ūmālt* is hot and moist but the hotness surpasses its moistness.

Swellings and pimples: Its paint is useful for ulcerative itches.

Joints organs: It is useful in rheumatism.

Organs of the head: It makes one sleepy and slothful.

SECTION VI

Ocular organs: Collyrium made with *ūmālī* is useful in cases of dim vision.

Excretory organs: Three *Ūqiah* (90 gm.) of *ūmālī* diluted with nine *Ūqiah* (270 gm.) of water not only purges out bile and immature humours but also produces laziness and flaccidity. It is said that one should not be apprehensive of using *Ūmālī* since it is beneficial, but at the same time, sleep should be avoided after its use.

73— *Īrsā*

Orris root

Iris ensata Thumb

Nature: *Īrsā* is the root of *sausan āsmānjūnt* (blue lilly) which is a herb with stem and flowers of different colours e.g. white, yellow, blue and purple, and hence it has been named *Īrsā* meaning a rainbow. The roots are knotty and the leaves are thin. Old leaves are moth-eaten. Dioscorides states that leaves of *Īrsā* are similar to those of the wild lily except that the former are longer and wider than the latter. Its stem bears flowers which cover one another and which are of several colours. It is due to this diversity of colours that it has been named as *Īrsā* i.e. a rainbow. The roots are hard, knotty and fragrant. It is necessary that after the roots have been collected they should be dried in shade and tied together with the thread of flax.

Choice: Hard, dense, compact, reddish and free from stink resembling that of stagnant water constitutes the best quality of *Īrsā*. It irritates the tongue and forcefully causes sneezing.

Temperament: It is hot and dry in the last of the second degree.

Actions and properties: *Īrsā* is warming, rarefying, maturative, deobstruent detergent and purifying. Its extract is dissolvent, when used along with hydromel, it expels thick phlegm.

Cosmetics: A mixture of *Īrsā* and hellabore in equal quantity removes freckles and lentigo. *Īrsā* alone also produces the same effect.

Swellings and pimples: The decoction of *Īrsā* softens hard and thick swellings scrofula and acne.

Wounds and ulcers: *Īrsā* is useful for malignant ulcers, its (powder) sprinkled over fistula promotes the growth of flesh. It also covers the bones with flesh.

Joints organs: Its oil removes fatigue. It is useful in convulsion and muscular rupture when used internally with vinegar or wine. Its enema is useful for sciatica.

Organs of the head: It induces sleep and removes chronic headache. When mixed with rose-oil and vinegar (or wine) and then

applied, it removes headache. *Īrsā* of good quality causes sneezing. A gargle of its decoction gives relief in toothache. Its oil diluted with vinegar removes *tinnitus aurium* and is useful for chronic catarrh. Its oil and decoction removes the ozaena and being frightened in sleep.

Ocular organs: It causes tearing in eyes.

Chest and respiratory organs: It relieves pleuralgia and pleurisy. It is useful specially in cough, due to thick humours, and also for pneumonia, dyspnea and diphtheria. Owing to its highly rarefactive and deobstruent properties, it expels the superfluous matter which may cause congestion and blockade in the chest. In diseases of the chest it is used with *maibukhtaj*. Gargling with its decoction removes the swelling of uvula.

Alimentary organs: When used with vinegar, it relieves the patient against cold hepatalgia and splenalgia. Its internal and external use is beneficial in dropsy.

Excretory organs: It is a deobstruent for the orifices of piles, removes gripes, nocturnal emissions and secretion from prostate glands. When taken with wine it acts as an emmenagogue. Sitting in its decoction helps the patients in metrorrhoea and cold uteralgia. A suppository made of it with honey causes abortion. Its oil is useful for the uterus. Use of old powdered *Īrsā* with honey, expels the yellow bile, black bile and phlegm. The dose varies from half an *Ūqia* (15 gm.) to seven *dirham* (24.5 gm.)

Fevers: Its oil is useful in fevers accompanied by cold and shivering.

Poisons: It acts as an antidote for all poisons if taken with vinegar.

LETTER BĀ

1. *Bāblus*

Wild poppy

Papaver dubium Linn.

Nature: It is the same thing which is called *Khashkhāsh al-wabari* and *al-zabadi* (spotted or horned poppy) for purgation. Its effect is like that of the euphorbia.

Temperament: It is very hot.

Excretory organs: It acts as a purgative like euphorbium.

2. *Bābūnaj* Chamomile *Matricaria chamomilla* Linn

Nature: *Bābūnaj* is well-known. It is a herb having flowers of different colours such as yellow, white and purple. The leaves and flowers are preserved and converted into tablets. The root is dried up and stored. According to Galen, chamomile is nearer to the rose in tenuity but is hot, though mild like the olive. It is a soft herb and grows in rough places and near the pathways. It is procured in spring season and stocked.

Temperament: It is hot and dry in the first degree.

Actions and properties: It is deobstruent and rarefying of thick humours. It is relaxant and mild dissolvent but is not absorbent. This is its main characteristic.

Swellings and pimples: It soothes the hot swellings by producing relaxation and dissolution and softens the swellings provided it is not severe. It is administered internally in cases of severe swellings of the viscera.

Joints organs: It reduces tension, strengthens the muscles and is the most useful drug for removing fatigue since its heat is similar to that of animal heat.

Organs of the head: It is a tonic for the brain, is useful for cold headache and for evacuating the (humoral) matter from the head because it dissolves (humours) without absorption. This is its main characteristic feature. It is also useful for stomatitis.

Ocular organs: Its plaster is useful in (eye diseases) as eruptive fistula, lachrymalis, conjunctivitis, turbidity, pimples, scabies, pains, and itches.

Organs of the chest: It is an expectorant.

Alimentary organs: It removes jaundice.

Excretory organs: It is diuretic, expels (calculus, especially the variety bearing purple flowers). Fomentation with it is useful in cold bladder pain. It acts as an emmenagogue both when the patient takes it internally or sits in its (boiled) water. It expels the foetus and placenta and is useful for ileus.

Fevers: A liniment (mixture of *bābūnaj* and oil) of *bābūnaj* is used in intermittent fevers. It is used internally in last stages of chronic fever and is useful in fevers which are not severe. It is also useful for hot swellings of the viscera provided the (morbid) matter has been matured. Similarly, it is useful for swellings which are not hot and their (morbid) matter has been matured.

Substitutes: *Brinjāsif* (yarrow) which is also called *Qaisūm* is its substitute for strengthening the brain and removing headache.

3. *Bādranjūyah* Cultivated balm *Nepeta hindoostana* Haines

Temperament: Cultivated balm is hot and dry in the second degree.

Properties: It is useful in all kinds of phlegmatic and atrabiliary diseases.

Cosmetics: It improves odour of the body.-

Ulcers: It is useful in atrabiliary itches.

Head: It is beneficial for removing obstructions from the (vessels) of head and also in ozaena.

Chest: It is an exhilarant and tonic for the heart and also removes palpitations.

Food: It helps in digestion and is useful in hiccough.

Substitutes: Equal weight of silk pod and two-third weight of the peels of citron is its substitute for causing exhilarating effects.

4. *Bādhāward* White acanthus *Centurea phylloce phalla*

Nature: *al-shaukat al-baiḏā'* is another name of this drug. It resembles the caltrops but is relatively white in colour and having larger spikes. The leaves resemble those of *ḥamāmā* (amomum) but are whiter and thinner than those of *ḥamāmā*. The stem is 2 arms (about 3 feet) high. The flowers are purple and the fruit resembles the carthum seed but is more round than that of carthum seed.

Temperament: Its roots are cooling, desiccant and somewhat dissolvent. The seeds are mildly hot. According to some physicians, *bādhāward*, as a whole, is hot.

Actions and properties: *Bādhāward*, especially its seeds are dissolvent, deobstruent, moderately astringent and styptic.

Swellings and pimples: Being dissolvent and astringent, it is useful in phlegmatic swellings. Hence the drug, especially the seeds, are used in plasters.

Joints organs: It is useful in convulsions because it is moderately astringent and dissolvent. The seeds are beneficial for children suffering from disorder in the movement of their muscles.

Organs of the head: Gargling with its decoction relieves odontalgia.

Organs of the chest: *Bādhāward*, especially its root, is useful in haemoptysis.

Alimentary organs: It is useful in weakness of the stomach and removes its obstructions.

Excretory organs: The root which is a diuretic is also useful in chronic diarrhoea especially caused by gastric disorder.

Fevers: It is useful in chronic phlegmatic fevers caused by the weakness of stomach and also for all other chronic fevers.

Poisons: It acts as an antidote for the scorpion bite when chewed and applied on the bite to absorb the poison. The seeds used orally remove the effect of insect-bite.

Substitutes: For fevers, the substitute of *bādhāward* is *shahtarj* (Fumitory).

5. *Bādh rūj*

Sweet basil

Ocimum basilicum Linn

Nature: *Hūk* is another name of *bādh rūj*. It is a well-known drug.

The oil of *marzanjosh* (sweet marjoram) may be a substitute for the oil of *Badhrūj* but the latter is weaker in potency and has also contradictory properties:

Temperament: It is hot from first to second degree and dry in the beginning, of the first degree with superfluous moistness which makes it cool upto the second degree. This property is, however, not found in it.

Properties: It is astringent but is also purgative. It is constipative but at the same time enables the superfluous matter to be expelled through purgation. It is dissolvent, maturative and flatulent. It gets putrefied soon. It expels the morbid and atrabiliary humours. The seeds check the formation of black bile.

Swellings: A liniment made with *bādh rūj*, vinegar and rose oil is useful in hot swellings.

Head: Nasal drops made from the extract of *bādh rūj*, especially with the addition of vinegar (of wine) and camphor, stops epistaxis. It relieves molar pain when used as a wick, removes excessive thirst in (persons of) certain temperaments while in some other cases, it induces thirst.

Eye: Its plaster is useful for the throbbing in the eyes. If used orally it causes blindness by thickening and evaporating the fluids in the eyes but the extract, if used as a collyrium, strengthens the eye sight.

Chest: It is a powerful tonic for the heart, decongests the lungs and chest. One *Uskurja* (120 gm.) of its juice corrects irregular breathing. The juice is very useful for blood-spitting and also increases milk secretion.

Diet: *Bādhhrūj* is slow to digest, gets putrefied soon and is bad for stomach especially its leaves.

Excretion: It is constipating but also enables the humours to be expelled. It is diuretic but is harmful for the anus. The seeds are useful in dysuria.

Poisons: It is placed on the spot stung by wasp, scorpion and *Tinnin bahri* (sea dragon).

6. *Bādhinjān*

Brinjal

Solanum melongena Linn

Description: It is a well-known vegetable.

Choice: Stale brinjal is unsuitable and the fresh one is good (for use). The taste and temperament are like those of soda ash.

Temperament: Ibn Māsarjawaih holds brinjal to be of cold temperament, but the fact is that it is hot and dry in the second degree on account of its bitterness and pungency.

Properties: It produces blackbile and obstructions.

Cosmetics: It has an adverse effect on the complexion, darkens it and makes it pale. A small sized brinjal is mainly composed of the skin so it produces freckles.

Swellings: It produces cancers, hard swellings and leprosy.

Head: It causes headache, obstructions and foul odour in the mouth.

As food: Brinjal, when not cooked with vinegar, produces obstructions in the liver and spleen. Sometimes it removes the obstructions of the liver.

Excretion: It (the fruit) produces piles. However, dried in shade and pulverized buds are useful in piles. Uncooked brinjal has nothing to do with constipation or relaxation of the bowels but when it is cooked in oil, it relaxes the bowels and when cooked with vinegar, it causes constipation.

7. *Bāqla*

Broad bean

Vicia faba Linn.

Description: It has many varieties, one is well known and the others are Egyptian, Indian and Nabṭī varieties which is called *Jirjir*. The *Nabṭī* variety is most constipating and the Egyptian one is more moist and less nutritious. The moist one produces little superfluous matter. If it were not slow to digest and flatulent, it would have

been as nutritious as the barley broth; rather it would have produced thick and stronger blood.

Choice: The (stored) broad beans which are thick, white and free from insects are good, while the fresh beans are considered inferior. *Baqla* can be rectified (defects are removed) by leaving it in water for a long period and cooking it well. It should be used with pepper, salt, *Sa^ctar* (origanum) and oil. The Indian variety with a particular dose, is included among emetics and purgatives.

Temperament: It is somewhat moderate in temperament, but is mostly inclined towards coldness and dryness and the moist variety has some superfluous humidity. The correct approach would be to classify *bāqla* as cold. However, those who declare it to be cold in the second degree exaggerate the matter.

Properties: It is a weak detergent and a strong flatulent. When cooked for long with repeated addition of water, unlike barley broth, removes its flatulent property. This property is also reduced when *bāqla* is cooked peeled and lacerated well in the vessel and it is not stirred during cooking. Roasted *baqla* is less flatulent but slow to digest. When cooked with peel, it is highly flatulent. Probably the thinner beans are less flatulent. The *Nabīl* variety is highly constipating and its peel is very astringent but it does not act as a detergent. The Egyptian variety is most constipating but detergent and helps growth of soft flesh and thick humours. According to Hippocrates it is a good nutriment and preserves health when used without peel. Longitudinally split beans when placed on the bleeding part, stop bleeding. One of the characteristics of *bāqla* is that a hen fed on it ceases to lay eggs and human beings get nightmares. The beans, especially fresh ones, cause itching.

Cosmetics: The peel when applied on hair as a plaster, thins it. Similarly such plaster stops growth of hair on the pubis, or on the shaven part. *Bāqla* especially its peels, acts as detergent in pityriasis freckles, lentigo and improves the complexion.

Swellings: A plaster of *bāqla* with vinegar is made and applied on the swellings of the testicles.

Ulcers: It is useful in muscular ulcers.

Joints: It is useful in muscular convulsion. Its decoction mixed with the fat of swine is applied on the part affected by gout.

Head: It produces headache and aggravates all existing headache. A green and bitter thing found inside the bean of Egyptian variety, ground with rose oil and dropped into ears, relieves otalgia.

Eye: A plaster made of *bāqla*, honey and fenugreek is useful in lividity and ecchymosis and a plaster made of *bāqla*, frankincense,

roses and the white of eggs is useful for protrusion of the eye particularly that of the pupil.

Chest: It is beneficial for the chest, haemoptysis and cough. A plaster made of *bāqla*, honey and powdered fenugreek is useful in laryngitis and tonsillitis. A plaster of *bāqla* is useful in mastitis and congestion of milk in the breasts.

Food: It is hard to digest but is not slow in its downward movement and final emission. It does not produce obstructions. It acts as an anti-emetic when used after cooking it with vinegar.

Excretion: A decoction of *bāqla* especially its peels, vinegar and water is useful in chronic diarrhoea. The *Nabfi* variety is useful for intestinal abrasions. The paste and soup of *bāqla* have common properties. A plaster made of vinegar is useful in testicular swellings.

8. *Bān*

Persian Lilac

Melia azedarach Linn.

Nature: The fruit of *bān* is larger than chick pea, whitish, soft and oily.

Temperament: It is hot in third and dry in second degree.

Actions and properties: The fruit, especially its pulp, is a cleansing agent for the viscid humours and it removes the obstructions of the viscera when used after mixing it with vinegar and water.

The oil cake (of *bān*) is bitter and somewhat astringent because of its caustic property. The peel is more astringent, The oil is also not free from astringency. All of them have detergent and erosive potency.

Cosmetics: The fruit is useful in pityriasis, freckles, specks and scars. The oil too has these properties.

Swellings and pimples: The fruit when included in an ointment is useful in all types of hard swellings. Similarly, it is useful in warts if it is used in an ointment.

Wounds and ulcers: The fruit is useful in exfoliating scabies, ulcerating scabies and acne when used after mixing it with vinegar. It is also useful in favus.

Joint organs: The fruit warms up the nerves and softens them in convulsions. The oil of *bān* removes hardness of the nerves.

Organs of the head: Because of the astringency the fruit stops epistaxis. The oil is useful for otalgia and tinnitus, especially when used with the fat of duck. A decoction of the root (of *banj*) is used as gargle to cure odontalgia.

Alimentary organs: The fruit when mixed with vinegar and administered, two *Dirham* (7.00 gm.) being the dose, is useful in sclerosis of

liver and spleen. A bread made from it with the flour of darnel and water mead or with the flour of peas or with the flour of lily and applied as a plaster, is useful for the spleen. It is not suitable for the stomach because it causes vomiting. One *mithqāl* (4.5 gm.) of *bān* taken with honey causes severe vomiting and diarrhoea. The fruits possess similar properties.

Excretory organs: One *mithqāl* (4.5 gm.) of it especially when taken with honey, expels the phlegm. Similar is the effect of its oil when a wick soaked in it is used.

Substitutes: An equal quantity of madder or half quantity of cassia bark or ten times of mace are its substitutes.

9. *Bardī*

Papyrus

Papyrus antiquorum

Description: *Bardī* is a well known plant. It is used in making Egyptian paper and has properties similar to paper. *Bardī* as well as its paper when burnt, becomes highly desiccant.

Temperament: It is cold and dry in temperament.

Properties: *Bardī* or its ashes stops bleeding.

Ulcers: When sprinkled over fresh wound its powder heals them. It is put into vinegar and dried and then it is applied on fistula, creeping ulcers and wounds.

Head: Ashes of *bardī* is useful in *cancrem oris*.

Chest: Ashes of *bardī* stops bleeding.

Excretion: It is wrapped in linen and left to dry sometimes to be used in piles.

10. *Barshiāushān*

Maiden hair

Adiantum capillus-veneris Linn.

Description: It is *kuzbara al-bi'r* (Coriandar of well). In persian it is called *barsiaushān*, in Syrian *Sha^or al-hidām* and in Arabic *Shar al warn*. It is a thin grass which grows on sea-shores, near water tanks, rivers, canals and inside wells. It resembles fresh coriander but its stalks are reddish with a tinge of black-ness. It has no stem and bear no fruits or flowers. It loses its potency quickly.

Temperament: According to Galen it is moderate in temperament but at times it slightly tends towards hotness and mostly it tends towards dryness.

Properties: It is dissolvent, attenuant, deobstruent, astringent and stops secretions. When it is put into the feed of cocks and quails it excites them to fight.

Cosmetics: The ashes of *barsiaushān* mixed with vinegar and olive oil is used in alopecia and alopecia furfuracia. When mixed with the oil of myrtle and wine, its use lengthens the hair and prevents it from falling.

Swellings: It is useful in abscesses and cures scrofula.

Ulcers: It is useful in fistulas, fresh and malignant ulcers.

Head: Ashes used with water is useful in dandruff.

Eyes: It is useful in itches.

Respiration: It cleanses lungs and is useful in cough.

Alimentary organs: Administration with wine is good for stopping the movement of morbid matter towards abdomen and stomach. It is also good in splenic pain and in jaundice.

Excretion: It promotes the discharge of urine, dissolves stones, helps menstruation, expels placenta, cleanses puerpera and stops bleedings. According to some physicians, it causes constipation. *Ibn Masawaih* holds that it relaxes bowels.

Poisons: If mixed with wine, it is useful in bite of snakes, mad dogs and insects.

Substitutes: An equal quantity of violet and half the quantity of rob of liquorice may serve as its substitutes in cases of asthma.

11. *Barfāniqi*

Nature: It is reported that *barfāniqi* is the same as *bustān afroz*. Its leaves are like those of *hummāz al-Barrī* (bladder dock) but these are relative better and slightly black.

Properties: The leaves are constipating.

Ulcers: It heals wounds and ulcers.

Heads: Its extract is good for chronic oral ulcers and stomatitis. Its rob is highly useful in stomatitits.

12. *Brinjāsif (Qaiṣūm)* Yarrow *Achilea millepholium* Linn

Nature: It is a herb resembling absinth and it contains viscous fluid. One of its variety has small branches but large leaves. *Brinjāsif* generally has small and thin leaves and it is yellow or white in colour

and grows in summer. Galen states that since both (*brinjāsif* and *qaišūm*) have same temperament they are (collectively) called as *brinjāsif*.

Temperament: It is cold and moist in the first degree.

Properties: It is highly attenuant and deobstruent. Its plaster prevents the superfluous matter from moving towards an organ.

Organs of the head: Its plaster or a douche with its decoction is useful in cold headache. Inhalation of the vapours arising from its decoction gives relief in cases of nasal obstruction and coryza.

Excretory organs: It dissolves kidney stones. Sitting in its decoction helps in (regulating) menstruation. It is useful in ulcers, expels foetus and placenta, opens the mouth of uterus (*Os uteri*) and removes its hardness when administered orally or applied in the form of a plaster. The dose is upto 5 *dirham* (17.50 gm.).

13. *Birank Kābuli* *Embelia* *Embelia ribes* Burm F.

Nature: It is an Indian seed procured from Sindh (region). It is of two kinds; (a) small without holes and large with holes. The small variety is better.

Joints: It is useful in rheumatism and gout. It expels the phlegm from joints and this is its chief characteristic.

Excretion: It expels phlegm, tapeworms and other worms from intestines and this is its another characteristic.

14. *Buzāq* *Saliva* *Ptyxis*

Choice: The first saliva of the person of hot temperament is strongest in potency particularly when taken in the morning after night fasting.

Ulcers: It is useful in ringworms.

Eyes: It is useful for removing red spots from eyes and opacity of the cornea.

Poisons: It is an antidote for the poisons of snake, scorpion and other (poisonous) insects.

14. *Bazr Qaḡūnā* *Ispaghula* *Plantago ovata* Forsk.

Nature: *Bazr qaḡūnā* is of two types: one growing in winter and another in summer. The dose of each type is two *dirham* (7 gm.).

Choice: The best is that which is fully developed and settles down in water (when immersed in it).

Temperament: It is cold and moist in the second degree.

Properties: It causes constipation when used after roasting it and mixing with rose oil. Its plaster with vinegar gives relief in pains. These are its chief properties.

Swellings: It is beaten in vinegar and applied on hot swellings, herpes and erysipelas, etc especially on the swellings under ears and the phlegmatic swellings.

Joints: Its plaster is useful in tortuosity of nerves, convulsions, gout and hot rheumatism. The plaster is made with vinegar and rose oil.

Head: It relieves hot headache when plastered over the head.

Chest: It softens the chest.

Food: Its mucilage mixed with oils of rose and almond soothes severe and bilious thirst.

Excretion: Two *dirham* (7 gm.) of roasted ispaghula mixed with rose oil, causes constipation. It is useful for intestinal abrasions, particularly of infants. Its mucilage alone or mixed with the oil of violet, acts as a laxative.

Fevers: It cools down excessive heat in fevers, when it is taken orally.

16. *Bazr al-Kattān*

Linseed

Linum usitatissimum Linn

Nature: In potency it matches fenugreek.

Temperament: It is hot in the first degree and moderate in moistness and dryness. Some people state that decoction of linseed is moist and possesses superfluous humidity.

Properties: It is maturative and detergent. It produces flatulence because of its superfluous humidity. Even when roasted, it maintains its property of causing flatulence though it acquires astringency. The unroasted seeds mixed with figs become moderate. Then it may soothe pains even without the addition of chamomile.

Cosmetics: A paste made of linseed, natron (sodium nitrate) and figs is used for freckles and acne. Application of seeds mixed with garden cress kneaded with honey, stop the rupture of nails, their splitting and peeling off.

Swellings: Linseed stops internal and external hot swellings. When mixed in ash water, it is useful for swellings behind the ears and hard swellings.

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Joints: It is useful in convulsions and fissures of nails when applied after mixing it with honey and wax.

Heads: The smoke from the seeds or plant (when inhaled) is useful in catarrh.

Respiration: The seeds, particularly when parched, are useful in phlegmatic cough.

Food: The seeds corrupt the stomach, take long to digest and have little nutritive value.

Excretion: Roasted seeds cause constipation, while unroasted seeds are moderate (in their action) and have weak diuretic property. But they may be made potent (in their action) by roasting them. The seeds serve as an aphrodisiac when used with honey and pepper. A decoction of seeds is used as a douche for the uterus. Sitting in the decoction is also useful for the irritation and swelling of the uterus as well as of intestines. The seeds are also useful in ulcers of the bladder and kidney. In respect of the ulcers of intestines, the enema (of the decoction of the seeds) may be made more effective by adding rose oil to it.

17. *Bisbāsah*

Mace

Myristica fragrans Houtt.

Nature: The leaves of *bisbāsah* are intertwined, corrugated, dry, reddish or yellowish and look like barks. The wood and leaves are pungent like cubeb and are obtained from China. According to Ibn Māsawaih *bisbāsah* is the peel of nutmeg. Masih holds that in potency it equals *nārmushk* (iron wood tree) but is a little more attenuant.

Temperament: According to Paulos it is moderate in temperament. But some others state that it is hot and dry in the second degree. Undoubtedly it (the latter statement) is true.

Properties: It is somewhat astringent and removes flatulence.

Swellings: When used in *qairūṭī* (an ointment), it dissolves hard and thick swellings.

Cosmetics: It refines the odour of the body.

Head: When mixed with violet oil and introduced into the nose, it relieves the headache caused by dense gases and also in migrain.

Food: It strengthens the stomach and the liver.

Excretion: In persons afflicted with dropsy, it causes constipation. It is useful in abrasions (of intestines and uterus).

18. *Bisbāij* Common polypody *Polypodium Vulgare* Linn

Nature: *Bisbāij* is a thin knotty wood of mud colour with black or red tinge. It has multiple off shoots like an insect which has numerous legs. It is sweet but a little astringent. Some people state that it grows on trees in marshy bonds. According to some others, it grows on stony lands.

Choice: The best is that which is as thick as an index finger, somewhat green or yellow, compact, fresh, with a little bitterness but sweet (at the sametime) and acrid, tasting somewhat like a clove.

Temperament: It is hot in the second and dry in the third degree. It is predominantly desiccant.

Properties: It removes flatulence and moistness.

Joints: Its paste is useful for tortuosity of the nerves.

Excretion: It purges out black bile without causing gripes, phlegm and aqueous chyme. It is decocted with chicken or fish soup for use in colic. Its root (powdered), sprinkled over water mead and used with bean soup, helps in purging out yellow bile and phlegm. The dose is six *Kurmāt* (7 gm.), one *Kurma* (1.3 gm.) is equal to 6 *qirāt* or 2 *dirham* (approximately)*. It is necessary to use *bisbāij* with a liquid like hydromel. Before using it, some food like sardine fish should be taken, or 4 *dirham* of its decoction should be taken.

Substitute: *Aftīmūn* (epithyme) or the Indian salt to be taken half of its quantity as its substitutes.

19. *Bussad* Coral *Corolium rubrum*

Nature: It is a well known drug having different colours, such as red, black or white.

Temperament: It is cold in the first and dry in the third degree.

Properties: It is astringent, stops haemorrhage, is highly desiccant but its desiccating property is, however, stronger than its astringency.

Ulcers: It removes the superfluous flesh.

Eyes: *Bussad*, especially which has been washed (*maghsūl*), strengthens the eye, because of its cleansing property,. It absorbs the fluids collected therein. It removes the scars and is useful in epiphora.

*This measuring argument of Ibn Sina is not correct according to our conversion table prepared as per modern Decimal system. As per our finding one *Kurma* is equal to 1.3 gm. only. So Ibn Sina's calculation is not agreeable in this connection.

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Chest: It stops haemoptysis and also acts as an expectorant. Its black variety especially when burnt and washed, is a tonic for the heart and useful in palpitation.

Alimentary organs: when mixed with water, it is useful in the swellings of the spleen.

Excretion: It is useful in intestinal ulcers.

20. *Busr-wa-Balah* unripe date *Phoenix dactylifera* Linn

Nature: *Busr* and *Balah* are well known.

Temperament: Both the types are cold and dry in the second degree. However, the unripe dates are more desiccant than dried ones.

Properties: *Busr* and *Balah* are flatulent, particularly when water is taken after their consumption. Sweet dates produce borygmus in the bowels. *Busr* and *Balah* produce obstructions in viscera. The decoction of burr relieves us from burning by protecting the natural heat. An excessive intake of the two (*busr* and *balah*) produce thick humours.

Head: *Busr* causes headache and is intoxicating. Both types of date are very useful for gums.

Chest: Both types are unsuitable for lungs.

Alimentary organs: Both types help in coction (in stomach), are slow to digest and produce obstructions in the liver. The soft dates are less nutritious and slow to digest.

Excretion: Both are constipating, especially when vinegar or acrid wine is added to them. *Balah* is diuretic and when it is used with vinegar, stops leucorrhoea and bleeding in piles.

Fevers: An excessive use of both types, produces shivering fever and horripilation.

21. *Basl* Onion *Alium cepa* Linn

Nature: It is well known. It has biting pungency, some bitterness and astringency. The edible variety is larger in size, and more pungent. Red onions are more pungent than the white ones. Similarly the dry form is more pungent than the fresh one and raw green onion is more pungent than the roasted or fried one.

Temperament: *Basl* is hot in the third degree with superfluous humidity.

Properties: *Başl* especially its edible variety is rarefying and diluting, has astringency alongwith such properties as cleansing, deobstruency and flatulence. It can attract blood from inside and reddens the skin. The uncooked *başl* gives no nourishment. *Ştir bāja* (a kind of dish) prepared with *başl* causes less flatulence than that one which is prepared without it. A food in which *başl* has been used, produces thick humours. The edible variety is useful for removing the harmful effects of water. It loses its odour when its essence is taken and the rest is discarded.

Cosmetics: It reddens the face and the seed removes pityriasis. *Başl* is highly useful for alopecia when rubbed on the affected parts and removes the warts when used with salt.

Ulcers: The juice of *başl* is useful in dirty ulcers and it heals with chicken fat the abrasions caused by leather socks.

Head: Nasal drops (of the juice) cleanse the head and the ear-drops remove heaviness of the head, *tinnitus aurium* and pus and excessive moisture from ears which was causing heaviness of the head. Excessive use of it, causes stupor, harms the intellect, produces bad humours and increases the formation of saliva.

Eyes: The extract of edible *başl* is useful in cataract and clears the vision. Collyrium of powdered seeds with honey is useful in corneal opacity.

Chest: Onion juice mixed with honey is useful in diphtheria.

Alimentary organ: Wild *başl* is difficult to digest. One of its, varieties induces vomiting. The edible variety, aided by its bitterness strengthens the weak stomach and increases appetite. *Başl* twice fried (or roasted) becomes more nutritious, increases thirst and is useful in jaundice.

Excretory organs: It opens up the orifice of piles (i.e. causes bleeding). All varieties of *başl* stimulate sexual urge. The juice of *başl* promotes menstruation and acts as a mild laxative.

Poisons: The juice, when mixed with salt and wild rue and applied on the affected part, is useful in the bite of a mad dog. The edible *başl* removes the deleterious effects of hot winds (*Sumūm*). Some people hold that it produces bad humours in abundance in the stomach and counters the effects of poisons and in this regard it is excellent.

22. *Başl al-Zīr*

Nature: In potency and taste, it is like *Başl al-fār* (Squill) *Urginea indica*, Kunth, is used as a substitute for the same, though it is somewhat weaker (than the squill).

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Excretion: It relieves the patient from cold uteralgia.

Poisons: It is an antidote for (several) poisons and is used either internally or as a paint or with fig in cases of the scorpion and tarantula bites.

Substitutes: *Zaranbād* (Long zedoary) in equal quantity and *qaranfal* (cloves) three times in quantity, are its substitutes.

23. *Baṭ*

Duck

Anas

Temperament: It is hotter than all other domestic fowls in temperament. Some people are of the view that it warms up persons having some coldness in temperament and causes fever to those having hot temperament.

Properties: Its fat is very useful in removing pain and the irritation in deeper parts of the body. Its fat is better than the fats of all other birds. Its meat is carminative and its gizzard is highly nutritious.

Cosmetics: Its fat clears complexion and the meat fattens (the body).

Chest: It clears voice.

Alimentary organs: The meat of duck, especially of the goose, is slow to digest. The wings (among its different parts) provide lightest and best food. Among the meat of birds, the meat of duck, if digested, is the lightest but the most nutritive food.

Excretion: It increases sexual power and the quantity of semen.

24. *Buṭm*

Terebinth

Pistacia terebinthus Linn.

We shall deal with it under *al-Ḥabbah al Khaḍrā*.

25. *Baṭbāt*

Knot weed

Polygonum arviculare Linn.

Nature: It is '*Aṣā al-rā'i*' (Knot Weed). We shall describe its properties under letter '*Ain*'.

26. *Biṭṭikh*

Sweet melon

Cucumis melo

Nature: It is a well known fruit.

Temperament: It is cold in the first and moist in the last of the second degree. The dried seeds, however, do not remain moist but acquire dryness of the second degree. Infact, these (seeds) are dry in temperament.

Properties: Ripe melon is attenuant while the unripe one is thick in humour. In temperament, unripe melon is like cucumber and in deobstruency it is also similar to it. In properties *malbūn* (*biṭṭikh-i Khurāsānī* which is found in Khurasān, Iran) is the best variety. The pulp of melon, and more so its seeds, are maturative and detergent. The properties of maturation and detergency are shared by both, the ripe and unripe. The seeds are stronger and more detergent. Melon transforms itself into such humours as may be agreeable to the stomach. As it has the higher tendency towards becoming phlegm than yellow bile and that is why it does not incline towards black bile. On the other hand the *malbūn* variety does not transform speedily.

Cosmetics: Water melon, particularly its pulp and seeds, clear the skin. It is useful in freckles, pityriasis and dandruff, especially when the pulp is mixed well in the oil of the wheat and warmed up in the sun.

Eye: Application of the peel on the forehead prevents the catarrhal secretion to the eyes. This is the chief property (of the peel).

Alimentary organs: Water melon, especially its root, induces vomiting. Two *Dirham* (7 gm.) or one *obūlūs* (750 mg) of the root mixed with wine brings forth vomiting without any difficulty, The melon if not fully relished causes cholera. *Malbun* variety, except it is taken with its innermost part, is difficult to digest. It is most nutritious food and it produces most agreeable humours when water melon has been consumed. It is necessary that it should be followed by some other edible thing. Non-compliance of this direction would result in nausea and vomiting. It is advisable that after taking melon the persons with hot temperament should take *Kundur* (Frankincense), ginger (preserved in honey or candy) and old fragrant wine.

Excretion: Ripe as well as unripe melons are diuretic and help in the removal of stone from the kidney and the bladder, especially if the stone is small. The benefit is greater in case of kidney stone. *Malbūn* variety is less diuretic but more detergent and a soft part of it descends into the stomach quickly.

Poisons: Melon, when not digested properly, acquires poisonous property. Hence when heaviness is felt in the stomach it should be expelled without delay. It would be better to get it expelled through vomiting.

27. *Baʿr al-ḥayawān*

Animal dung or dropping

Cosmetics: Monitor lizard's dung has a cleansing property and is useful in freckles and leukoderma while the camel dung wipes out scars and warts.

Head: The same dung because of its abstersion is useful in dan-druff. Camel dung stops nose bleeding and when added to the medicines meant for epilepsy, enhances their efficacy.

Eye: Monitor lizard's dung removes the opacity of the cornea.

Ulcers: Camel dung removes pimples and ulcers and those of goat are useful for favus.

Swellings: Goat excreta potentially dissolves a scrofula. In the same manner the dung of camel and goat are useful in erysipelas.

Joints: Camel dung soothes the pains and swelling of joints.

Excretion: A little of the dried excreta of goat placed in a piece of wool (used as suppository), checks leucorrhoea.

Poisons: Local application of one *uqiah* (30 gm.) of excreta of goat diluted in five *uskurjah* (600 gm.) of black wine, especially the fresh one, acts as an antidote in the bite of a serpent which induces thirst. Application of a paste made from the burnt goat dung and vinegar gives relief in cases of mad dog bite.

28. *Baqla hamqā'*

Purslane

Portulaca oleracea, Linn

Nature: It is a well known vegetable.

Choice: The extract is stronger than its other forms of use.

Temperament: It is cold in the third and moist in the last stage of the second degree.

Properties: It is astringent, stops chronic bleeding and other secretions, has little nutritive value and it removes yellow bile.

Cosmetics: Warts may be removed when rubbed with *baqla hamqā* due to its inherent properties and not by its mechanical action.

Swellings: It may be used as a plaster on hot swellings and erysipelas especially when complications are feared.

Head: The pimples of head heal up when washed with *baqla hamqā* especially when it is mixed with wine. It may remove the molars if they are painted with it. It gives relief in hot and throbbing headache.

Eye: It is useful in ophthalmia and it is included in collyrium. Its excessive use, however, may cause hemeralopia.

Chest: The juice of *baqla hamqā* is useful in haemoptysis because of its astringent action.

Alimentary organs: Its syrup or paste is beneficial in cases of stomatitis, the irritation of epigastrium and liver, stops biliary vomiting and reduces appetite.

Excretion: Its enema is useful in intestinal abrasions, bilious diarrhoea, nephralgia, cystalgia and renal and cystic ulcers. The

general belief is that it reduces sexual urge but Māsarjawaih thinks otherwise and holds it to be an aphrodisiac. It may act thus in persons of hot or dry temperament. It stops bleeding and is useful in irritation of the uterus. Its juice is useful in bleeding piles and its extract expels tapeworm. Oral use of roasted *baqla ḥumqā* stops diarrhoea.

Fevers: It is useful in acute febrile conditions.

Substitute: *Bazr quḥūnā* (Ispaghula) is its substitute.

29. *Baqla Yamānia* Bliton *Amaranthus blitum* Linn.

Nature: According to Dioscorides, *al-baqla al-Yamāniah* has no medicinal property but has moisture content like that in the goose-foot and in this respect it surpasses all other vegetables. It is more moist than lettuce and white pumpkin, has little nutritive value and does not get assimilated soon because of less boraceousness or alkalinity in it.

Temperament: According to Galen it is cold and moist in the second degree.

Swellings: It is used as a plaster on hot swellings.

Ulcers: The paste of its root is applied on favus.

Head: Its juice, mixed with rose oil, gives relief in headache caused by sun-stroke.

Chest: It is useful in cough and thirst due to heat, especially when it is decocted alongwith almonds and juice of sweet pomegranate.

30. *Baqla Yahūdia* Jew's mallow *Malya rotundifolia* Linn.

Temperament: It has hotness which is more than moderate in temperament.

31. *Bal* _____ *Cucumis Sps.*

Nature: A group of physicians state that *bal* is an Indian cucumber like caper cucumber. It is bitter in taste and resembles ginger.

Temperament: It is hot and dry in the second degree and according to some physicians it is so in the third degree.

Actions and properties: It is astringent and strengthens the viscera

Joints: It is useful in sclerosis and flaccidity of nerves and all other cold nerve diseases, for example, paralysis and facial paralysis.

Alimentary organs: It produces heat in the stomach, gives relief in vomiting and is included in certain electuaries (*Jawārish*).

Excretory organs: It constipates but removes gases (winds).

32. *Balādur* Marking nut *Semecarpus anacardium* Linn.

Nature: It is a fruit of Indian origin, resembling the tamarind stone. Its pulp is like that of walnut, sweet and harmless. The peel is flaccid with cavities full of a matter like viscous and fragrant honey. Some people chew it specially with walnuts and it does not harm them.

Temperament: It is hot and dry in the last stage of the fourth degree.

Properties: Its honey-like matter causes ulcers and inflammation and burns up blood and humours.

Cosmetics: It removes warts and leukoderma, eliminates the tattoo marks completely and cures phlegmatic alopecia.

Swellings: It agitates the internal alopecia.

Joints: It is useful in coldness and laxity of nerves caused by paralysis and facial paralysis.

Head: It is useful in cases of weak memory, especially when its preparation is used with *anqardiā* (an electuary). However, it disturbs the thinking power and stirs melancholia.

Excretory organs: The piles get dry when fumigated with *balādur*.

Poisons: It is one of the poisons and burns humours and kills. Churned milk is its antidote. The oil of walnut reduces its toxicity.

Substitutes: The following formulation may serve as a substitute in diseases for which it is useful.

Hazel nut—4 times of its weight

Oil of balsam—0.25 parts of its weight

White bitumen—0.75 parts of its weight

33. *Balbūs* Wild onion *Scilla* Sps.

Nature: It is a kind of onion, is edible, small in size and resembles narcissus bulb. The leaves are like those of leek and the flowers like those of violet. One variety of *balbūs* induces vomiting. According to a group of physicians *balbūs* is the *baṣl al-Zir* while another group

holds that it belongs to the species of *talkh biyāz*. *Balbūs* may also be the *anāghālis* (Pimpernel) which we shall describe under that name.

Temperament: The temperament of *balbūs* is nearly identical with that of (common) onion. Perhaps it is dry in the first degree with superfluous moisture.

Properties: It is flatulent, diaphoretic and it roughens the tongue.

Cosmetics: Its extract is painted on freckles, chiefly on brownish spots caused by the sun. Similarly it removes the marks of ulcers and roughens the tongue and palate. For removing the warts it is mixed with the yellow of the egg and painted and for acne it is painted with oxymel.

Ulcers: For drying up ulcers of the chin, it is roasted with the head of a salted fish (*samak al-ṣīr*) and sprinkled over them and when plastered it cures and clears them.

Joints: A plaster made of *balbūs* and vinegar is useful for the fatigued medius muscles. A paste of *balbūs* is useful in gout, arthralgia and tortuosity of nerves. It is also used as a plaster in cases of splitting of nails and ears etc. In the latter case, it is plastered with roasted wheat or barley flour.

Head: *Balbūs* is a drug for dandruf and ulcers of the skull. Its extract mixed with the yellow of egg is painted on cracks of the skull (when they do not amount to multiple fractures).

Eyes: For eyes it is used either alone or with the yellow of the eggs. Its extract is painted on the blood spots of the eyes. With the addition of vinegar it becomes a dependable medicine for trachoma and swellings of the canthus.

Alimentary organs: The sweet and red variety of *balbūs* is good for the stomach. For gastralgia it is plastered with honey. The bitter variety is superior, digests food. It is nutritious though the resultant nutriment is not commendable especially when it is raw. If it is not assimilated it causes gripes and flatulence.

Excretion: It stimulates sexual urge.

34. *Balsān*

Balsam

Commiphora opobalsamum Engl

Nature: *Balsān* is an Egyptian tree which grows only at one place called 'Ain al-Shams'. Its leaves and smell resemble those of common rue (*sadhāb*) but the leaves are whitish. In height it is like the *huḍaḍ* tree (Ophthalmic barberry). The oil is better than the seed while the seed is more potent than the wood in all respects. For obtaining the oil, the tree is given cuts over its trunk with a piece of iron. When the sirius has risen whatever secretions come out of it are

absorbed in a piece of cotton. The oil so obtained does not exceed a few *raql* (450 gm) in a year. Dioscorides stated that this tree is found only in the remote places of the lower part of the land of the Jews, that is Palestine. The trees differ in roughness, length and thinness.

Choice: The test of purity of *balsān* lies in its capability of congealing milk or water when it is mixed with the same and in its ability to get strained through a piece of cotton, and having a good smell. It is adulterated with pine, mastic and henna oil alongwith melted wax. Fresh *balsān* constitutes the best quality while that which is old and thick has no potency. The best seeds of *balsān* are those which have a redish tinge and which are compact, large and heavy. Sometimes they irritate the tongue and scratch it and have a smell like that of the *balsān* oil. The seeds are adulterated with other seeds resembling them but they are smaller in size, weaker in potency and peppery in taste.

Temperament: The twig of *balsān* is hot and dry in the second degree, the seeds are comparatively hotter (than the twig and the oil is hotter than both of them. The oil is hot in the first stage of the third degree. However, it does not produce heat as it is generally believed.

Properties: It is deobstruent and is useful for the diseased viscera.

Ulcer: It purifies ulcers especially when administred with Orris root and also removes the pieces of crushed bone.

Joint organs: It is useful in sciatica when taken in the form of a syrup. Its decoction is useful in convulsions.

Organs of the head: It purifies the head and its ulcers. It is also useful in epilepsy and giddiness.

Ocular organs: *Balsān* and its oil cleanse hemeralopia.

Organs of the chest: The twig and seeds of *balsān* are useful in pleuralgia, severe asthma, dyspnoea and pneumonia. Its seeds are useful in cold pneumonia and cough. On the whole it is useful for the parts of viscera and supra hypochondrium.

Alimentary organs: *Balsān* is useful in weakness of digestion. Its decoction removes indigestion, cleanses the stomach, strengthens the liver and is useful in gripes.

Excretory organs: It acts as a diuretic drug when one *uqiah* (30gm). of the decoction of its twigs or two *ūqiah* (60 gm.) of decoction of its bark are taken. Fumigation with *balsān* dries up the moistness or coldness of uterus, expels the foetus and placenta and is useful in all the painful conditions of uterus. The decoction opens the mouth of the uterus. A *qairūfi* (ointment) made from its oil, rose-oil and wax is useful in coldness of the uterus. Its decoction is useful in dysuria.

Fevers: The oil of *balsān* is useful in shivering.

36. *Baitlaj* Balleric myrobalan *Terminalia belerica* Roxb

Nature: It is somewhat like *amlaj* (*Embllica affincinalis*) in taste. The pulp is almost as sweet as hazelnut.

Temperament: It is cold in the first and dry in the second degree.

Properties: It possesses dual properties that of loosening the bowels as well as causing constipation.

Alimentary organs: It strengthens the stomach by improving its capacity of coction and assimilation and is helpful in relaxity and moistness of the stomach. Nothing is more maturing for the stomach than it.

Excretion: Sometimes it may cause constipation but the physicians believe it to be only laxative. Obviously it is so. It is useful for rectum and anus.

37. *Banāt wardān* Cockroach *Periplaneta orientalis*

Excretory organs: Cockroach (used as a drug) is useful in painful conditions of uterus and kidneys. Its dissolving potency may be increased by mixing it with olive oil or wax and the yellow of an egg. It does not cause hardness, is a diuretic, emmenagogue and abortifacient drug. It is useful in piles when mixed with caraway (used as an external application).

Fevers: It is useful in shivering fever.

Poisons: It is useful against poisons of insects.

Substitutes: *Qaishūr* (Pumice stone) is its substitute.

38. *Banāsfān* _____

Nature: It acts as substitute for *kasht barkasht* (Screw tree). It is a kind of wood obtained from Zanj (*Habsha*).

39. *Banj* Henbane *Hyoscyamus niger* Linn.

Nature: *Banj* is a well-known plant. The black variety is most harmful and corrupt. Next comes the red variety in this respect.

The white variety is most suitable which is the only variety to be used. The first two varieties are not used. The flowers of the black variety are purple while those of the red variety are yellow. The flowers of the white variety are white or yellowish. The juice and oil of *banj* are used.

Choice: The white variety is the best. However, the red variety may be used only if the white is not available but the black variety should always be avoided. The extract of leaves of the black variety is used as a substitute for opium.

Temperament: The black variety is cold and dry in the last stage of the third degree while the white one is cold and dry in the first degree.

Properties: *Banj* is an anaesthetic drug. It stops bleeding and soothes throbbing pain because of its anaesthetic properties.

Cosmetics: Since it thickens the blood, it is included in medicines for fattening.

Swellings: It relieves pain caused by swellings, dissolves the hard swellings of testicles and is useful for erysipelas.

Joints: *Banj* acts as a sedative for gout pain when used as a paint and three *qirāt* (750 mg.) are taken orally with hydromel. It is said that a decoction or paint made from its three or four leaves cures osteogangrene.

Head: Its extract or some other preparations soothe the earache and when mixed with vinegar and rose oil, it relieves toothache. Similar are the properties of its seeds, roots boiled in vinegar and oil. It causes mental confusions if its leaves are orally taken. Ear drops made from the decoction of its leaves remove all types of earache.

Eyes: It is painted on eyes. The seeds and the extract of leaves soothe severe painful conditions of the eye. Its rob or leaves or seeds made into a paint are applied on the forehead to stop the catarrhal secretions.

Chest: Two *obūlūs* (15000 mg) of *banj* is useful in excessive haemoptysis. In the swellings of breasts the leaves are used in the form of a plaster. Sometimes *banj* is included in medicines intended to soothe cough. When breasts get swollen after conception, it is used as a paint and the swelling is reduced or dissolved.

Excretion: The extract is useful in uteralgia and stops bleeding. The leaves are applied in the form of a plaster on the swelling of testicles.

Poisons: It is a poison. It causes mental confusion, dysmnnesia, diphtheria and mania.

40. *Banjanjusht*

Chaste tree

Vitex agnus castus Linn

Nature: *Banjanjusht* is a plant of the size of a tree. It grows near water. Its branches are hard and leaves are like those of olive but they are thinner. Its wood is not used as a drug. Only its flowers, leaves and fruits are used. The fruits of *banjanjusht* and all other parts, which are used (medicinally), are tenuous, pungent and astringent. It is next to the dry common rue in these properties.

Temperament: It is hot in the first and dry in the second degree.

Properties: It is dissolvent, attenuant and carminative, It is not flatulent but is deobstruent with some astringency.

Cosmetics: It whitens and clears the complexion.

Joints: The leaves of *banjanjusht* are used in the form of a plaster to remove the tortuosity of nerves and to relieve fatigue.

Organs of the head: *Banjanjusht* causes headache and giddiness when taken orally, but is useful as a plaster. Roasted *banjanjusht*, when taken orally, reduces headache.

Chest: It is one of the drugs which increase the milk but decrease the semen. The dose of cyclamen is one *dirham* (3.5 gm).

Alimentary organs: It removes obstructions of liver and spleen. A dose of two *dirham* (7 gm.) with oxymel, is very useful in sclerosis of the spleen. It is also useful in dropsy.

Excretory organs: The patient of uteritis is given sitz bath in its decoction. In uteralgia it is given orally with mint or used as a fumigation. It desiccates semen. When its branches are spread under the back of a person, It stops nocturnal emission and sexual excitement. The seeds are used as a plaster with clarified butter in the hardness of testicles.

Poisons: *Banjanjusht*, when taken in a dose of one *dirham* (3.5 gm.), is useful in snake-bite. Similarly its plaster is useful in the bite of dogs and other beasts. The smoke of its leaves repels the insects.

41. *Bunduq*

Hazel nut

Corylus avellana Linn

Nature: *Bunduq* is a well-known drug. Its earthiness excels that of walnut, but it is more nutritive because it is more compact, less oily and slow to digest.

Temperament: Hazelnut is somewhat hot and less dry.

Actions and properties: It is more astringent than walnut and produces bile. It produces flatulence and gases in the anterior part of the abdomen.

Cosmetics: Burnt hazelnut serves as a hair dye.

Organs of the head: It causes headache. Roasted *bunduq* taken with a little pepper, maturates catarrh. Hippocrates says that it grows cerebral matter.

Ocular organs: A group of physicians think that when a paint made from *bunduq* is applied to the fontanel of an infant, it removes blue spots.

Chest: With hydromel it is useful in chronic cough and helps in the expulsion of phlegm.

Alimentary organs: It is slow to digest, and induces vomiting. It is slower to digest than walnut.

Poisons: It is useful in bites particularly in cases of scorpion sting when applied with fig and common rue.

42. *Banṭāfulūn*

Cinquefoil

Potentilla reptans Linn.

Nature: *Banṭāfulūn* is an euphorbium (milk plant) called 'five-leaf-grass' *Potentilla reptans*.

Properties: It is highly desiccant and without sharpness, pungency and irritation. It is used as a plaster for haemorrhage so it checks it.

Swellings: It is plastered on abscesses, scrofula, phlegmatic swellings, whitlow and itches.

Ulcers: The decoction of its root is used in creeping ulcers and when cooked with vinegar, it is useful in herpes. It is also useful in erysipelas, whitlow and itches.

Joints: It is useful in arthralgia, sciatica and hydrocele.

Head: Decoction of its root is used in toothache and as mouth-wash it is useful in stomatitis. The leaves are mixed with wine and are to be taken for three days in epilepsy.

Chest: Gargling with its decoction is useful in roughness of the throat. The root extract is used in lung pain.

Food: Extract of its root is used orally with salt and honey for a few days in cases of hepatalgia and jaundice. Its dose is three *obūlūs* (2.25 mg).

Excretion: Its root is useful in diarrhoea, intestinal ulcers and piles. Its decoction acts in the similar manner.

Fever: Its leaves are used with honey-wine or other wine in quartan, paroxysmal and nocturnal fevers.

Poisons: Extract of its roots may be fatal.

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43. *Banafsaj* Sweet violet *Viola Odorata* Linn.

Nature: It is a well known drug. The action of its root is identical to that of the whole plant of *banafsaj* (Violet).

Temperament: *Banafsaj* is cold and moist in the first degree. Some people hold it to be hot in the first degree. Its leaves undoubtedly are cold.

Actions and properties: It is said that it produces the blood of moderate temperament.

Pimples and inflammations: A plaster made from *banafsaj* and barley flour or from its leaves (alone), dissolves hot inflammations.

Ulcers and wound: The oil of *banafsaj*, as a paint, is very useful in scabies.

Organs of head: Inhaling Sweet Violet (flowers) as well as an application of paint made from it, relieves us from congestive headache.

Ocular organs: It is useful in hot conjunctivitis.

Chest: *Banafsaj*, especially its preserve made in sugar, is useful in hot cough and it relaxes the chest (lungs). Its syrup is useful in pleurisy and pneumonia, and in these cases it is better than rose petals or rose-water.

Excretory organs: Syrup of *banafsaj* is useful in nephralgia. It is diuretic. When taken dry, it expels bile. Its syrup relaxes the physis gently and it is beneficial for *prolepsus ani*.

44. *Banqah* A lentil-like grain _____

Banqah is a seed (grain) resembling lentil. In potency also it is similar to lentil, but it takes longer time to digest.

Temperament: It is moderate in dryness.

Properties: It is constipating like lentil and produces black bile.

Joints: It is good for joints and is used as a plaster in cases of hernia and hydrocele in children.

Excretion: It causes constipation.

45. *Bunk* _____

Nature: *Bunk* is brought from Yemen. Some people believe it to be the root of decaying *Acacia arabica*.

Choice: The best is that which is yellow, light and has sweet smell. The white or heavy variety is inferior.

Temperament: It is hot and dry in the first degree. Some people hold it to be cold in the first degree.

Properties: It strengthens the organs.

Cosmetics: It clears the skin and dries the fluid collected under it. It gives a pleasant aroma to the body and removes the (unpleasant) smell of lime.

Alimentary organs: It is good for stomach.

Head: It disturbs the intellect and the mind.

46. *Būraq*

Borax

Sodium Borate

Nature: *Būraq* is well-known and a stronger drug than common salt. Though it bears corresponding potency, it is free from astringency. *Būraq* is put in an earthen pot to be placed on fire and then it is roasted inside.

Choice: Armani *būraq*, which is light in weight, brittle, spongy and rosy or white in colour, is the best variety. The purple variety causes irritation. The African variety, in comparison with other varieties, has the same difference which is observed between *būraq* and common salt. Generally *būraq* is not taken orally unless special reasons warrant it. In potency the foam of *būraq* is more tenuous than the *būraq* itself. Its best form is that which is brittle and extremely white (as ivory).

Temperament: It is hot and dry in the second degree, inclining towards the third degree in dryness.

Actions and properties: *Būraq* especially its African variety, is a powerful cleansing agent and it disintegrates thick humours. Boric substances have a little astringency with some detergency. *Būraq*, except the African variety, is good because of its saltiness. The African variety has no astringency but is abundantly detergent. The salt has no astringency and is slightly detergent.

Cosmetics: It thins the hair, if it is sprinkled over them. Its plaster is rubefacient. *Būraq* improves the complexion and is useful in emaciation. However, its excessive use darkens the colour.

Swellings and pustules: Because of its property of dissolving the pus, it is useful in prurigo. The African variety, if used along with vinegar, is more potent in this respect. It is also useful in itches.

Joints: A *Qairūti* (an ointment) made from it, is useful in the treatment of paralysis, especially in its advanced stage. It is also useful in the tortuosity of nerves.

Head: It is useful in dandruff. Ear-drops made from its foam mixed with honey, cleanses and opens the ears and gives relief in deafness. With wine or the syrup of hyssop it is useful in tinnitus.

Alimentary organs: *Būraq* is bad for stomach and corrupts it. The African variety induces vomiting. Had it not this property (of inducing vomiting), it would have been a stronger dissolvent for the gastric humour as compared to the other varieties. A plaster made from *būraq* with figs, gives relief in dropsy.

Excretory organs: Its suppository relaxes the bowels and oral use with a syrup, cumin or decoction of common rue and dill, removes the gripes. It is on account of this and similar other properties that *būraq* is considered superior than salt. When used along with those medicines which kill the worms, *būraq* expels them (the worms). Also when a patient is seated near a fire and his abdomen and umbilicus are fomented with *būraq*, the worms are killed. Therefore, it is superior to salt.

Poisons: *Būraq*, especially the African variety, whether roasted or un-roasted, is very useful in diphtheria caused by poisonous mushroom. Its foam has a similar property. It is mixed with the fat of an ass or a pig and applied on rabid dog bites. With water it acts as an antidote for cantharides. A variety of *būraq*, known as the *Iqrīī* variety when used with asafoetida, helps in removing the deficiency of the blood of a bull.

47. *Būzīdān* Sweet pellitory *Orchis morio* Linn.

Nature: It is a medicinal wood of Indian origin having the potency almost similar to *Behman*.

Choice: *Būzīdān* which is white, thick, multistripped and rough, is the best, but one which is thin, whitish and smooth, is inferior. The latter is used as an adulterant for colchicum.

Temperament: It is hot in the second and dry in the first degree.

Property: It is an attenuant drug.

Joints: It is useful in rheumatism and gout.

Excretion: It increases the sexual urge.

Poisons: It acts against poisons.

48. *Būsh Darbandī* Eye salve of Darband *Bush Darbandrium*

Nature: It is used as a suppository. It is brought from Armenia where it is found often stuck in the hooves of sheep.

Swellings: It is used in hot swellings and pimples.

Joints: It is used as a plaster for hot gout.

49. *Būṣṭr*

Great mullein

Verbascum thapsus Linn.

Nature: *Būṣṭr* is of two varieties, one has white, while the other has black leaves. The former is again of two varieties: male, which has smaller leaves and the other female has somewhat bigger leaves. There is a third variety, i.e. the wild one whose leaves and flowers resemble those of the apple (tree). There is also a fourth variety, known as *Filosda*. The roots of the first two varieties are astringent in taste. Hence these are very useful in diseases involving body fluids (e.g. blood).

Properties: The variety having flowers of golden colour is dissolvent and moderately detergent.

Cosmetics: The wild variety which has golden flowers imparts a reddish colour to the hair.

Swellings and ulcers: The decoction of the leaves of *būṣṭr* is useful in swelling, wounds and ulcers. It is mixed with honey and used as a plaster.

Joints: The decoction is useful in split of muscles.

Head: Mouthwash with its decoction is useful in odontalgia.

Eyes: The decoction is useful in hot ophthalmia.

Chest: The decoction is useful in chronic cough.

Excretory organs: The varieties having white or black leaves are useful in serious and chronic diarrhoea.

50. *Būqīṣā*

Ash tree

Feraxinus ornus Linn.

Temperament: *Būqīṣā* is of cold temperament.

Properties: It is detergent and astringent. The shell of its fruits contains moistness.

Cosmetics: It cleanses the face.

Ulcer: *Būqīṣā*, chiefly its bark, is applied in powder form on ulcerated scabies to fill up the ulcers. This effect is brought about by its astringency and detergency. Its powder is sprinkled and the decoction of its leaves and roots is poured over fractured bones.

Excretion: One *mīthqāl* (4.5 gm) of its thick bark, mixed with cold water or wine, expels the phlegm.

51. *Baul*

Urine

Nature: Urine is a known excretion.

Choice: The urine of an Arabian camel of a noble breed is the best (in property). The urine of human beings is weak. The urine of a castrated domestic pig is weaker than that of human beings. The urine of the stray animal is the most strong. The urine of all castrated animals is weak. The urine of human beings is more detergent than all other urines.

Temperament: Urine is hot and dry in temperament.

Properties: All types of urine are detergent. Local application of the urine of human beings, mixed with ash, stops bleeding. Washing with camel urine is useful in dandruff. Similar is the property of the urine of an ox.

Cosmetics: It cleanses pityriasis.

Ulcers: The urine of a donkey is useful in creeping and moist ulcers. Similar is the property of the urine of human beings and stray animals. The urine, especially when mixed with borax and sour dock water, is useful in scaling of the skin, prurigo and leukoderma. Urine sediment is useful in erysipelas. As a paint it is useful in scabies, prurigo and verminous ulcers. The ulcers on feet heal up if some one urinates over them and leaves as such till it is cured.

Joints: Urine, especially of domestic and mountain goats, is useful in neural pains. It is also useful in organic tension and convulsions. In organic tension it may be used through sniffing.

Head: Ear drops, made from myrrh and mixed with ox-urine, are used to relieve one of otalgia. Similar are the properties of the sheep urine, used alone or with myrrh. The matured urine of a human being stops the pus flowing from the ear. Camel urine is very useful in the diseases of the nose and also causes forceful expulsion of ethmoid obstructions.

Eye: The urine of a person, preferably that of a child, when condensed in a Copper Vessel, is useful in the opacity of cornea and trachoma. A decoction of such urine cooked with leek has a similar property.

Chest: The urine of a suckling baby is said to be useful in orthopnoea.

Food: Some people suggested to a man who was suffering from a splenic disease to drink his own urine in three *hafnāt* (handful) a day. The man did so and got rid of the disease. The experiment revealed wonderful result. The urine of a man or camel is useful in dropsy and hardness of the spleen, specially when mixed with camel milk. The urine of a goat is useful in fever. The urine of a mountain goat, mixed with

nard or the urine of a swine with strong wine, helps (in curing the disease of) the bladder.

Excretion: Swine urine dissolves the kidney and bladder stones and promotes diuresis. The urine of a donkey is useful in nephralgia. Sitz bath in a decoction of human urine and leek for five days, is beneficial in uteralgia.

Poisons: Oral intake or local application of human urine is useful in bites by vipers and mountain snakes, particularly the latter. The urine of man mixed with sodium nitrate is useful in cases of dog bite or the bites and stings of other animals. The urine of a young man acts against all poisons including that of a sea-rabbit.

52. *Būyānas* Parsley/Southern wood *Petroselinum sativum* Hoff. skoch

Nature: *Būyānas* is a plant. Though generally the roots of this plant are used, the gum as well as its extract are also used. The gum is stronger than the extract. When it is mixed with olive oil, a little garum and wine, it becomes thick in consistency. *Būyānas* with moderate density is considered to be more useful.

Temperament: *Būyānas* is hot and dry in the third degree.

Properties: It is dissolvent.

Ulcers: Because of its extreme desiccation, it scratches away decayed bones and cleanses the ulcers.

Joints: It is useful for nerves.

Chest: It expels the superfluous matters congested in the chest. A drink or fumigation with it is good for the lungs and is useful in pulmonary ulcers.

Food: It is useful in sclerosis of the spleen.

53. *Bahār* Bupthalmum *Anthemis arvensis* Linn.

Nature: *Bahār* is also called *Kāo jashm* or 'ain al-baqar. Its flowers have yellow petals which are red in the middle part and thicker than the flowers of chamomile.

Temperament: *Bahār* is hot in the second and dry in the first degree.

Head: Smelling of *bahār* is useful in cases of the thick gases concentrated in the head.

54. *Bahrāmaj* Scented willow *Salix caprea* Linn.

Nature: *Bahrāmaj* is one of the varieties of fragrant plants.

Properties: Its douche dissolves the flatulence in any part of the body.

Head: The flowers of *bahrāmaj* are beneficial when thick gases are concentrated in the region of the head. The smelling of its leaves also acts similarly.

Excretion: *Bahrāmaj* relaxes the bowels.

55. *Bahman* Behman *Centauria behman* Linn.

Nature: *Bahman* is a piece of dried, crooked and twisted branchy wood. It is of two kinds: (a) white and (b) red.

Temperament: It is hot and dry in the second degree.

Cosmetics: It fattens the body.

Organs of the chest: *Bahman* is a strong tonic for the heart and is useful in palpitation.

Excretory organs: It increases the formation of semen.

Substitute: Erysimon (*tūdari*) in equal weight and conessi (*lisān al-⁴aṣāfir*) in half of its weight are its substitutes.

56. *Bīsh* Aconite *Aconitum nepellus* Linn.

Nature: *Bīsh* is very toxic and is a fatal poison.

Temperament: It is extremely hot and dry.

Cosmetics: It cures leukoderma when painted or taken orally with the *jawārish* of *bazr al jali*. Similarly it is useful in leprosy.

Poisons: *Bīsh* is a poison which tears to pieces the body of one who takes it. Generally half *dirham* (1.75 gm) of it is considered fatal, but in my opinion a lesser dose may also be fatal. The antidote of *bīsh* is *Fār al bīsh* (aconite mouse)—a mouse which lives on it but does not die. A compound prepared with musk (*dawā'al misk*) is the only *ma'jūn* which counters its effects.

57. *Bīsh Mūsh Bīshā*

Nature: *Būhā* is a kind of grass which grows near aconite. Such aconite does not bear fruit. *Būhā* is a strongest antidote of aconite and has the same uses which aconite has for leprosy and leukoderma. *Bīsh Mūsh* is a mouse-like animal living in the roots of aconite.

Cosmetics: It is useful in leukoderma.

Joints: *Bīsh Mūsh Bīshā* is beneficial for leprosy.

Poisons: It is an antidote of all types of poisons including those from snakes.

58. *Baiḍ*

Eggs

Ovum

Choice: The best kind of egg is the fresh egg of hen, the best part of its contents is its yolk and the best way of its preparation is that it is not mixed with any other thing. Next to the egg of hen, are the eggs of other birds akin to the hen e.g. pheasant, francolin, partridge and hazel grouse. The eggs of duck and the like (water fowls) contain unhealthy humours.

Temperament: The eggs (as a whole) are moderate. The white and the yolk are inclined to be cold and hot respectively, but both of them are moist specially the white. The driest eggs are of goose and ostrich.

Properties: The *baiḍ* are constipative particularly the fried yolk. The white of an egg due to its agglutination relieves us of the irritant pain. It adheres and remains there (for some time) and does not digest easily like the milk. The hard boiled eggs are slower to digest. Half boiled eggs are more nutritive and quick in digestion.

Cosmetics: The white of an egg is painted over sun-burns to remove the black spots. The roasted yolk of an egg, mixed with honey, is also used as a paint for freckles and other black spots. It is said that the egg of bastard is a good kind of dye. For testing this, a thread of wool can be passed through the egg and left for some time till it becomes black. The egg of stork is said to possess the similar properties.

Swellings: Egg is used in anti inflammatory medicines and in the enemas for ulcers and swellings. It is painted with olive oil on erysipelas.

Ulcers: Egg is useful in the ulcers of anus, pubis and in burns. It is used with a piece of wool which prevents ulceration as well as heals the burns.

Joints: Both parts (the yolk and the white) of an egg soften the nerves and are useful in all kinds of arthralgia.

Head: Egg is incorporated in medicines which stop bleeding from the meninges. It is also useful in catarrh. The yolk of hen's egg is useful in hot swellings of the ear. It is said that the egg of wild tortoise is useful in epilepsy.

Eye: The white of an egg relieves ophthalmia and its yolk mixed with saffron and rose oil, is very useful in the throbbing of the eye. Its plaster, prepared with barley flour, stops ocular throbbing and similarly, when painted with frankincense over forehead, it stops catarrhal secretion from the eyes.

Chest: Half boiled egg is useful in the dryness of the pharynx and the chest. Intake of tepid yolk removes cough, pleurodynia, pthysis, hoarseness due to temperature, dyspnoea and haemoptysis. The egg of a wild tortoise is a tested treatment for the cough in children.

Food: The egg, cooked with vinegar, prevents infiltration of the matter towards the stomach and intestines. It is useful in conditions of the oesophagus and stomach. Roasted egg gets converted into smoky matter.

Excretion: Eggs cooked with vinegar stop diarrhoea and abrasions. The yellow part is useful in the ulcers of the kidney and gall bladder specially when raw eggs are taken. The eggs roasted on smokeless fire are useful for loosening of the bowels and in abrasions. Oral intake of eggs with some astringents and juice of unripe grapes is useful in condition of roughness of the intestines and the bladder. An enema is prepared with the white of an egg and sweet melilote for use in the ulcers of intestines even in their putrefaction. It is useful in anal and pubic wounds. A suppository, soaked in egg and rose oil, is useful in cases of anal swellings and throbbing. A pessary, made from the white of and egg and henna oil, is useful in the ulcers of the uterus and also softens them. Uncooked eggs stop hemmorrhage and hematuria. All kinds of eggs specially of the sparrows are highly aphrodisiac. Intra-uterine instillation of goose egg with olive oil in a lukewarm state, is said to help the discharge of the menses after four days of administration.

59. *Bailmūn* Wild purslane *Portulaca oleracea* Linn.

Nature: *Bailmūn* is a wild purslane which is one of the euphorbia. Its seeds are harmful like those of euphorbia.

Excretion: It loosens bowels.

LETTER TĀ

1. *Tāfsiā*Gum of wild rue *Ruta Sybestris* Mill

Nature: *Tāfsiā* is a gum of wild rue. The word '*Tāfsiā*' is sometimes pronounced with the letter *tā* and sometimes with the letter *thā*.

Choice: None of the kinds of *tāfsiā* is useful except the fresh one. After the lapse of a year *tāfsiā* becomes weak and ineffective (in potency) because of the dissolution of superfluous moisture contained therein.

Temperament: *Tāfsiā* is an extremely hot, corrosive, warming and desiccant drug. It contains extraneous moisture which immediately resists the acidity.

Properties: *Tāfsiā* is a purifying, purgative, maturative and rupturing drug. Due to its superfluous moisture content, it does not burn except after an hour. *Tāfsiā* absorbs the matter fully from the deeper parts of the body but this happens after a lapse of a considerable period because of the presence of the excessive moisture. *Tāfsiā* has an unparalleled quality of converting the temperament of a drug into hotness.

Cosmetics: *Tāfsiā* promotes the growth of hair and is a very useful and matchless remedy for alopecia. We shall discuss it in the chapter of alopecia (in the book of Therapeutics). *Tāfsiā* is useful in ecchymosis but it should not be applied there for more than an hour. Similarly it is also useful for treating ugly spots, freckles and leukoderma.

Joints: The joints, affected by flabbiness, gout and coldness are massaged by *tāfsiā*. An enema is also prepared with *tāfsiā* for the use in sciatica.

Chest: *Tāfsiā* is useful in pyoptysis, dyspnea and particularly the chronic pleuradynia when it is applied externally either as paint or plaster or taken as an evacuative drug. *Tāfsiā* helps in expelling the superfluous matter when it is used as a paint or taken orally after it is diluted in linctures.

Excretion: Its roots, barks and gum cause diarrhoea.

Fevers: For the treatment of fevers, the dose of bark of *tāfsiā* is three *drachmi* (10.5 gm), the dose of extract is three *ubūlūsāt* (22.5 mg) and the dose of gum is one *drachmi* (3.5 gm), but when the prescribed doses are exceeded, it becomes harmful.

Substitute: Two-third quantity of a mixture of gum tragacanth and water cress serves as a substitute of *tāfsiā*.

2. *Turbud* Turpeth root *Ipomoea turpethum* Br.

Nature: *Turbud* is a piece of thick or thin wood brought from India.

Choice: The best variety of *turbud* is one which is free from worms, white in appearance, it can be readily pulverized, is hollow like a thin cane, smooth, easy to be broken and not very thick. The worm-eaten, very light and perforated variety of *turbud* is weak. To improve its properties, the dust-coloured peel of *turbud* should be removed to such an extent that its whiteness becomes visible. Its powder should then be kept with almond oil.

Properties: The use of *turbud* produces dryness and desiccation in the body because it expels thin fluids. Therefore it is used with almond oil.

Joints: It is useful for nervine diseases.

Excretion: *Turbud* purges out much phlegm but it expels burnt humour in relatively lesser quantity. This is so when it is taken as a powder, but if it is taken as a decoction, the result would be reverse. Māsarjawaih states that *turbud* purges out thick and viscous humours. Some other physicians are of the opinion that it purges out immature humours from the hips. It is more correct to say that *turbud* purges out thin phlegm, but if it is made more potent by mixing with dry ginger or any other strongly pungent drug, it would also be able to purge out the thick and immature humours. *Turbud* alone cannot purge out the thick humours except when they (the thick humours) are lying in the stomach and intestines. The dose of *Turbud* is two *dirham* (7 gm), in powdered form and four *dirham* (14 gm) as a decoction.

3. *Tursī* Lupin/Mad wort *Lupinus termis* Forsk./*Alyssum alpestre* Linn.

Nature: It is (also called) *ālūsan* (Lupin) and has already been discussed under the letter *Alif*.

4. *Turmus* Lupin *Lupinus albus* Linn.

Nature: Lupin (*turmus*) is a kind of seed, flat in shape, bitter in taste and has a hollow interior. It is an Egyptian bean.

Choice: Wild *turmus* is the strongest in all its properties but is smaller in size.

Temperament: *Turmus* is hot in first degree and dry in second degree.

Properties: *Turmus*, which is bitter in taste, has the property of cleansing and dissolving (the matters) without causing any irritation. According to Galen *turmus*, separated from its bitterness, is thick and it may be agglutinant and no sweetness is found therein. On the whole it is corrupt, difficult to digest and, when not digested, produces immature humours in the vessels. The fragrant kind of *turmus* is nutritive; particularly so when cooked thoroughly then it is digested without producing any bad humours. *Turmus* has inherent dryness and viscosity. To remove its bitterness, it is soaked in water and cooked. In short, *turmus* is more of a drug than a food.

Cosmetics: *Turmus* makes the hair thin, removes freckles, pityriasis, marks, blood spots, pimples and clears the face. These effects are particularly evident when it is thoroughly cooked with rain-water. It is useful in leukoderma when one *raṭl* (450 gm) of its decoction is taken.

Swellings: It is useful in cases of the pimples on the face, wounds, hot swellings, scrofula and hard swellings. For obtaining these effects, it is taken with vinegar or with vinegar and honey as the different bodies require. When the decoction of *turmus* is poured over gangrene, it prevents its further deterioration.

Ulcers: *Turmus* is useful in scabies when applied with the root of laurels-purge. It cures the scabies in the animals. It also cures rodent ulcers, acute and malignant *miliaria rubra*. The flour of *turmus*, mixed with the flour of barley, soothes the pain due to wounds and *nār-i-farṣī* (a skin disease resembling somewhat anthrax).

Joints: The plaster of *turmus* is useful in sciatica.

Head: Its flour is (also) useful in wet ulcers of the head.

Food: *Turmus* removes the obstructions of the liver and the spleen. For obtaining these effects it is cooked with vinegar and honey or more specifically with honey, common rue and pepper. *Turmus* cures nausea, and stimulates appetite but it is poorly assimilated when it is devoid of its bitterness.

Excretion: If the decoction of *turmus* is taken with vinegar or painted over pubis, or licked with honey, it proves to be useful for expelling the worms and tapeworms. It is useful in sciatica, helps in menstrual discharge and expels the foetus. For getting these effects it is taken orally or used as a pessary with common rue and pepper. It may also be used with honey as a pessary. When taken orally with honey and vinegar, it expels the worms and helps in diuresis.

Properties: The apple, particularly its leaves, stops the flow of superfluous secretion. Generally apple is flatulent particularly if it is not sweet. The acrid and astringent apple is earthy and aqueous, the sweet is aqueous and the insipid is very aqueous to the extent of the superfluous moisture. That is why the apple juice boils up soon. The extract is preserved with honey. An acrid and astringent apple produces earthy humours while the sour and unripe one produces putrefaction. Its immaturity, unripe status and tendency to become putrid causes fevers. The sour humour is more attenuant than the astringent humour. Old apple wine is better than the fresh one in dissolving harmful gases.

Swellings: The leaf and its extract are useful in early stages of hot swellings and pimples.

Ulcers: Its leaves and bark heal wounds and the extract from an astringent apple possesses similar property.

Joints: Regular use of apple specially when the fruits are collected in spring season, produces neuralgia.

Chest: Apple strengthens the heart, particularly its syrian fragrant, sweet fragrant, and sour varieties. It is very beneficial in case of excessive hotness in the heart. Its flour has also the similar action.

Food: Apple strengthens the weak stomach. Astringent apple is useful in the weakness of the stomach caused by hotness and moisture. An acrid and sour apple is also useful in the weakness of stomach due to thick but not too cold humours. Roasted apple taken with flour is beneficial in cases of the lack of appetite. Dried pulverized apple strengthens the stomach and stops vomiting.

Excretion: If a sweet and sour apple comes in contact with thick humours in the stomach, it sometimes expels it through faeces though on an empty stomach, it causes constipation. Administration of roasted apple with flour is useful for expelling worms and in dysentery. Acrid apple and its flour is better for treating dysentery but not in condition of loose bowels due to diabetes.

Fevers: Unripe apple causes various types of fevers due to its immature humours.

Poisons: The apple and the extract of its leaves are useful against immature humours.

8. *Tamr hindi*

Tamarind

Tamarindus indica Linn.

Nature: *Tamr hindi* is a well known drug brought from India.

11. *Tinkār*

Borax

Sodium borate

Nature: *Tinkār* is of two kinds : (a) mineral and (b) artificial. It is said that it is the copper carbonate which is used by goldsmiths.

Head: Though it is useful in alleviating molar pain, it has a corrosive effect on the teeth.

12. *Tannūb*

Fir

Picea abies, Linn.

Nature: *Tannūb* is a well known drug and *Qūfā* (turpentine of fir) is one of its varieties. *Qaḍm quraish* is the seed of this plant from which pitch-jews is obtained.

Properties: Its seed i.e. *Qaḍm quraish*, is astringent and mildly warming.

Swellings: A plaster is made from the leaves of this plant for use on hot swellings.

Ulcers: The leaves and seeds of fir, when used alongwith the goose fat, impure oxide of lead and powdered frankincense, are useful in external ulcers. It is also useful in soft, hot and fresh ulcers in the body when used with clarified butter and myrtle oil. The powder of its bark is suitable for the wound when sprinkled over it. If its leaves are applied on fresh wounds, they stop their further decay.

Head: Mouthwash with *tannūb* itself or with its decoction, specially with vinegar, is useful for odontalgia. For this purpose the cleft wood of this plant is cooked with vinegar.

Eye: The condensed smoke of *tannūb* is used in collyriums.

Chest: The seed of *tannūb*, i.e. *Qaḍm quraish* is an expectorant. Its gum is a kind of pitch which is most useful in cases of chronic cough.

Food: A dose of one *mūthqāl* (4.5 gm) with honey water is useful in damaged liver.

Excretion: When *tannūb* is taken orally, it causes constipation and retention of urine.

13. *Tinnīn baḥrī*

[Sea dragon or Sea monster]

Draco sps.

Properties: Galen says that *tinnīn baḥrī* is useful against its own bite. For this purpose it is cut and placed on the bitten part.

Poisons: It is placed on the bite of any animal resembling it (*tinnīn baḥrī*).

14. *Tūbāl*

Filings

Nature: The strongest *tūbāl* is that of iron and then that of copper comes next. It is produced due to the impact of striking hammer (on the metal concerned). All these *tūbāl* are desiccant and have already been discussed.

15. *Tūtiā*

Blue vitriol

Copper sulphate

Nature: Basically *tūtiā* comes from the smoke emanating at the time of separation of copper from the stone and lead. Sometimes the litharge sublimes and the copper sulphate, so obtained, is of the best variety. Sometimes the litharge deposits as a sediment which is also called *Saqūdūs*. *Tūtiā* is of several kinds: (a) white, (b) yellow, (c) green and (d) red. The Indian variety is the slop of copper sulphate which settles down as a sediment when it is washed with water. Similar is the case of *Saqūdūs*. The difference between *Tūtiā* and *Saqūdūs* is that *tūtiā* sublimes while *Saqūdūs* settles down at the bottom of the vessel in which the copper is melted. That is copper litharge and the substance which evaporates from it, is *tūtiā*.

Choice: The white and volatile kind of *tūtiā* is the best. Next in order of quality is the light and fresh one and then the greenish (*tūtiā*) of Kirmān. Fresh *tūtiā* of all types is considered good.

Temperament: *Tūtiā* is cold and dry in the second degree.

Properties: It is desiccant without causing irritation. *Tūtiā* washed with water is superior as compared to the other desiccants.

Cosmetics: It is useful for (removing) the stench of armpits.

Ulcers: Water treated *tūtiā* cures the (simple) ulcers including the cancerous ulcers.

Eye: It is useful in ophthalmia. The water treated variety is particularly effective in stopping the flow of superfluous and malignant matters, collected in the vessels of the eye, from moving towards its layers.

Excretion: *Tūtiā* is useful in the ulcers and swellings of anus and penis.

16. *Tūth*

(Black) Mulberry

Morus nigra Linn.

Nature: *Tūth* is of two kinds: (a) sweet *Firṣād* or white mulberry—it is a substitute for fig in maturation but much inferior to it in nutrition.

It is the least to produce blood and is most corruptive of it. It is most unfavourable for the stomach and has all the properties of fig to a lesser extent. (b) Sourish mulberry or Syrian mulberry. It should be discussed here thoroughly. The dried or unripe mulberry is a substitute for sumach.

Temperament: *Tūth* is sweet, hot and moist, but the sourish Syrian mulberry is inclined towards coldness and moistness.

Properties: It is cooling and astringent; its extract is most astringent specially when cooked in a copper vessel. It prevents the flow of humours towards organs. This property is particularly exhibited by the unripe *tūth* which is similar to sumach.

Cosmetics: *Tūth* blackens hair. For this purpose its leaves, cooked alongwith the leaves of wild vine, black fig and rain water, are used.

Swellings: The sour mulberry stops uvulitis, pharyngitis and the swellings of mouth. Its leaves are useful for angina and diphtheria.

Ulcers: The sourish mulberry and its extract are beneficial in malignant and dry ulcers.

Head: The rob of sourish mulberry is useful in stomatitis. The root extract loosens the teeth and the mouth-wash with the leaf extract is helpful in toothache.

Food: *Tūth* is unsuitable for stomach as it upsets the organs; *firsād* variety is particularly unsuitable but if it does not cause instant stomach upsets, it may not be harmful, it is necessary that all its varieties should be taken before diet and it should be taken by the persons whose stomach is not weak. Syrian mulberry is neither harmful for biliary stomach nor has any ill-effects unlike the *firsād* mulberry. Though it has some bad effects but it does not cause nausea. It is less in nutritive value, increases appetite, lubricates the food and facilitates its passage. In short, it descends from the stomach quickly but slowly from the intestines.

Excretion: Acid, salted and dried *tūth* is very constipating and useful in dysentery. The watery substance (oozing out from the tree of *tūth*) is purgative. The bark is purifying and more purgative (than its purifying action). Sweet *tūth* has a tendency of quick descent (from the stomach). This is attributed to its moisture content or pungency. Archigenes says that *tūth* is poorly digested and excreted via faeces or urine but I think that these qualities are of sourish *tūth*. As it is a constipating (drug) by nature, specially in dried form it stops chronic diarrhoea and intestinal ulcers. All kinds of *tūth* are diuretic. Syrian mulberry is quickly expelled from the stomach but its passage is slow from the intestines.

Dry fig is benign but the blood, produced by it, is not healthy. As a result, it produces lice except when it is mixed with walnut. In such cases it forms better chyme. Almond comes next to walnut (in this property). The finest kind of fig is white.

Temperament: White fig is less hot; the moist one is much watery and less curative; unripe fig, excluding its milk, is detergent with some tendency towards coldness. The dry fig is hot in the first degree and attenuant in its last phase.

Properties: Dry fig, particularly the one having pungent taste, is strongly detergent, maturative and dissolvent; the fleshy one is more maturative, agglutinant, incisive and attenuant. Wild fig has more pungency and intensity in this respect. The fig is a very nutrient fruit. Though the fully matured fruit is generally harmless, figs may be flatulent. Sometime, the detergence of pungent and dry fig causes ulceration. That is why, dry fig and its leaves, cooked with the root of mazerion, are used as a treatment for scabies in animals. Extract of the leaves is strongly warming and detergent. There is much laxative property in the fig which moves the putrid matter towards the skin to be eliminated in perspiration. For this reason, I think its use alleviates warmth. Dry fig also elicits the internal humours. Its latex clots and coagulates both, the freely flowing blood and the milk. It dilutes the viscous and hard substances also. Moist fig quickly reaches the deeper parts of the stomach and the body. The nourishment produced by fig, unlike that by meat and grains, is not so compact. However, it is most compact when compared to the nourishment produced by other fruits. The strength of the extract of the branches, having no leaves, is similar to that of its latex. The ash of the wood of fig tree, repeatedly treated with water, is taken orally in case of internal coagulation of the milk. The ash-water of the wood of oak (also) has a similar effect. The wine of fig is attenuant but contains unhealthy humour. Its branches are so attenuant that with its use, the meat is over-cooked. The cluster fig (a kind of fig) has the property of absorbing the matter from the deeper parts of the body and dissolving it quickly.

Cosmetics: The unripe fig as well as its leaves are painted and plastered on the various kinds of freckles, warts and pityriasis. It improves complexion rendered unhealthy by swellings, hot diseases and flabbiness. It matures carbuncles specially when it is used with orris root, sodium nitrate and quick lime. It is painted with the rinds of pomegranate on whitlow. The latex of cluster fig as well as its decoction is useful in hard swellings, scrofula and carbuncles. The mulberry, particularly the cluster fig and its leaf extract, remove tattoo marks. It is applied as *qairūtī* (a kind of ointment) on skin erup-

SECTION VI

tions attributed to coldness. Similarly latex is useful in all these diseases. It fattens the body but the fatness dissolves very soon. It is said that the bitter fig produces lice because of its unhealthy humours. It is further said that it tends to eliminate bad humours quickly towards outer surface of the body, which is essential to the human life.

Swellings: The cluster fig, cooked with barley flour, is plastered on hard swellings. Unripe fig is plastered on pityriasis. It matures carbuncles. The use of fresh fig produces *miliaria rubra*. Gargling with a decoction made from fresh figs and the rinds of pomegranate, is useful in pharyngitis and parotitis. In case of whitlow, it is used with sugar-candy. Dry fig is harmful in hepatitis and splenitis due to its sweetness. If the swellings are hard, it would neither harm nor benefit but when it is mixed with (some) attenuants and solvents, it becomes very useful. The cluster fig is most dissolvent (drug) for the hard (difficult) swellings, which do not subside.

Ulcers: Extract of its leaves is ulcerative. Its decoction is painted on prurigo along with the foam of mustard. The leaves are useful in ringworm and are also applied on urticaria and the weeping ulcers. The refined water having the ashes of the fig wood is erosive and it cleanses chronic putrefactive ulcers. If used with the rind of pomegranate, it cures whitlow; if used with green Vitriol, it heals the malignant ulcers of the shanks. Latex from cluster fig fills up (heals) the wounds.

Joints: The unripe fig and its leaves mixed with the leaves of poppy seeds, are applied on (the disease of) scaling off bones. The refined water of its ashes is sprinkled over the painful nerves. It is taken in a dose of one and a half *ūqia* (45 gm).

Head: The moist and dry fig is useful in epilepsy. Its decoction with the foam of mustard is used as ear drops in cases of tinnitus. The latex and extract of its leafless twigs are useful in tooth-decay. It is plastered on parotitis and sprinkling of powdered unripe figs is useful in head injuries.

Eye: Its latex with honey water is useful for the 'moist' day blindness. It is also useful in early stages of cataract and in condition of thickening of the layers of the eye. Its leaves are useful if rubbed in cases of roughness and scabies of eyelashes.

Chest: Both the fresh and dry fig are useful in the roughness of the pharynx and is favourable for the chest and trachea. Syrup of fig is lactigenous and useful in chronic cough, thoracalgia and trachitis.

Food: It removes the obstructions of the liver and spleen. Galen states that fresh fig is harmful for the stomach but the dry one is not so. When used with *murry* (a kind of pickle or vinegar), it cleanses the superfluous matter of the stomach. It prevents the (excessive) thirst caused by the saltish phlegm but excites thirst in dropsy specially when it is used with absinth. Similarly its wine is useful for stomach and reduces appetite. The fig is quick to descend and penetrate into the body. This is attributed to its detergence. Dry fig is harmful in hepatitis and splenitis because of its detergence. In hard swellings it would neither be harmful nor beneficial. Its use on an empty stomach is highly beneficial in the opening of alimentary passages specially when taken with almond or walnut; however, the combination with walnut rather than that with almonds is more nutritious. If it is taken with any inspissative agent, its harmful effects would be greater. Though the cluster fig is injurious to stomach and less nutritive, but a plaster made from its juice with gum ammoniac is useful in splenic sclerosis. All kinds of fig are not suitable to the flow of matters towards stomach.

Excretion: Both the fresh and dry fig are useful for kidneys and bladder. It controls strangury but its use does not suit when there is (excessive) flow of matter towards intestines. The extract of its leaves dilates the anal vessels. Fresh fig is laxative and less purgative specially if taken with pounded almonds. It elicits a similar action in the hardness of the uterus when taken alone or with sodium nitrate and carthum seeds before meals. A pessary of its juice with the yolk of an egg cleanses the uterus by its emmenagogue and diuretic action. It is mixed with fenugreek for preparing a plaster for the uterus. An enema is prepared from a combination of common rue and figs for use in gripes. Its latex removes the kidney sands (minute stones). When its preparation is made by putting the latex of fig in (ordinary) milk and whipping up slightly with fig-twig, it is a most effective relaxant for the bowels and renal purification. If ash of the fig twigs, repeatedly treated with water, is taken in a dose of one and a half *ūqia* (45 gm), it proves to be useful in diarrhoea and dysentery. It is also taken as an enema. In both cases it is to be mixed with olive oil. The syrup of fig is a diuretic and laxative and due to its detergent nature, its passage (through the stomach and the body) is very quick.

Poisons: A liniment, made from its latex, is useful in cases of scorpion and trantula stings. Unripe fig and fresh leaves are applied on the part bitten by a mad dog. It is plastered with peas in cases of the weasel bite. Ash of its wood, repeatedly treated with water, is useful in trantula stings both taken orally or in the form of an embrocation. The cluster fig is useful in the bites if taken orally or as a paint.

LETTER THĀ

1. *Thāfsiā* Gum of wild rue *Ruta sylvestris* Mill.

Nature: *Thāfsiā* is pronounced with the letter *Tā* and therefore we have mentioned it under the letter *Tā*.

2. *Tha^alab* Fox *Vulpes bengalensis*

Properties: *Tha^alab* is dissolvent and its skin is the hottest in comparison to other skins. The people of moist temperament are benefitted by its dissolvent property.

Joints: A decoction of fox is applied as a douche for relief in aching joints. Similarly the olive oil, in which a fox was boiled alive, is more effective. In such cases the patient should be given sitz bath in this oil for a considerable time. It would be better for the patient first to have recourse to purification and evacuation (of the matter) otherwise the (corrupt) humour would be dispersed into the body due to its dissolving quality. If this method is adopted (cautiously), it would not draw any humour towards the joints. Even if it occurs, it would be very mild. Similarly the fat of fox, sometimes, absorbs more (humour) than it dissolves. Fox whether boiled alive or slaughtered in olive oil, dissolves the humours congested in the joints in both cases.

Head: Ear drops made from its fat remove ear-ache.

Chest: Dried lungs of fox are very useful for the patient suffering from asthma. The dose of its oral use is one *dirham* (3.5 gm).

3. *Thufl* Dregs

Choice: The best kind of dregs is of dense saffron oil.

Temperament: Dregs taken from olive oil is hot in the first degree.

Properties: We have mentioned (elsewhere) that the dregs of saffron oil imparts a dark colour to tongues and teeth lasting for several hours.

Ulcers: Dregs of the olive oil, heal up ulcers of dry bodies (persons having dry temperament).

4. *Thalj*

Ice

Aqua astricta

Properties: Ice is not suitable for the old people as well as for those who have cold humours in their bodies.

Head: Ice water cures painful inflammatory conditions of teeth.

Joints: Ice is harmful for nerves as it restricts the movements of hot vapours therein and prevents them from being dissolved.

Food: It is harmful for the stomach particularly if it has cold humours. It produces thirst due to its property of retaining heat (in the stomach).

5. *Thūm*

Garlic

Allium sativum Linn.

Nature: Garlic is of several kinds: (a) garden garlic which is well known (b) leek-like garlic and (c) water germander (wild garlic) which is bitter and astringent and is also called mountain garlic. The leek-like garlic has the composite strength of garlic and leek (*Allium porrum*).

Temperament: Garlic is warming and desiccant from second to fourth degree. The water of germander is more so (having desiccation and warmth) than others.

Properties: Garlic is laxative, highly repellent of flatulence, ulcerative and corrosive to skin. It is useful for the ailments due to change of water (climate).

Cosmetics: Oral intake of garlic with the decoction of mountain mint, destroys lice and nits. It is also anointed on the hair or skin. Ash of garlic, if applied with honey, is useful in pityriasis and ecchymosis. It is (also) useful in alopecia caused by putrid matters.

Swellings: Garlic opens the internal abscesses and its ash is applied on pimples.

Ulcers: It causes skin ulcers and its ash, mixed with honey, is applied for ringworm and ulcerative scabies. Application of fresh water germander adheres the malignant wounds.

Joints: As garlic expels blood and bilious humours, it is useful in sciatica specially when given as an enema.

Head: Garlic causes headache and the decoction of roasted garlic soothes odontalgia. Mouth-wash with its decoction is also beneficial in odontalgia; specially so when used with frankincense.

Eye: Garlic weakens eye-sight and produces styes in the eyes.

Chest: The decoction of garlic clears the throat and is also useful in chronic cough and pleuralgia caused by cold. It may be used to extract leech from pharynx.

Food: The decoction of garlic, particularly that used by Christians with olive oil and carrot, is useful in dropsy.

Excretion: A sitz bath in the decoction of garlic leaves, elicits the diuretic and emmenagogue effects and also expels the placenta. It has similar action when it is taken orally or used as a pessary. A recipe prepared by Christians, as described (above), is also very useful. Administration of two drachms (7 gm) of garlic pounded with honey-water, expels phlegm and worms. Garlic is a purgative by nature. Because of its very desiccant and dissolvent nature it may sometimes be harmful for the aphrodisia. If it is boiled in water till its intensity is dissolved, the remaining part would be less in hotness and, therefore, it would not desiccate but instead, may promote the formation of semen. In the persons of phlegmatic temperament it may convert the phlegmatic matters into the gases which can not be dissolved properly. But if the gases are dissolved in the vessels (of the body), it may stimulate the sexual desire.

Poisons: Garlic taken with wine, is useful in insect sting and snake-bite cases; we have personally tested it. Similarly it is also useful in the bite by a mad dog. It is said to be useful when plastered along with the leaves of fig and cumin on the part bitten by a mole.

6. *Thūmūn* Wild thyme *Thymus serpyllum* Linn.

Temperament: The seed of *thūmūn* is strongly hot.

Excretion: It is diuretic, expels dead foetus, blood and bilious humours. The dose of its syrup is half *dirham* (2 gm apprx.). It expels worms also.

7. *Thil* Couch grass *Scirpus lacustris* Linn.

Nature: It is believed to be a synonym for *bandkiā* (or *band giāh* in Persian).

Temperament: *Thil*, particularly its fresh root, is cold and dry in the first degree.

Properties: It has an astringent and irritant property and its extract prevents the flow of matter towards viscera.

Ulcers: External application, particularly its root, is useful in ulcers. It is a healing drug for wounds.

Head: *Thil* prevents all kinds of catarrh.

Eye: Extract of *thil*, cooked with wine and honey in equal proportion, constitutes a good medicine for the eye. The method of preparation comprises of mixing *thil*-extract with myrrh in half of its weight, pepper one third and frankincense one third and then it is kept in a copper jar.

Food: Its seeds and roots stop vomiting and the flow of matters towards the stomach. In short, its seeds are suitable for the stomach.

Excretion: A lincture of *thil* seeds is diuretic and lithotriptic because of its dry and bitter nature. Similarly its root is useful in gripes and dysuria and its decoction is useful in the ulcers of bladder.

LETTER JIM

1. *Jāoshir* *Opoponax-galbanum* *Ferula galbeniflua* Boiss.

Nature: *Jāoshir* is the leaf of a small plant with a little height from the earth. It resembles the fig leaf. It is dark green, five-cornered, serrated and round (in shape). Its stem has dusty downs on the surface and resembles *qunna* (a kind of cane) in length. Its leaf is very small; at its one end there is a corona like that of dill. The flower of *Jāoshir* is yellow, its bud is very fragrant and its various branches come out from the single root having thick, bitter taste and unpleasant odour. The gum is taken out by incising its root just after the first stem appears. The colour of its gum is white but the part, which is incised, is of saffron colour. The other drug resembling *Jāoshir* and its various kinds are (a) *Māfānts asflūs (Zūfrā Kabir)* which has thin stem and grows up to a yard (in height) and then spreads like the leaves of fennel but is weaker (than it) and (b) *Māqās Khairūnūn (Zūfrā ṣaghīr)* its leaves are like those of white chamomile and buds are golden.

Choice: The best part of *Jāoshir* is its white root which is fragrant, irritant to the tongue and has no good smell. The best fruit of *Jāoshir* appears on the stem of a medium sized root. The best gum is characterised by a highly bitter taste, white interior and saffron coloured exterior, brittleness and solubility in water. The black and soft kind of *Jāoshir* is (often) adulterated with gum ammoniac.

Temperament: *Jāoshir* is hot and dry in the second degree.

Properties: *Jāoshir* is dissolvent of gases, laxative and detergent.

Swellings: It softens hard swellings and its bud is a good soothing drug for pimples.

Ulcers: The root of *Jāoshtr* is suitable for the treatment of cases in which there is loss of flesh covering the bones and, if applied with honey, it cures chronic ulcers and anthrax. In short, all of its parts are useful in malignant ulcers. In case of rodent ulcers, it is applied with honey.

Joints: *Jāoshtr* is taken with water-mead or wine for the treatment of weakness of the nerves caused by stroke. Some physicians state that it is unsuitable for nerves. This might be true for the healthy nerves but not for moist (temperament) of nerves. *Jāoshtr* is useful in sciatica. For this, its juice may be taken for removing fatigue. Its plaster is useful in all kinds of arthralgia and gout.

Head: *Jāoshtr* is useful in tooth-decay and when filled in the cavities of teeth it relieves of the pain. It is also useful in headache, epilepsy and infantile epilepsy.

Eye: If applied as a collyrium, it restores (normal) eyesight.

Chest: *Jāoshtr* is applied as a plaster in pleuralgia. It is useful in cases of pleuralgia and cough due to its cold nature.

Food: If the juice of *Jāoshtr* is applied as a plaster or taken orally with vinegar, it is useful in cases of hardness of the spleen. For this purpose ten drachm (35 gm) of vinegar is mixed with two jarsfull of the juice of *Jāoshtr* and thus it is left for two months. The filterate obtained from it would be very useful in splenitis as also in dropsy.

Excretion: *Jāoshtr* softens the hardness of uterus and is useful in strangury. A dose of one *bunḍuqa* (4 gm) is taken orally with luke-warm water for diuresis increasing menstrual flow and in coldness of the uterus. Its fruit, specially when taken with absinth, increases the menstrual flow. The root is fetotoxic and, if taken orally or as a pessary, it causes abortion. It is useful in hysteria, dissolves gases and softens the uterine cavity. It is (also) useful in colic, prurigo of the bladder and it purges out immature humours.

Fevers: *Jāoshtr* is taken orally with water-mead for the treatment of shivering and intermittent fevers.

Poisons: A good ointment and adhesive (preparation) is made from *Jāoshtr* and pitch for the treatment of rabid dog bite. Oral intake with birthwort is good for (other kinds of) stings. The juice possesses similar property.

Substitute: Fig is the substitute for *Jāoshtr* and I think that gum ammoniac (also) has similar properties.

2. *Jār al-nahr* A water-lily-like plant *Potamogetan nataus*

Nature: *Jār-al-nahr* is a herb the flower of which resembles water lily. It grows under the water with only a small part appearing on the surface. It is similar to knot-grass in properties.

Temperament: It is cold, dry and astringent.

Ulcers: It is good for malignant ulcers and prurigo.

3. *Jāsūs* Spotting poppy *Silene inflata*

Properties: *Jāsūs* possesses properties and temperaments similar to that of *Jablāhank* (sesamoides). Its dose is half *dirham* (1.75 gm).

4. *Jāwars* Common millet *Panicum miliaceum* Linn.

Nature: *Jāwars* is of three kinds. It is similar to the rice in potency but rice is more nutritious. *Jāwars* is better than *dukhn* (a kind of *Jāwars*) in all its actions but it is more astringent.

Choice: *Jāwars* is cooked with milk or bran-water of white flour and almond oil to give a very nutritious food.

Temperament: It is cold and dry in the last of the third degree. Some (physicians) describe it to be hot in the first degree but the former statement is more correct.

Properties: It is astringent and desiccant without irritation. It is used as a fomentation for relieving pain. If not properly purified, it might produce unhealthy blood. *Jāwars* is the least nutritious of all the grains used for making bread. It is less nutritious and viscous. Some physicians believe it to be attenuant. When cooked with milk or bran-water from white flour, specially with fats or almond oil, it becomes a good nutrient.

Food: *Jāwars* as such or its bread is slow to digest.

Excretion: Its fomentation relieves gripes. It is also a diuretic drug.

5. *Jibsīn* Gypsum *Hydrous calcium sulphate*

Nature: *Jibsīn* is *ḥajar al jaṣ* (*calcium sulphate*). It has a transparent surface and when it is burnt, its rarefying property is enhanced.

Temperament: It is cold and dry.

Properties: *Jibsīn* is agglutinant and when it is placed on a bleeding spot, it is said to stop bleeding due to its adhesive and astringent properties. When burnt, it becomes less dense and more desiccant.

Head: In case of epistaxis it is either painted on forehead or the (whole) head is covered with it. As a result the epistaxis stops. It is also used as plaster with lime specially with red armenian bole, lentil and hypocist juice along with some vinegar and myrtle water.

Eye: It is mixed with the white of an egg only to such an extent that it is not coagulated and then it is applied in cases of hemorrhagic conjunctivitis.

Poisons: It is one of the suffocating pions.

6. *Jubn*

Cheese

Nature: *Jubn* is made from milk. Curdled milk is called *aqaf* (a kind of butter-milk).

Temperament: Fresh cheese is cold and moist in the second degree but stale cheese with a saltish taste is hot and dry. The whey is hot because of its biliary content and alkalinity acquired from the first phase of the formation of blood.

Choice: The best kind of cheese is in between gumminess and softness in texture as (extremes) of both these qualities, are unsuitable. Moreover the best cheese is that which has no other taste except a moderate tendency towards sweetness and which does not remain for long in the stomach. The cheese obtained from sour milk is also quite good. Attenuant substances increase the harmful property of cheese by making it thin and increasing its dispersion (in the body). The cheese prepared from the milk of goats grazing on attenuant substances is better than that obtained from goats grazing on couch grass and bitter vetch.

Properties: Cheese is detergent but the fresh one is nutritious and fattening. Honey is recommended to be taken after its use. Stale cheese is hot, detergent and purifying but it produces bilious humours. Fresh saltish cheese has moderate properties. The whey is fattening and nourishing for dogs. Among all kinds of cheese *aqaf* is the most dissolvent.

Cosmetics: Oral intake of whey with other drugs purging out blackbile, is useful in freckles. The fresh cheese is painted in case of facial convulsion. For this purpose it is cooked with *filā'* (from grapes

juice) and the rind of pomegranate till it is reduced to the half of its volume. The stale saltish cheese has an emaciating effect.

Swellings: The fresh cheese having no salty taste prevents the swelling of wounds.

Ulcers: The stale cheese is useful in foul ulcers and wounds and the fresh one in small and fresh wounds. Fresh cheese is more potent. It stops swellings particularly when applied with the leaves of oriental plane tree and bladder dock. It is (also) taken orally in scabies.

Joints: The stale cheese, mixed with olive oil or saltish water of pigs trotters, is plastered in cases of ankylosis and from it a lime-like exudation comes out without any discomfort which is very useful for this purpose.

Eye: Both salted and plain cheese are very useful when plastered in cases of conjunctivitis and ecchymosis in the eyes.

Respiration: Intake of cooked cheese with water is highly lactigenous.

Food: Salted cheese is not suitable for the stomach and plain cheese has (also) the similar property. The former, however, has lesser property of getting 'cooked' in the stomach. Dioscorides states that fresh cheese is most suitable for the stomach but in my opinion, it needs further study. Fresh salted cheese is moderate and its assimilation and digestion is quick. *Aqaṭ* is less harmful to the stomach than the ordinary cheese.

Excretion: The cheese specially the fresh one and particularly when taken with the condiments that get well dispersed, produces stones in kidney and bladder. Plain cheese relaxes the bowels and the water of cheese expels yellow bile. Its alkalinity helps the detergent property. The use of honey and medicines in combination with the cheese obtained from milk of goat and sheep, becomes highly beneficial. The cheese specially fried one, is useful in intestinal ulcers and diarrhoea. Enema of fried pulverized cheese along with rose oil and olive oil, is useful in *qayām al a'rās* (a kind of diarrhoea).

Poisons: It is said to be applied with mountain mint on the parts affected by poisons.

7. *Jadwār*

Larkspur

Delphinium denudatum Wall

Nature: *Jadwār* is a piece of a root resembling Indian birthwort but is thinner and less potent than it. The best *jadwār* is that which grows near aconite and hampers the growth of aconite. Ibn Māsārjawaih states that *jadwār* is similar to the actions of doric

but is less potent. But I say that if he means larkspur is weaker, he is wrong. If, however, he means that doronic is weaker than *Jadwār*, his statement is not far from truth. I do not think that Ibn Māsarjawaih experimented with it using correct judgement and probably he did not receive this information from a reliable source. It is well known that larkspur hampers the growth of aconite. How it could then be weaker than doronic?

Poisons: Jadwār is an antidote against all snake venoms and aconite poisons etc.

Substitute: Long zedoary in triple quantity of *jadwār* acts as its substitute.

8. *Jarād*

Locust

Locusta migratoria

Choice: The locust, which is fat and wingless, is the best.

Cosmetics: It is said that the legs of locust remove the warts.

Food: Locust is useful in dropsy. For this purpose twelve round locusts are picked up, their heads and appendages are removed and taken with dry myrtle.

Excretion: It is useful in strangury. Its fumigation is beneficial in dysuria, particularly so in women. Fumigation helps in piles also.

Poisons: The fat and wingless locusts are fried and taken in (poisoning due to) scorpion sting.

9. *Jirjir*

Rocket seeds

Eruca sativa Mill.

Nature: *Jirjir* is a well known drug. It is of two kinds (a) wild and (b) cultivated. A decoction of its seeds may be used as a substitute for mustard.

Temperament: It is hot in the second degree, dry in the first degree and moist in the first degree.

Properties: *Jirjir* is deobstruent and laxative.

Cosmetics: The water of *Jirjir* with ox bile is useful for removing ulcer-marks and its seed or juice is taken with honey for removing the reddish and brownish pigment spots of the skin.

Head: If taken alone it causes headache but lettuce reduces this harmful effect. Endive and purslane possess similar properties.

Chest: *Jirjir* is lactogenic.

Food: It is also a digestive drug.

Excretion: Wild *jirjir*, specially its seed, is diuretic aphrodisiac and stimulates erectile power.

Poisons: With *Sharāb-i-raihānt* (wine made from fragrant herbs), it acts as an antidote for the bite of weasel and similar other animals.

10 *Jazr*

Carrot

Daucus carota Linn.

Nature: Carrot is well known. The seed of wild carrot is most potent. Dioscorides described a kind of carrot having smaller leaves than that of fennel but otherwise similar to it; its stem measures one hand-span and has a cluster-like structure resembling coriander and dill. It has a white, pungent, fragrant and chewable fruit that grows in stony and sunny places. The cultivated carrot, resembling roman celery, is sharply pungent and fragrant. A third kind of carrot has leaves like those of coriander, white flowers and a dill-like stigma. Pericarps of fruits are like those of walnut containing seeds resembling the seeds of cumin in shape and pungency.

Temperament: It is hot in the last of the third degree and moist in the first degree. The root of cultivated carrot is flatulent and retains gas. The seeds, however, are not like this because when they are used in plaster the flatulence subsides.

Ulcers: Application of powdered seeds and leaves of carrot is useful in corrosive ulcers.

Chest: It is useful in pleurisy and chronic cough.

Food: Carrot is difficult to digest but in the form of jam it is easily digested. It is also useful in dropsy.

Excretion: Carrot, specially its kind *dūqū* (*Daucus*) relieves gripes. Wild carrot, specially its seeds and leaves, are very diuretic. The seeds of cultivated carrot unlike that of wild one, stimulate sexual power as they are most flatulent. The secacul and wild carrot, if the latter may also be considered as a carrot, are more stimulent to sexual power than its cultivated variety. Oral intake or suppository of carrot specially of the wild variety increases the discharge of menstruation and urine. Its roots and seeds are helpful in difficult pregnancy.

Substitute: The substitute of carrot is sweet basil.

11. *Jaş*

Gypsum

Hydrous calcium sulphate

Nature: Gypsum is similar to *Jibstn*.

12. *Jo^cdah* Germander *Teucrium polium* Linn.

Nature: *Jo^cdah* is a kind of worm-wood. It is hot and a little pungent. The small variety is more pungent and bitter. It consists of branches measuring a hand-span and downy white flowers with a yellowish tinge and full of seeds. Its head is like the ball having white hair and heavy odour with slight fragrance. The larger variety is weaker and bitter and has some pungency. The hilly kind of germander is smaller than others.

Temperament: The small variety of germander is hot in the third degree and dry in the second degree. The large variety is hot and dry in the second degree.

Properties: It is attenuant and deobstruent specially the small variety which removes the obstructions in internal organs.

Ulcers: The fresh germander specially its large variety heals all the fresh wounds. The dry germander, particularly the small variety, is useful in malignant ulcers.

Head: Germander causes headache.

Food: It is painted on splenitis and it is used with vinegar in cases of the hardness of spleen but is harmful for stomach. It is useful in black jaundice particularly so is the decoction of its large variety. It is (also) useful in dropsy but, in short, is unsuitable for the stomach.

Excretion: Germander is diuretic, emmenagogue, purgative and useful in tapeworm infestation.

Fevers: It is useful in chronic fevers.

Poisons: Germander is useful in scorpion sting and the decoction of its large variety is useful in other insects bite. Its fumigation and sprinkling (of its powder) on the bed drives away the insects.

Substitute: Fresh pomegranate wood bark acts as its substitute for expelling the worms and for promoting the menstrual flow and diuresis. Cassia bark in two third of its weight is also a substitute of germander.

13. *Juft-āfrand* Satyriion *Satyrium minus*

Nature: *Juft āfrand* is conical in shape having two thorns-like growths on its top. It is also said to be similar to almond nut with some splittings and crackings (on the surface).

Excretion: It increases the sexual power.

14. *Jalbhank*

Sesamoides

Reseda canescens

Nature: The action of *jalbhank* is similar to the action of hellebore. Some physicians state that *jalbhank* is the seed of black turpeth root and its root-bark is yellow in colour. It grows at Şughd.¹ The Indian variety which resembles erysimon is considered best.

Joints: Some physicians prescribe it for paralytic persons in a dose of one *dirham* (3.5 gm). It causes vomiting and, as a result, the patient recovers.

Food: It is an emetic and, sometimes, becomes fatal due to excessive vomiting.

Excretion: A dose of half *dirham* (1.750 gm) proves to be purgative but its one *dirham* (3.5 gm) is dangerous.

Poisons: *Jalbhank* is a poison.

15. *Jild*

Skin

Cutis

Choice: The best skin is obtained from sucklings because of its moisture contents.

Properties: It is very viscous and has little nutritive value. It is similar to the trotters (in properties). Application of skin scrapings of goat stops hemorrhage.

Cosmetics: Burnt skin of snake is painted on alopecia.

Swellings: It is said that when the skin of a hippopotamus, an animal which lives in water, is placed on pimples, it alleviates pain.

Ulcers: The ash of the skin of mule and similar other animals is applied on burns and acute ulcers having no swellings. It is a drug for abrasions on the sole of feet and thigh and also for anal fistula. If the skin flayed from a she-goat is placed on a fresh injury, prevents complications. It is also good for the treatment of malignant ulcers, scabies and prurigo.

Food: Oral intake of dried and pulverized inner lining of the skin of gizzards and claws of birds specially of the cocks, taken with grape juice, is useful in gastralgia.

Poisons: It is said that when fresh flayed skin of the goat is placed on the bite of snakes, it absorbs poisons.

1. Şughd is a place near Samarqand in Central Asia.

16. *Julnār*: Flower of pomegranate *Punica granatum* Linn.

Nature: *Julnār* is the flower of wild Persian or Egyptian pomegranate. It is either red or white or rosy. Its extract resembles the nature of the extract of salsify. According to Paulos the potency of *Julnār* equals the potency of its pulp.

Temperament: *Julnār* is cold in the last of the first degree and dry in the second degree.

Properties: It is agglutinant, stops all kinds of bleeding and produces black bile.

Cosmetics: *Julnār* is very good for bleeding gums.

Ulcers: Sprinkling of *Julnār* in powdered form heals wounds, chronic ulcers, injuries and skull fractures.

Joints: An adhesive medicine is prepared from it for use in hernia.

Head: It makes shaky teeth firm.

Chest: It stops haemoptysis.

Excretion: It causes constipation and is useful in intestinal ulcers, leucorrhoea and bleeding from the uterus.

Substitute: The chest nut and calyx of pomegranate serve as a substitute for its flowers.

17. *Jillaudh* Neozapine *Pinus gerardiana* Wall

Nature: *Jillaudh* is (also) *ḥab al-ṣanobar al-kibār* and it is more nutritious than walnut but it is slower to digest. It is a compound of watery and earthy substances with very little airy contents. For its detailed description, the reader should refer to the chapter on pine.

Temperament: *Jillaudh* is moderate and slightly hot.

Properties: It produces strong and thick nutrient matter which is not inferior in quality as it rectifies the harmful fluids found in intestines. It is slow to digest. It is made digestible with the use of sugar candy in hot tempered persons or with honey in cold tempered persons. Thus its nourishing quality is increased. When *Jillaudh* is soaked in water, its pungency, intensity and irritation is removed. Then it becomes most nutritious so much so that even its small variety which is less nutritious becomes more nutritious than medicinal property. The small variety of *Jillaudh* is called small pine which is frequently found in all the countries.

Joints: It is beneficial in neuralgia, dorsalgia, sciatica and paralysis.

Respiration: *Jillaudh* clears the lungs and expectorates the pus therein, thick humours and allied matter.

Excretion: It is an aphrodisiac particularly when used in the form of a jam. It prevents pus and stone formation in bladder.

Poisons: When *Jillaudh* is taken with fig or date it becomes useful in scorpion's sting.

18. *Jummār* Pith of the palm tree *Pith of Phoenix dactylifera* Linn.

Nature: *Jummār* is well known.

Temperament: It is cold in the second degree and dry in the first degree.

Properties: It is astringent.

Chest: It is useful in the roughness of the pharynx.

Excretion: It checks diarrhoea and (rectal) bleeding.

Poisons: Its plaster is useful in wasp sting.

19. *Jamsafrum* Basil of Solomon *Ocimum Basilicum* Linn.

Nature: The potency of *Jamsafrum* is similar to that of worm wood as also of garden night shade.

Properties: It is cleansing, deobstruent and soothing in gas troubles in general and flatulence in particular.

Food: It dissolves viscous matter in the stomach and is particularly suitable to the stomach of children.

Excretion: *Jamsafrum* is useful in gas retention inside the uterus.

20. *Jummaiz* Clustes fig/Cycamore *Ficus glomerata* Roxb.
Ficus cycomorus

Nature: Dioscorides states in his book that the *jummaiz* is a big tree resembling fig tree. It is full of milky fluid. The leaves of *jummaiz* are like those of mulberry. It yields fruits three or four times a year. Its fruits appear on the stem unlike the fruits of fig which are seen at the base of branches. The fruits of *jummaiz* resemble those of wild fig which are sweeter in taste and have smaller seeds than the unripe fig. It does not ripen unless it is scarified by an iron claw. It grows mostly at *fārtā* in the region called *Rhodes*. It can be used at any time.

SECTION VI

Some people name it as *stgōmōrūn* (cycamore) which means *al-tin-al ahmaq* because of its unpleasant taste. Another plant growing in an island, called *aqṭālā* bears leaves resembling those of *jummaiz*. Its fruit is similar to plum fruit in size but is sweeter in taste and resembles the fruit of *jummaiz* in all respects.

Temperament: It is said that *jummaiz* is hot and moist.

Properties: It is also said that the tree of *jummaiz* has milky fluid and the lactic acid, which is sometimes extracted before the appearance of fruits by scraping its bark. The latex is gathered on a piece of wool, and got dried and made into tablets to be used as an enema. It possesses much potency of softening and dissolving.

Food: Dioscorides states that the *jummaiz* is less nutrient and unsuitable for the stomach.

Ulcers: It is said that the latex of this tree is an adhesive and heals up difficult wounds.

Swellings: Similarly it dissolves the (chronic) swellings which resist treatment.

Excretion: *Jummaiz* is laxative.

Fevers: The latex of this plant is useful in shivering.

Poisons: It is also anointed on insect sting.

21. *Janāḥ*

Wings

Palerygium (G)

Choice: The best *janāḥ* is obtained from fowls. The *janāḥ* of swan is nutritious and digestible. It is light on account of its frequent movements and exercises. Its nutritive value is increased due to its fleshy nature.

Swellings: It is said that the feathers of the wing of turtle dove dissolve the scrofula of the neck without applying cautery. For this purpose it is mixed with an equal weight of Indian hemp and is burnt, powdered and put into the bread as salt or sprinkled over a piece of bread.

Excretion: It is said that the bread, prepared as described above, causes relaxation of the bowels very much.

22. *Jumbudh*

Pomegranate flower

Punica granatum Linn.

Nature: Some physicians state that it is *julnār al khūzī* (a kind of pomegranate flower).

Joints: It is harmful for nerves and causes convulsions.

23. *Jund bidastar*

Castoreum

Castoreum

Nature: *Jund bidastar* are the testes of a sea-animal. It is found in pairs suspended with a single chord and resemble two dry cow bladders. It has a thin covering which cracks even by a mild stroke.

Choice: The best *jund bidastar* are found to be closely suspended together and twisted with each other. As such it is pure in quality but may be adulterated by mixing and kneading it with opoponax-galbanum, gum and (some) blood and then placing it in a bladder to dry. In order to obtain this organ from an animal, one should rip open the enveloping covering and expel the fluid. This fluid is similar to honey and it should be allowed to get dried simultaneously.

Temperament: It is more attenuant and potent than all the substances which are warming and desiccant. It is essentially hot from the last phase of third degree to the fourth degree and dry in the second degree.

Properties: Castoreum is a dissolvent of flatulence and when it is rubbed, the body becomes warm. Something like the wax, which is found in the castoreum, is irritant and extremely hot.

Swellings: It is useful in hot swellings.

Ulcers: Castoreum is also useful in fatal ulcers.

Joints: It is useful for the nerves and warms them. It is also beneficial in chorea, 'humid' convulsion and tetanus, numbness and paralysis.

Head: Castoreum is useful in amnesia and lethargia when used with vinegar and rose-oil. When taken with honey and pepper, it proves to be useful in stupor and fever without causing any side-effects. Its dose is one spoonful. The plaster of castoreum or its fumigation cures the various kinds of 'cold' headache and physocephalgia. It is also useful in deafness attributed to cold. Nothing is more useful than castoreum for the air troubling the ears. In such a case a dose of castoreum equivalent to one grain of lentil is mixed with nard oil and used as ear-drops.

Respiration: The vapours of castoreum are inhaled in pulmonitis and such other diseases of lungs.

Food: It is taken with vinegar in hiccough. It induces thirst.

Excretion: If it is taken with vinegar, it removes gripes and dissolves flatulence. Two *dirham* (7 gm) of it is taken with mint and honey after the venesection of saphenous vein to promote menstrual flow and expel the placenta. Thus it is emmenagogue without any ill-effect, expels foetus, removes congestion and coldness of the uterus and testicles.

Poisons: It is useful for alleviating irritation caused by the sting of insects and is an antidote against suffocating inflammation of the throat caused by the use of hellebore. The dust-coloured and blackish castoreum is very poisonous and it may kill the person on the same day. The surviving consumers develop diaphragmitis. Sour juice of citron, vinegar and also the milk of she-ass are the antidotes of *jund bidastar*.

Substitute: Equal quantity of sweet-scented-flag with half quantity of pepper serve as a substitute for castoreum.

24. *Janṭiānā*

Gentian

Gentiana lutea Linn.

Nature: The leaves of gentian appear on the root and resemble those of walnut and great plantain. Its colour is red. Its middle and outer parts are elevated whereas the stem is smooth, hollow, thick like a finger and two cubits long. The leaves are well separated from each other and the fruits are found inside the calyx. The root of gentian is long and similar to that of birthwort. It grows on the hills in moist and shady places. It is said that *janṭiānā* was discovered by King Gentian who traced its habitat on the high peaks of mountains. The extract of *janṭiānā* is prepared by soaking it in the water for at least five days, then it is decocted, filtered, inspissated and condensed like honey.

Choice: The best *janṭiānā* is its Roman variety which is dark red in colour and very hard. It is a wood and the root is thick like a finger. It may be big or small (in size). It is dark yellow in colour and its broken piece resembles rhubarb.

Temperament: *Janṭiānā* is hot in the third degree and dry in the second degree.

Properties: It is deobstruent and mildly astringent. Its root is deobstruent, attenuant and detergent to some extent.

Cosmetics: The root of *janṭiānā* particularly its extract, mentioned already, cleanses the pityriasis.

Ulcers: *Janṭiānā* and particularly its extract heals the corrosive wounds and ulcers.

Joints: Two *dirham* (7 gm) of it with wine is taken orally in tortuosity of the nerves. It is also useful for the person who has fallen down from a high place.

Eye: An eye epithema is prepared by *janṭiānā* to treat conjunctivitis.

Chest: Two *dirham* (7 gm) of its extract is useful in pleurisy.

Food: *Janṭiānā* is a deobstruent for spleen and liver obstructions and is useful in hepatalgia and splenalgia. It is also useful for cold hepatic and splenic swellings particularly when a dose of two *dirham* (7 gm) is taken with wine. The administration of its root rectifies the stomach ailments attributed to coldness.

Excretion: It is diuretic and emmenagogue and its root expels foetus and causes miscarriage when used as a suppository.

Poisons: It is a good drug to be used in scorpion bite. Two *dirham* (7 gm) of gentian with wine is useful in cases of the stings by all kinds of insects, bites by rabid dogs and other beasts.

Substitute: Indian Valerain one and a half time of its weight and the root-bark of caper and celery by half of its weight act as its substitute.

25. *Jauz*

Walnut

Juglas regia Linn.

Nature: *Jauz* is well known. It is hot and pungent and the oxymel is its antidote in hot-tempered persons. For persons having a weak stomach, walnut treated with vinegar, is useful.

Temperament: It is hot in the third degree and dry in the second degree but its dryness is less than its hotness. The fresh walnut has thick fluid which vanishes when it becomes dry.

Properties: The roasted walnut is very astringent. Its leaves together with its rinds stop bleeding. The burnt rind is desiccant without causing irritation. Old oil of walnut resembles the old olive oil but the detergent potency in the former is stronger.

Cosmetics: A group of physicians advocate application of the fresh walnut on the scars caused by injuries.

Swellings: The chewed pulp of walnut is applied on the atrabiliary and ulcerated swelling.

Ulcers: The gum of walnut, if sprinkled over or mixed with ointments, is useful in hot ulcers.

Joints: Walnut is applied with honey and common rue in tortuosity of the nerves.

Head: A group of physicians state that walnut causes headache. Instillation of ear-drops made from its lukewarm juice prevents pus formation in the ear. It causes heaviness of the tongue and produces pustules on it.

Eye: Its oil is useful in rodent ulcers, erysipelas and fistula of the eye.

Chest: The extract of its bark and pulp stops suffocating inflammation of the throat but its use is harmful in cough. Its old oil induces painful sensation in the throat. According to some physicians all kinds of walnut specially the big variety called *mūlūki*, are plastered over swollen breasts.

Food: It is difficult to digest and is unsuitable for the stomach. Its use in the form of jam and its fresh peeled variety, however, becomes quite suitable and is less harmful for the stomach. Walnut treated with honey, is useful in 'cold' stomach. I believe that the walnut is not suitable only for 'hot' stomach.

Excretion: When the walnut is sprinkled over the umbilicus, it relieves the patient of gripes but causes retention (of urine) particularly when used in roasted form. Its peel stops excessive flow of menses. The jam of walnut is very useful for 'cold' kidneys. The ash of its peel, if taken orally or as a pessary, stops menses and when taken with *Murry* (a kind of pickle) it relaxes the bowels. The use of walnut in larger doses expels small worms and tapeworm. It is one of those drugs which are useful for (diseases of) caecum.

Poisons: Combination with fig and common rue forms a useful drug effective against all kinds of poisons. If plastered with onion and salt, it sedates the pain caused by rabid dog bite and such other bites etc.

26. *Jauz būwwā*

Nutmeg

Myristica fragrans Houtt.

Nature: *Jauz būwwā* is a nut resembling the gallnuts. It is easily broken, thin skinned, fragrant and pungent.

Temperament: According to *Masīh* it is hot and dry from the last phase of second degree to the third degree.

Properties: It is astringent.

Cosmetics: Nutmeg clears the freckles and renders a (pleasant) odour to breath.

Eye: It is useful in vascular keratitis and improves eyesight.

Food: Nutmeg strengthens the liver, the spleen and the stomach particularly cardiac orifice of the latter.

Excretion: Nutmeg causes constipation and diuresis and is useful for dysuria. When mixed with oils, it becomes useful in all painful conditions. It is also used in suppositories. It stops vomiting.

Substitute: The substitute of nutmeg is nard either in equal quantity or half of it.

27. *Jauz rūmī* White dammer tree *Watiria indica* Linn.

Nature: *Jauz rūmī* is also called *akrūfas*. It is said that the tree of *jauz rūmī* grows in a canal called *lirāndānūs*. Its gum flows out of the tree and coagulates over the surface of the canal. This substance is called *ilqaṭūn*. Some people call it as *khūsūfōrūn*. The latter is a yellow amber from which emanates a pleasant fragrance on rubbing. It is of golden colour.

Temperament: It warms in the third degree and is desiccant in the first degree. Its gum is very warming and the flower has also the same property.

Head: Its fruit, when given with vinegar, is useful in epilepsy. Dioscorides states in his book that oral intake of the fruit of *jauz rūmī* with vinegar is useful in patients suffering from epilepsy.

Joints: Plaster of its leaves with vinegar is useful for throbbing pain caused by gout.

Food: Its gum inhibits secretions of the stomach.

Excretion: Similarly when gum is taken orally, it prevents the intestinal secretions. It is also used as a component of ointments.

28. *Jauz jundum* Lichenea _____

Nature: *Jauz jundum* is wild and granulated like the white gram with some yellow tinge. It is imported from Khurāsān and *Riqqa* and a liquor is prepared from it with honey.

Temperament: Paulos states that it has cooling, (thirst) quenching and mildly desiccating properties.

Properties: It stops hemorrhage.

Cosmetics: It fattens the body.

Ulcers: It cures ringworm.

Excretion: It stimulates sexual desire.

29. *Jauz al-sarw* Fruit of cypers tree *Cupressus sempervirens* Linn.

Ulcers: *Jauz al-sarw* is plastered on hernia.

Swellings: It is useful as a plaster in swellings.

30. *Jauz al-ṭarfā* Tamarisk nut *Tamarix gallica* Linn.

Nature: *Jauz al-ṭarfā* is also called tamarix (*Tamarix-articulata*).

Temperament: It is moderate in hotness which may be in the first phase of the first degree and desiccant in the last phase of the first degree or may be more than that. But according to (other) physicians it is cold in the first degree.

Properties: It is an effective hemostatic drug.

Head: *Jauz al-ṭarfā* is used as a mouth wash in odontalgia.

Food: Its decoction is taken with water or vinegar in cases of splenic hardness.

31. *Jauz al-hind* Coconut *Cocos nucifera* Linn.

Nature: *Jauz al-hind* is a well known fruit commonly called coconut.

Choice: *Jauz al-hind* which is fresh, extremely white and containing sweet water, is the best. Lack of water in it is an evidence of its being old. In such a case the skin of its pulp should be removed.

Temperament: It is hot in the first phase of the second degree and dry in the first degree. It contains some noticeable superfluous moisture but the fresh one is moist in the first degree.

Properties: It is heavy but not deficient in nutritive value.

Joints: Old coconut oil is useful in dorsalgia and knee-joint pain.

Food: It is good in nutritive value but is heavy for the stomach (to digest) and has a little harmful effect. As the skin of its pulp is indigestible, it should be removed. Diet should be taken after an hour of its use. Its fresh oil produces better chyme than *ghee* (clarified butter). It does not adhere and relaxes the stomach.

Excretion: *Jauz al-hind* stimulates sexual desire and its oil is useful in piles specially in chronic cases and particularly when taken orally in a dose of one *mithqāl* (4.5 gm) with the oil of apricot. When it becomes old, it kills tapeworms and other worms and expels them.

32. *Jauz māthil* Thorn apple *Datura stramonium* Linn.

Nature: *Jauz māthil* is a poisonous and narcotic drug similar to the walnut bearing thick and small spikes. It resembles *nux-vomica* and its seed is like that of citron.

Properties: It is an anaesthetic drug.

Head: It is soporific and not suitable for brain . One *dāniq* (6 gm) of *jauz māthil* causes intoxication.

Poisons: It is harmful for the heart. Its dose of one *dirham* a day acts as a poison.

LETTER ḤĀ

1. *Ḥāshā* Wild thyme *Thymus vulgaris* Linn.

Nature: The herb of *ḥāshā* has reddish white flowers and thin stalks like that of lemon-grass. Its flowers are round, leaves are small and very thin and their ends are purple and thin. Dioscorides states that it is a small thorny plant having small and thin leaves around it. Mostly it grows on rocks.

Temperament: It is hot and dry upto the third degree. Rhupos states that it is more dry than mint.

Properties: *Ḥāshā* is dissolvent and erosive even for the coagulated blood and is so warming that its use stops shivering even in winter season.

Cosmetics: It dissolves warts.

Swellings: It is plastered with vinegar on fresh phlegmatic swellings.

Joints: It is taken orally in cases of the weakness of nerves and plastered with roasted wheat or barley flour and wine in sciatica. It is useful in painful conditions which develop under the epigastrium.

Eye: Ingestion with food protects the eye-sight and also cures its weakness. Dioscorides has also testified it.

Chest: If taken as a decoction or lincture with honey, it removes congestion from the chest and lungs, helps in expectoration and relieves pain in epigastrium. Due to its desiccant nature, it stops haemoptysis.

Food: It is helpful in digestion and its use removes indigestion and lack of appetite.

Excretion: It is a diuretic and emmenagogue; expels worms and when taken in a dose of two to four *dirham* (7-14 gm), it expels phlegm thoroughly without any difficulty.

2. *Ḥāsts* A species of euphorbium _____

Nature: *Ḥāsts* is an Armenian or a Persian drug. Some physicians state that it is stronger than gum euphorbium and when its dose exceeds from one *dirham* (3.5 gm), it proves to be fatal.

Temperament: It is hot and dry in the fourth degree.

Properties: It is a caustic and a tasteless drug.

Food: It is an emetic and caustic for the stomach.

3. *Hālibi*

Stellaria

Aster atticus

Nature: *Hālibi* is a herb and is named *hālibi* because it cures ureteritis when used as a plaster or pending around the neck. It has mixed potency like that of rose.

Temperament: It has cooling power with some hotness.

Properties: *Hālibi* is a dissolvent and has cooling as well as expelling properties.

Swellings: It cures the swellings in ureter, when it is suspended over it but not when used as a plaster. It is also called *aṣṭarāṭiqūs* which has already been discussed under the letter *Alif*.

4. *Ḥab al-bān*

Persian lilac seed

Melia azedarach Linn.

Nature: We have discussed it under the letter “Ba” pertaining to *bān* i.e. Persian lilac.

5. *Ḥab al-zalam*

Monkey pepper

Cyperus esculentus Linn.

Nature: *Ḥab al-zalam* is a seed having a good taste and growing at Shahrzūr. It is (also) called Sudanese pepper.

Temperament: It is hot in the second degree and it is also moist.

Cosmetics: It is a fattening drug.

Excretion: It increases the seminal fluid.

6. *Ḥab-al-simnah*

Bugle seed

Buchanania latifolia Roxb.

Nature: *Ḥab al-simnah* is a desert plant of about one yard long and having somewhat whitish leaves. It is an oily and lactogenous seed. Its fruit is similar to pepper. Some experts state that it is nothing but common heliotrope seeds (*Sābir yūfā*).

Temperament: It is hot and a little moist.

Cosmetics: It is a fattening drug.

Food: It stays in stomach, but when digested, proves to be highly nutritive.

Excretion: It increases seminal fluid and stimulates the sexual desire.

7. *Ḥab al-ṣanobar*

Edible pine *Pinus gerardiana* Wall.

Nature: The seeds of *Ḥab al-ṣanobar* are thinner than those of pistachio nut, soft, thin-skinned and red in colour. When split, a long, white, oily and tasty kernel appears. *Ḥab-al-ṣanobar* has also a larger variety of edible pine called *sausan* or blue lily. The smaller variety of edible pine is triangular in shape and hard skinned. It has a very pungent, astringent and acrid pulp, and is more useful as a drug rather than as food.

Temperament: The larger variety i.e. neozapine is moderately hot and excessively moist but the edible pine is hot and dry in the second degree.

Properties: Edible pine, particularly the fresh one is maturative, laxative, dissolving and irritant but its irritant effect can be removed by soaking it in water. In this way it becomes quite lubricant and smooth. These two qualities (which now become manifest) were already existing in it. Edible pine is composed of earthy, watery and some airy substances.

Cosmetics: It is a fattening drug.

Joints: Oral intake of neozapine is useful in the relaxation and weakness of the body. It dries out the defective humours formed in the body.

Chest: Edible pine and neozapine both are used in cases of putrid humours in lungs, pus, haemorrhage and cough. These are particularly effective when used with fresh *maibukhtaj* (a kind of wine) having some bitterness. When it is boiled with sweet wine, it cleanses much purulent matter from the lungs. The skin, seeds and wood are also included in linctures for similar effects.

Food: When plastered with absinth, it strengthens the stomach. It is slow to digest, highly nutritive but causes irritation in the stomach except when it is used after soaking in hot water. The hot tempered persons should take it with sugar candy and the cold tempered persons should take it with honey. In this way it would become digestible, better and suitable for the stomach. According to Dioscorides it does not suit the stomach but probably it is not true except when it is burnt and becomes rancid. Soaked edible pine is quite good as soaking

corrects its defects and removes its gases. When taken with purslane, instead of causing irritation, it removes irritation.

Excretion: When taken with sesame, sugar candy and honey, it increases sexual desire and volume of semen. Excessive use of edible pine and neozapine causes gripes. Chewing of sour pomegranate seeds, acts as its antidote. It is strongly cleansing for the fluids of kidneys and bladder and strengthens them to hold urine. It cures both kinds of polyurea (of renal or cystic origin) strangury and stops the formation of stones and ulcers in the bladder. It is diuretic and its plaster with absinth is also very useful.

8. *Ḥab al-ghār* Seed of laurel/Bay tree *Laurus nobilis* Linn.

Nature: *Ḥab al-ghār* is the seed of *dahmusht* (bay tree) resembling small hazelnut. Its rind is blackish and thin. When pressed, it splits into two hard and yellowish parts giving out some fragrance. We shall discuss it later under the heading “*ghār*”

9. *Ḥab al-qulqul* Seed of baloon vine *Cardiospermum helicacabum* Linn

Nature: *Ḥab al-qulqul* is like the white pepper, larger than carthum seeds in size but imperfectly round. When broken, an oily and tasty pulp emerges. Some physicians state that it is actually wild pomegranate seeds and according to them the root of *ḥab al-qulqul* is *maghāth* (root of wild pomegranate used as a purgative and emetic).

Joints: It strengthens infirm bodies.

Properties: The roasted *ḥab al-qulqul* is lighter.

Cosmetics: It is a fattening drug.

Head: It induces headache specially when taken in the form of a dessert after wine.

Respiration: Its big variety is useful for (removing) the putrid humour from lungs and for pus and bleeding.

Food: Its excessive use induces dyspepsia and (symptoms similar to) Cholera. When taken with sugar-candy, sugar and honey, it acts as a good digestive. The roasted form is also better. The humour produced by it is not defective. Small variety is very irritant for the stomach.

10. *Ḥab al-mīsam* A seed resembling terebinth

Nature: *Ḥab al-mīsam* is a seed similar in size and colour of pepper and it is easily broken. On splitting it yields an extremely white and fragrant pulp.

Temperament: It is hot and dry in the second degree.

Food: It is favourable for flaccid and cold stomach.

11. *Ḥab al-nīl* Pharbitis seed *Ipomoea hederacea* Jacq.

Nature: They are called pharbitis seeds.

Choice: The red, compact, smooth and fresh variety is the best.

Temperament: Some physicians believe it to be hot and dry in the first degree but, infact, it is hot and dry in the third degree.

Cosmetics: It is useful in leukoderma and *pityriasis alba*.

Food: It causes pain and nausea.

Excretion: It forcefully expels thick humours, black bile, phlegm, worms and ringworms.

Substitute: Half of the quantity of the pulp of colocynth with one sixth of armenian stone acts as its substitute in cases of diarrhoea and melancholia.

12. *Ḥabba al-khaḍrā'* Terebinth *Pistacia terebinthus* Linn.

Nature: *Ḥabba al-khaḍrā'* is well known as it grows in various cold countries including the islands of *Fūflāwis*. The seed, obtained from the plants of this island, are superior and have a bluish white colour resembling the glass. These seeds have a good fragrance. Its fruit is astringent in property similar to that of mastic but its gum is better in this respect. Larger variety of seeds are called *dirw* (*Pistacia-terebinthus*) and the plant is called terebinth.

Temperament: Some physicians state that its oil is laxative and astringent like the rose oil. Though the hotness of pistacia is not much lesser than that of rose but its dryness, as long as the moisture persists, is not strong enough. When dried, it gets hot into the third degree. Its gum, having little dryness, is hot.

Properties: Pistacia is warming, laxative and cleansing having some astringence. Its gum is more dissolvent than mastic because of its being more bitter and somewhat astringent. It is a strong

SECTION VI

detergent and good deobstruent and has the laxative and maturative property. It extracts undesirable matters from the depth (of the body) and often its actions are similar to mastic. The fumes of terebinth are not so troublesome unlike that of frankincense. Its oil has three types of properties in addition to astringence. Some physicians have the opinion that its oil has some cooling effects.

Cosmetics: Pistacia cleanses the face and removes freckles while its resin is useful in facial cracks.

Swellings: Its gum is useful in hard swellings.

Ulcers: Pistacia cleanses scabies and ringworms. Its gum is used in ointments for cleansing the wounds. It removes pus and cures the external wounds, itching ulcers, scabies purulenta, phlegmatic scabies and pimples.

Joints: The oil of pistacia is used with other oils for relieving fatigue, paralysis and facial paralysis.

Head: The use of its gum with honey and olive oil is good in cases of otorrhea.

Eye: Fumes (condensed) of pistacia are used in *kohl* (collyrium) and also for the protection of hair and in erosive conditions of the eyelids.

Chest: External application in the form of a plaster or an ointment is useful in pleuralgia. Its gum is very useful in lung ulcers and chronic cough when licked as such or with some sweetening agent.

Food: Pistacia specially the resin of terebinth, is useful in the diseases of spleen but it causes loss of appetite. It also cleanses the liver.

Excretion: It is a diuretic and stimulant of sexual desire. Its gum, if taken one *bunduqa* (3.5 gm) or one *jauza* (4 gm) on an empty stomach, acts as a diuretic and softens the bowels without causing any ill effects. It also cleanses the viscera and kidneys.

Poisons: The gum or fruit of pistacia is taken orally with wine in tarantula bite.

13. *Hajar armant*

Arminian stone

Lapis arminium

Nature: Arminian stone is slightly azure in colour, lacks compactness and is sandy in structure. Sometimes the dyers and painters use it as a substitute for *Lapis lazuli*. The latter is softer and smoother than armenian stone.

Food: It is unsuitable for the stomach. The water treated stone is not emetic, but the untreated one is an emetic. In short it is unsuitable for the stomach.

Excretion: Hajar armani strongly purges black bile and is a stronger purgative than *Lapis lazuli*. After its (therapeutic) recognition, the use of black hellebore for the treatment of melancholic diseases was abandoned.

14. *Hajar al-asākifa* Shoe maker's stone _____

Nature: Hajar al-asākifa is a well known stone.

Chest: It is very useful in cases of ulcers of the chest and uvulitis.

15. *Hajar al-isfanj* Sponge stone *Lapis spongia*

Nature: Hajar al-isfanj is a stone found in the body of sponge.

Excretion: It dissolves nephroliths.

16. *Hajar afrōjt* Phrygian stone *Lapis phrygius*

Nature: Hajar afrōjt is a well known stone belonging to Afrojia.

Properties: It is a desiccant drug with some astringent, irritant and dissolving properties.

17. *Hajar al-ḥabshī* Ethiopian stone *Lapis thyites*

Nature: Hajar al-ḥabshī is a stone which is obtained from Ethiopia. It is yellowish in colour. It is irritant to the tongue and resembles *tin* (a kind of palm).

Eye: It cures hemeralopia with no swelling and conjunctivitis. It is useful for removing the marks due to ulcers in the eyes and also soft petrygium.

18. *Hajar al-ḥayya* Snake stone *Lapis ophites*

Nature: Hajar al-ḥayya is a well known stone which may be related to the prick (tongue) of snake (in shape).

Excretion: It is said that it dissolves cystoliths but Galen does not agree with this view.

Poisons: *Hajar al-hayya* is said to be useful in snake bite when tied over the affected part. Galen stated that a reliable person informed him about this property.

19. *Hajar al-ruha* Grinding stone *Lapis asius*

Swellings: The fumes emanating from a mixture of *hajar al-ruha* and vinegar, stop hemorrhage and hot swellings.

20. *Hajar sajtūs* Haematite-like stone _____

Nature: *Hajar sajtūs* is a stone similar to blood stone in properties but is weaker than it.

21. *Hajar al-ʿājl* Marble *Lapis ivory*

Properties: *Hajar al-ʿajl* is desiccant, detergent and hemostatic.
Ulcers: It stops bleeding from wounds and ulcers.

22. *Hajar al-ʿasli* Honey stone *Lapis melittites*

Nature: The dust of *hajar al-ʿasli* produces much sweetness but, in all its actions, it resembles chalk.

Temperament: It has little hotness almost equivalent to that in blood-stone.

23. *Hajar al-qamar* Selenite *Lapis lunaris*

Nature: *Hajar al-qamar* is also called 'spittle of the moon' or 'foam of the moon'. It is found when the moon ascends. The variety found in Arab countries is light in weight.

Properties: It is said that when *hajar al-qamar* is suspended from a tree, the latter bears more fruits.

Head: It cures epilepsy. Amulets, prepared from it, are suspended around the neck of epileptics.

24. *Hajar al-labant* Chalk *Galactites lithos*

Nature: *Hajar al-labant* is a stone which, when rubbed with water, yields a milky substance. The stone is ash coloured, sweet in taste, and soluble in water. Its solution should be preserved in a lead box.

Temperament: It is moderate in temperament.

Swellings: It is useful in hot swellings in the initial stages but is ineffective later on.

Eye: If it is used as *kohl* (collyrium) with water, prevents the flow of superfluous matter towards eyes and is useful in eye ulcers.

25. *Hajar al-mathāna* Bladder stone *Lapis vesicae*

Excretion: It is said that *hajar al-mathāna* dissolves nephroliths and cystoliths. Galen, however, opines that such effects do not appear.

26. *Hajar al-misan* Whet stone *Lapis-escota naxia*

Cosmetics: The dust of *hajar al-misan* is applied on breast and testicles to prevent their unusual enlargement.

Swellings: Its dust is good for relieving hot swellings of the breast.

27. *Hajar al-yashab* Jasper *Lapis jaspis*

Food: *Hajar al-yashab* is very useful for stomach. Galen stated that, when suspended parallel to the stomach in the form of a garland, it is useful in diseases of oesophagus and stomach.

28. *Hajar yutfa'* Quenched stone *Therakios lithos*

Properties: *Hajar yutfa'* is quenched with olive oil and used with water.

Poisons: This stone is insect repellent.

29. *Hajar al-yahūd* Jewish stone *Lapis judaicus*

Nature: *Hajar al-yahūd* is a stone of short length resembling a small nut. It bears various parallel lines coming from opposite directions and intersecting each other giving it an appearance like the bright scales of a fish.

Food: It weakens the stomach and does not suit it. It reduces appetite.

Excretion: It is useful in nephroliths and expels them. Its dose is ten *obālūsāt* (60 gm) with warm water. It is also claimed that *hajar al-yahūd* is useful in cystoliths but this is not correct. It is one of the drugs used to stop bleeding from piles etc.

30. *Ḥadīd* Iron *Ferrum*

Nature: Iron is of three kinds.

(a) *shābūrqān* (b) *barmāhān* and (c) the processed *faulādh* i.e., steel. *Shābūrqān* is a natural *faulādh*. The processed steel is prepared from *barmāhān*. The scales of *shābūrqān* resemble those of copper. We propose to discuss its rust in a separate head under the letter "*khā*."

Properties: The dross of iron is astringent and corrosive while its rust is weaker and more desiccant.

Cosmetics: Rust of iron is applied with wine on whitlow.

Swellings: The iron rust is taken orally with wine for the treatment of erysipelas and pimples.

Joints: The iron rust, if taken with wine, is also useful in gout.

Head: Its powder, if decocted in pungent vinegar, would be beneficial in chronic otopyosis.

Eye: Rust is good for treatment of roughness of eyelids and pterygium.

Food: The wine and the water, in which the hot iron is extinguished, are useful in splenitis, atony and weakness of the stomach.

Excretion: The purging power of the scales of iron is weaker than that of copper. As the rust of iron is astringent, it stops bleeding from uterus and dissolves the swelling of piles. Similarly the wine, extinguished with hot iron, curbs the chronic diarrhoea and dysentery, cures the paralysis of the anus, enuresis and excessive discharge of menses. It also strengthens the sexual desire.

31. *Ḥirbā'* Chameleon *Chameleon zeylancius*

Eye: It is said that the blood of *ḥirbā'* prevents the growth of hairs plucked from the eye.

Poisons: It is also said that the eggs of *ḥirbā'* are fatal. This we have discussed in Book IV.

32. *Ḥirbah* Leek *Allium porrum*

Nature: *Ḥirbah* is also called *lughīṭus*. The seeds of the latter appear in groups of three like those of leek. The leaves are trifoliate like those of spleen wort or carrot.

Temperament: The hotness of garden leek is mild while the variety is hot in the second degree.

Ulcer: The fresh leek heals the wounds.

Food: Its peels are used with vinegar for the treatment of splenic disorders. The dried leaves, if taken orally, are also useful in the diseases of spleen and relieve the patient from hepatitis.

Excretion: The leaves, specially which are similar to the leaves of spleen wort, are diuretic.

33. *Hirdhaun* *Lizard* *Hemidactylus flavivirdis*

Nature: *Hirdhaun* is nothing but mastigure and its temperament is similar to that of monitor. Lizard has more similarity with monitor because the latter feeds on it.

Eye: The excretion of lizard is useful in the opacity of cornea, trachoma and it improves the eyesight.

34. *Hurshuf* Artichoke *Cynara scolymus* Linn.

Nature: *Hurshuf* is a kind of *kankar*.

Temperament: It is moderately hot and moist in the second degree. According to some physicians it is cold and moist. Masih states that it is like common asparagus (*hilyūn*) in actions and hot and moist in the first degree. Other physicians believe it to be hot in the first and moist in the second degree. Galen reportedly stated it to be hot in the last of the second degree but, in my opinion, *hurshuf* is of various kinds having different temperaments.

Properties: It is mildly detergent, desiccant and attenuant. Some physicians say that it produces black bile but it is far from truth.

Cosmetics: Its paint is useful in alopecia. Washing the head with its water kills the lice. It removes stench from the armpits by discharging malodorous urine.

Swellings: It dissolves hard swellings.

Ulcers: Its water is useful in hard prurigo.

Head: Its water also removes lichen.

Food: *Hurshuf*, particularly the hilly variety, causes nausea. This action is produced specially by its root and gum, that is artichoke gum, which we shall discuss under the latter "*kaf*."

Excretion: It stimulates sexual desire, discharges urine, excretes malodorous urine, moves the bowels, expels phlegm and, very often, causes constipation when taken with wine.

35. *Hurf* Garden cress *Lapidium sativum* Linn.

Nature: *Hurf* is well known. Dioscorides said that the best plant of cress which we have ever seen is found in Babylone. Its

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potency is similar to the potency of mustard and radish seeds taken together. Some physicians believe that mustard and rocket seeds when taken together, become equal to its potency. The leaves are weaker than the whole plant due to their moisture contents but, when dried their potency may become similar to that of cress.

Temperament: *Hurf* is hot and dry in the third degree.

Properties: It is dissolvent, maturative with some laxity and absorbs the pus formed in the cavity.

Cosmetics: Its paint or oral intake stops falling hair.

Swellings: It is good for relieving the phlegmatic swelling and is useful in boils if plastered with water and salt.

Ulcers: It is useful in ulcerative scabies, ringworms and favus; particularly so when used with honey. It roots out *al-nār al-fārsī* or eczema.

Joints: Oral intake or its painting with vinegar and barley flour is useful in sciatica. It is also used as an enema in cases of sciatica. The action is brought about by purging out blood contaminants. *Hurf* is also useful in various types of neural paralysis.

Respiration: It cleanses the lungs and cures asthma. It is incorporated in soups prepared for asthma patients because of its diluting and attenuant properties.

Food: *Hurf* produces heat in stomach and liver and is useful in splenic enlargement particularly when plastered with honey. It is not suitable for stomach and this is probably due to its being intensely irritant. It is an appetizer. When taken in a dose of one *iksōnāfin* (12 gm), it expels bile through vomiting or loose motion. Three fourth of a *dirham* (2.60 gm) is also quite enough to produce the same effect.

Excretion: It stimulates sexual desire, expels worms, promotes menses and causes abortion. The roasted *hurf* as such causes constipation. Its stickiness disappears when it is powdered and thus is useful in colic. If its powder is taken orally in four or five *dirham* (14-17.5 gm) with hot water, it relaxes the bowels and dissolves the gases of intestines. Some physicians state that the Babylonian cress, taken in a dose of one *iksōnāfin* (12 gm), purges out bile through vomiting and it does so even when taken in a dose of 3/4 *dirham*.

Poisons: Garden cress is useful in the insects sting both when taken orally or plastered with honey. If fumigation is carried out with it, drives away the insects.

36. *Harmal* Syrian rue *Peganum harmala* Linn

Nature: Syrian rue is well known.

Properties: It is erosive and attenuant.

Joints: It is good for arthralgia and sciatica if used as a paint.

Head: It is an intoxicant like wine.

Eye: Dioscorides stated that if rubbed with honey, wine, gall-bladder of partridge or a chicken and the juice of dill, it proves to be useful for treatment of the weakness of eye sight.

Food: It causes severe vomiting.

Excretion: It is highly diuretic and an emmenagogue when taken orally or used as a paint. Similar administration is also useful in colic.

Substitute: Common rue is substitute for Syrian rue.

37. *Ḥazā'* Dill *Anethum graveolens* Linn.

Nature: Dill is the *zūfra* (goldy-locks) which is also called *Dīnārwaīh*. We have already dealt with it elsewhere.

38. *Ḥazāz al-sakhr* Stone flower *Permelea perlata* Ach.

Nature: Galen said that stone flower is similar to duck weed and it grows on the surface of the rock. It is desiccant for two reasons because it has the power of detergency and cooling. Its properties of detergency and desiccation come from the rock and its cooling effect is due to its water contents.

Properties: It is desiccant and cooling. Dioscorides stated that it stops bleeding but I am not of the opinion.

39. *Ḥasak* Caltrops *Tribulus terrestris* Linn.

Nature: *Ḥasak* is of two kinds (a) the wild one is more earthy and (b) cultivated one is more watery. In short, the moist variety is not much cold and the dry variety is not less cold.

Temperament: According to Dioscorides these two kinds of *ḥasak* are cold and dry but other physicians believe it to be hot in the beginning of the first degree and dry in the first degree. The latter description applies well to the *ḥasak* found in our country.

Properties: Because of its astringence, maturation and laxity it prevents the infiltration of (corrupt) matters towards organs.

Swellings: *Ḥasak* prevents the development of hot swellings and infiltration of matters towards the organs and, similarly, it is very suitable for relieving pharyngitis.

Ulcers: If used with honey, it proves useful in foul ulcers.

Heads: It is useful in putrid ulcers of the gums.

Eye: Its extract is useful for the preparation of *kohl* (collyrium).

Chest: It is useful in swellings on the muscles of the pharynx.

Excretion: *Hasak* stimulates sexual desire and dissolves nephroliths and cystoliths and, similarly, its extract is useful in dysuria and colic.

Poisons: Two *dirham* (7 gm) of wild *hasak* is useful in snake bite cases and dose of two *dirham* (7 gm) with wine is useful in fatal poisoning. The decoction of *hasak* is sprinkled on places where bugs are found.

40. *Hāshishah al-zujāj* Common pellitory *Parietaria officinalis* Linn

Nature: Common pellitory is a herb which is used to clean glasses.

Properties: It is an astringent with some moistness and possesses adhesive, cleansing and laxative properties.

Swellings: It dissolves swellings and its leaves cure erysipelas, fireburns and phlegmatic swellings. Its extract is used with white lead (*plumbi carbonas*) in herpes and erysipelas and it is taken as gargle in case of tonsillitis.

Joints: It is applied to gout in the form of a *qairūfī*.

Head: Its extract is used with rose oil in otalgia and locally applied in tonsillitis.

Chest: Sipping of its extract is recommended in cases of chronic cough.

Excretion: Common pellitory also removes the chronic piles.

41. *Huḍaḍ* Ophthalmic barberry *Berberis aristata* Dc.

Nature: Most probably the Indian variety of ophthalmic barberry is the extract of *filzahraj*. It is adulterated tactfully by decocting it with the extract of *zarishk* (barberries) in water till it is condensed. Its potency now becomes similar to that of fiery, tenuous and earthy cold substances. *Makkī* is a manufactured variety. According Dioscorides it is a thorny plant having branches of about three arms in length. Its fruits, resembling pepper, are solid and smooth. Its peel is yellow in colour. The plant has a lot of roots and grows in rugged places. *Huḍaḍ* is obtained either by crushing its fresh leaves including the whole plant or the material is soaked in water and kept for a number of days and then repeatedly decocted till it becomes thick. Some times *huḍaḍ* is adulterated either with (i) the sediments of olive oil mixed up during decoction or (ii) the extract of absinth or (iii) the gall-bladder of cow. Sometimes it is prepared by pressing the fruits of *huḍaḍ* after they are kept in the sun. The best kind of *huḍaḍ* is one which is heated on the fire and on cooling it produces foam resembling its own colour.

Choice: The Indian *huḍaḍ* is more effective than the Meccan variety for strengthening the hair but the *makkī* variety is more effective for relieving swellings.

Temperament: *Hudād* is moderately hot and cold but dry in the second degree.

Properties: The Indian variety is dissolvent and a little astringent. It is useful in all types of bleeding. Its power of dissolution is more than its astringency which is in the second degree. The astringency is, however, less than its desiccant property. It also possesses the power of attenuation.

Cosmetics: The Indian variety, in particular, reddens and strengthens the hair and removes freckles. All the varieties of *hudād* are useful in whitlow.

Swellings: It is useful in flabby swellings and herpes.

Ulcers: Both the varieties of *hudād* (Indian and Meccan) are useful in malignant ulcers.

Joints: It strengthens the joints.

Head: Indian *hudād* is useful in cases of pus and ulcers of the ear. Its local application on the palate cures stomatitis. It also cures the ulcers and other ailments of the gums.

Eye: *Hudād* is useful in conjunctivitis, cleanses cornea, removes cataract and cures trachoma.

Chest: Indian *hudād* is taken orally in cases of haemoptysis and cough.

Food: Oral intake or external painting of Indian variety is useful in black jaundice and splenic disorders. Its plant has also the same property and proves useful in gastric diarrhoea.

Excretion: It is useful in cases of anal fissures. It is taken orally or administered as a pessary in chronic diarrhoea and dysentery due to gastric weakness. It is also an emmenagogue. Fresh fruit purges out aqueous phlegm. It is useful in anal ulcers. It prevents excessive menstrual discharge and cures piles.

Poisons: Fruit of *hudād* is used to treat fatal poisoning and the Indian variety is taken orally in case of rabid dog bite.

Substitutes: Equal quantity of *filzahraj* (box thorn) is the substitute of *hudād*. Equal weights of betel nut and sandal wood taken together also act as its substitute.

42. *Hulbah* Fenugreek *Trigonella foenum graeceum* Linn.

Nature: *Hulbah* is a well known (vegetable).

Temperament: It is hot in the last phase of the first degree and dry in the first degree but not free from foreign humours.

Properties: It is maturative and laxative because it possesses hotness side by side viscosity which resists its ill effects. Its hot effects are elicited gently. Though its chyme is not less in quantity, it is of inferior quality.

Cosmetics: The oil of fenugreek, obtained with myrtle, is useful for the hair and also for removing the scars. Its mucilage is useful in (skin) ruptures attributed to cold exposure, particularly when used with rose oil. It is incorporated in preparing medicines intended to be used in freckles, improvement of complexion and is used as a deodorant. Moreover, it also renders a pleasant odour to the body and perspiration.

Swellings: Fenugreek dissolves phlegmatic and hard swellings. Its flour is useful in both external or internal hot swellings, specially those without a burning sensation but having some hardness. It softens and matures the abscesses.

Ulcers: Administration with rose oil is useful in burn.

Head: Washing the head with it removes dandruff but causes headache, particularly, when used with *murry* (a kind of pickle). Such combined use is, however, less harmful to the stomach.

Eye: The decoction of fenugreek cures ecchymosis in the eye and when painted on the eye, it proves useful in inflammatory conditions of the eye due to viscous exudates.

Chest: Fenugreek clears voice, nourishes the lungs, softens the chest and throat, soothes the cough and asthma, particularly when it is decocted with honey or dates or fig. It is better that the extract of fenugreek and pulpy dates is put together and mixed with a large quantity of honey and then heated on the live coal moderately. This preparation is to be taken before meals for a long period.

Food: It is useful for spleen if painted with sodium nitrate. The decoction of fresh *hulbah* and vinegar is useful in weakness of the stomach and gastric ulcers. It is also an emetic drug. The vinegar and *murry* rectify the ill effects of *hulbah*.

Excretion: Patients, suffering from uteritis, uteralgia, ulcers and adhesions of the uterus are relieved if given a sitz bath in its decoction. The decoction of *hulbah*, admixed with vinegar, is also useful in intestinal ulcers. For the same purpose, fresh fenugreek is nibbled with vinegar. Its aqueous decoction is also a good remedy for dysentery and diarrhoea. Its oil is good for relieving anal swellings and is also taken as an enema in cases of dysentery and diarrhoea. The oil is taken in anal swellings and gripes, particularly when used with *murry* before meals. Fenugreek facilitates faecal excretion due to its pungency; particularly so when it is taken with a little honey to avoid severe irritation. The decoction of fenugreek with honey expels the thick fluids from intestines, and it is also a diuretic and emmenagogue. It is used as a pessary with duck fat to cure sclerosis of uterus. Fenugreek facilitates delivery when there is any difficulty in usual process due to its dryness. It is beneficial for the patients suffering from piles.

It makes the faeces less foul smelling while the urine and perspiration become stinking but unlike lupin, it does not hinder their excretion.

43. *Halbīb* An Indian drug like hermodactyle

Nature: *Halbīb* is an Indian drug resembling white hermodactyle.

Temperament: It is hot and dry in the second degree.

Joints: It is useful in gout and arthralgia if taken orally.

Excretion: *Halbīb* purges out phlegm, mucus, worms, tapeworms and thick humours.

44. *Hūlīt* Assafoetida *Ferula assafoetida* Linn.

Nature: Dioscorides states in his book that it is the gum of assafoetida plant which exudes on scarifying the root and stalk. Tasting of assafoetida, procured from the town *Qūrnīā* creates vesicles on the whole tongue. Its odour is not offensive and, therefore, the taste does not bring about an appreciable change in the body's smell. Another kind of assafoetida known as Syrian assafoetida is obtained from Syria. It is weaker than Qurnian variety. All varieties of assafoetida are adulterated before drying with sagapanum and the flour of broad bean. This adulterated assafoetida can be identified by its taste, odour and colour. Some people call the stalk and the root of this plant as *silqīūn* and *mā' anṭārith* is the root of assafoetida. The strongest of all these parts in potency is its gum. Next in order are the leaves followed by the stalk. In the town of *Naubia* there grows a plant resembling the root of assafoetida which is thinner than it and pungant in taste. It yields no gum which can be powdered and used as assafoetida. Assafoetida is of two kinds (a) malodorous and (b) mildly odoriferous. The malodorous assafoetida is comparatively hotter and highly burning. This variety mostly comes from *Qairwān*. It is actually the gum of *mahrūth*.

Choice: The best variety of assafoetida is reddish and clean in appearance. It is known as *mur* (myrrh.) It has a strong odour unlike that of leek, has no green colour and no undesirable taste. It dissolves easily and when it is whisked becomes white in colour.

Temperament: It is hot in the beginning of fourth degree and dry in the second degree.

Properties: Assafoetida is carminative, and expels gases by its dissolving property but is flatulent also. It stops bleeding and dissolves the coagulated blood in the abdominal cavity.

Cosmetics: Application with vinegar and pepper as an epithem is useful in alopecia. Intake with edible substances improves colour of the body and removes coniform warts.

Joints: The patient, suffering from tetanus caused by dryness, is given sitz bath in its meat soup.

Head: Roasted liver of an ass, if taken on an empty stomach, is useful in epilepsy and its burnt hoof is similarly effective if taken two *filinjārs* (7.5 gm) in a day.

Excretion: It is said that the urine of an ass is useful in nephralgia and the urine of wild ass dissolves the bladder stones.

47. *Ḥummād* Sour dock *Rumex crispus* Linn.

Nature: Dioscordides states that there are many varieties of this plant. Some of them are the following: (i) A variety which grows in grassy land has long leaves with sharp ends. It also grows in gardens and, when cooked, becomes tasty. (ii) Another variety which grows in marshy lands has hard and sharp edged leaves. It is known as *afsūlābin*. (iii) A variety which is wild, smooth and similar to the great plantain. (iv) Another variety with leaves resembling the leaves of origanum and having branches bearing a few sour, red, pungent and not big seeds. (v) A variety called *anqūlūyūn* or *lu'nūn* by some people. It is bigger than all the varieties we have mentioned. It also grows in marshy land and has the property of all the varieties of *ḥummād* discussed above. (vi) One which is cultivated in gardens. (vii) Another variety which is wild and called *al-silq al-barrī*. This variety is suggested to be partly sour but is not wholly so. Of course, the wild variety is strongest in all qualities.

Temperament: *Ḥummād* is cold and dry in the second degree and its seeds are cold in the first degree and dry in the second degree.

Properties: It is astringent but the insipid one has less efficacy of dissolution. Sour variety is most astringent, but that which is not much sour, is nutritious. The latter is similar to endive. All varieties remove yellow bile. The humour produced by it is good.

Cosmetics: The roots of *ḥummād* are used with vinegar in the scaling of nails. Its plaster, prepared by cooking it with wine, is useful in leukoderma and ringworms.

Swellings: It is plastered on scrofula. Suspending it around the neck of a patient of scrofula is said to be very useful.

Ulcers: Its roots are used with vinegar in case of purulent scabies and ringworms. Its decoction with hot water is applied to itches. Similarly the patient may be given a bath with its water also.

Head: In case of aching teeth, its extract or decoction is taken as mouth wash. Similarly, if decocted with wine, it is useful in parotitis.

Food: If taken with wine, it is useful in black jaundice. It relieves a patient of nausea and is recommended to be taken orally in case

of geophagy. When cooked with vinegar and plastered, it dissolves splenic swellings.

Excretion: The *ḥummāḍ* and specially its larger seeds cause constipation. It is said that its leaves are laxative and seeds cause constipation. Some physicians state that roasted seeds of sour dock are lubricant while its pounded roots are useful in leucorrhoea. When taken with wine, it dissolves nephroliths. Its viscosity cures the abrasions caused by dry stools. Moreover it causes lubrication. *Ḥummāḍ* is useful in intestinal ulcers and chronic diarrhoea, when its seeds are swallowed with water or wine. When the powdered seeds are used as a pessary by a female patient, they stop chronic excretion of fluid from uterus. When decocted with wine and taken orally, it dissolves cystoliths and abundantly discharges menses.

Poisons: *Ḥummāḍ* is useful in the sting of scorpion particularly of the wild scorpion. When the seeds are taken before the scorpion sting, harmful effects of the sting will not appear.

48. *Ḥamām*

Pigeon

Calumba livia

Nature: The pigeon is a well known bird.

Temperament: The young ones have hotness and superfluous humidity while the grown up birds are less in hotness and moistness. Their eggs are very hot.

Properties: Young pigeon's flesh is dense due to its superfluous humidity.

Head: The blood of pigeon stops meningeal epistaxis.

Food: The growing pigeons are easily digestible and produce good humour. The patients of hot temperament should take them with juice of grapes, coriander and the pulp of cucumber. Pigeon eggs have foul smelling.

Eye: The excreta of pigeon is useful in the opacity developed due to the healing of the ulcers in the cornea.

49. *Ḥamāmā*

Cardamom

Amomum cardamomum Linn.

Nature: *Ḥamāmā* is a plant with a cluster of branches interlaced with each other. It has small flowers resembling *Cassia cinnamon* in colour. Its leaves are like those of white bryoni having golden colour but its wood is ruby coloured and has a pleasant smell. There are two kinds of *ḥamāmā* (a) one which grows in moist places and smells like common rue and (b) the second one called *Qibḥī* is neither long nor broad, is not difficult to break and is like a bunch of grapes. Its fragrance attracts the passers by.

Choice: The best kind of *ḥamāmā* is that which is of golden colour, fresh, sour, fragrant and the armenian one. The second variety

of good *hamāmā* bears a green stalk, is inferior and weak in odour and grows in humid places. The third variety is fresh, whitish with some redness, thick, smooth, straight without any curve, compact, irritant and pungent. The brittle variety should be avoided and the branches coming out from one and the same root should be selected to prevent adulteration. Dioscorides stated that the best variety of *hamāmā* is white in colour with some redness, full of seeds like a bunch of grapes and has a heavy and pungent odour. It should be uniform in colour, irritant to the tongue, and free from mould infestation.

Temperament: It is hot and dry in the second degree.

Properties: It softens and matures the matter, has some astringency and its efficacy is like that of sweet scented flag. The latter is more desiccant while *hamāmā* is more digestive and maturative.

Swellings: *Hamāmā* matures the hot swellings.

Joints: Its decoction should be taken orally in gout. Sitz bath in it is also advised for this purpose.

Head: It produces heaviness, headache and sleep. Some physicians state that when painted on the forehead, it relieves the patient of headache caused by intoxication and somniferous drugs.

Eye: Its decoction is applied as a fomentation in hot conjunctivitis.

Chest: It is useful in cold pleurisy of the false ribs.

Food: It removes hepatic obstructions. The decoction is taken in liver diseases. It is more digestive than sweet scented flag.

Excretion: *Hamāmā* is diuretic and emmenagogue. It is useful in uteralgia and is incorporated in a pessary for this purpose. The patient is given a sitz bath in its decoction in case of nephralgia. It is also taken orally in all types of uteralgia.

Poisons: It is plastered with sweet basil on scorpion sting.

50. *Ḥimmaṣ* Chick pea *Cicer arietinum* Linn.

Nature: *Ḥimmaṣ* is of various kinds: (a) white (b) red (c) black (d) pea-coloured (e) cultivated and (f) wild. The wild variety is most pungent, bitter and hot. It has the effects like those of cultivated chick pea but the latter is more nutritious.

Temperament: The white chick pea is hot and dry in the first degree. The black variety is considered more effective.

Properties: Both the varieties i.e. black and white, are flatulent, laxative and erosive. These are more nutritive and compact than broad bean. No other substance is considered more nourishing for the lungs as chick pea. The fresh *ḥimmaṣ* produces more superfluous matters than the dry one.

Cosmetics: It cleanses freckles and improves the complexion both when taken orally or applied as a paint.

Swellings: Chick pea is useful in hot and hard swellings including glandular swellings.

Ulcers: The oil of chick pea is useful in ringworm while its flour is used in malignant and cancerous ulcers and scabies. Its flour is also taken with honey as an epithem.

Joints: It is useful in dorsalgia.

Head: Chick pea is beneficial for the moist pustules on the head. Its infusion is useful in molar pain, hot and hard gum swellings and parotitis.

Chest: Chick pea clears voice, promotes lactation and nourishes the lungs very much. For this purpose a soup is made from its flour.

Food: Its decoction is useful in dropsy and jaundice. Chick pea, particularly its pea-coloured and black varieties, remove hepatic and splenic obstructions. It should neither be taken before nor after the meals but in the middle.

Excretion: Intake of decoction of black chick pea admixed, with almond oil, radish and celery, dissolves nephroliths and cystoliths and expels the whole fetus. It is unfavourable for the ulcers of the bladder. It increases the sexual desire very much. Therefore only the animals and camels are grazed upon it. The infusion of chick pea causes erection when taken on an empty stomach. All varieties of pea relax the bowels and dissolve nephroliths, particularly the black and pea-coloured chick pea. Some physicians state that when it is soaked in vinegar and taken on an empty stomach followed by half day fasting, it kills the worms. Hippocrates states that chick pea has two substances which are lost when it is decocted: (a) salty substance that relaxes the bowels and (b) hot substance that is diuretic. Its sweetness is flatulent and stimulent to the sexual desire.

51. *Hinnā'*

Henna

Lawsonia alba Linn.

Nature: Henna is well known. Dioscorides stated that it is a plant with branches bearing leaves resembling the olive leaves but the former are wider, softer and dark green. Its flowers are odorous like those of rockmoss and its seeds resemble the seeds of a plant called *aqfā* which is imported from tropical countries.

Temperament: Henna is cold in the first degree and dry in the second degree.

Cosmetics: When henna is admixed with the water of struthion and applied, it reddens hair.

Properties: It has dissolving, astringent and desiccant actions without any ill effect. Moreover it is carminative and vaso-dilator. Its oil is warming and laxative.

Swellings: Its decoction is useful in hot, phlegmatic and inguinal swellings due to its desiccant action.

Ulcers: The decoction of henna is used as a douche in burns. It is said that its effect on wounds is similar to that of the dragon's blood. It is also applied in case of bone fracture as such or in the form of a *qairūfi*.

Joints: I consider its use to be suitable in neuralgia. It is incorporated in ointments to be used in paralysis and distension. Its oil removes fatigue, relaxes nerves and is useful for treating fractures.

Head: It is painted with vinegar on the forehead in case of headache and similarly it is useful in the oral ulcers.

Chest: Henna is suitable for use in pleurisy of the false ribs and also in ointments for diphtheria.

Excretion: It is useful in uteralgia.

52. *Ḥandaqūqa* Blue melilote *Trigonella corniculata* Linn.

Nature: *Ḥandaqūqa* is a plant which is of three varieties: (a) wild (b) cultivated and (c) Egyptian. Bread is made from the flour of its seeds.

Temperament: Ibn Juraj described it to be hot and dry in the last stage of the second degree. According to Ibn Māswaih it is hot in the middle stage of the second degree but the cultivated variety is likely to be hot in the last stage of the first degree.

Properties: The cultivated blue melilote is moderately detergent and desiccant. Wild variety is astringent with some warmth and its oil is suitable for (relieving) thick gases.

Cosmetics: The wild variety is applied on freckles. Similar property is attributed to cultivated *ḥandaqūqā*.

Ulcers: The extract of cultivated variety with honey cleanses ulcers.

Joints: Its oil is good for use in arthralgia due to gases. Even in chronic illness, many patients have recouped health with its use.

Head: Sniffing of its extract causes headache but benefits epileptics.

Eye: The extract of cultivated variety is useful in the opacity of the cornea and cataract specially when it is used with honey.

Chest: *Ḥandaqūqā*, particularly its wild variety, is used in phlegmatic pain of the ribs. It produces pharyngalgia and diphtheria. Its harmful effects are removed using coriander, lettuce and endive.

Food: It is useful in cold and gaseous gastralgia. Its oil is beneficial in the initial stages of dropsy.

Excretion: It is diuretic and emmenagogue. The wild variety administered with wine and the seeds of jews mallow is useful in

cystalgia. Its oil is beneficial in testicular pain and uteralgia. The wild variety is also useful in cholera and produces constipation. Both *ḥandaqūqā* and its seeds are stimulent for sexual desire.

Fevers: Some physicians state that if a patient of tertian fever is given three leaves or three seeds of *ḥandaqūqā*, the paroxysm of the disease is disturbed (and thus the patient recovers). Similar effects are observed in case of quartan fever.

Poisons: When the water of *ḥandaqūqā* is sprinkled on the part affected by scorpion sting, it relieves pain immediately. If, however, its water is shed on an unaffected organ, it causes irritation and pain. Its seeds are more effective in the treatment of scorpion sting.

53. *Ḥiṭṭah* Wheat *Triticum sativum* Lam.

Choice: The best variety of wheat is moderately hard, brittle large, pulpy, fresh, smooth and reddish white in colour. Black variety of wheat is malnutritive.

Temperament: Wheat is hot in the first degree and moderate in moistness and dryness. Roasted flour has a little dryness.

Properties: The large and reddish wheat is very nutritive. Boiled wheat is slow to digest and flatulent but if digested fully, it becomes nutritive. Its fine flour is similar to the starch but is (in temperament) rather warmer. The flour of wheat, which has natural viscosity, is different from the flour which is artificially made viscous. The latter is not like the natural viscous flour. The roasted flour of wheat is slow to digest and very flatulent. A little sweetness helps it to be digested quickly and washing of wheat with warm water reduces its flatulence. Mixing of some barley flour with wheat flour is recommended. Its starch is cold, moist and viscous.

Cosmetics: The wheat cleanses the face. The flour and starch are particularly used in the medicines prepared for freckle.

Food: The roasted flour of wheat and barley are heavy and slow to digest.

Excretion: Raw wheat and also roasted, boiled, unkneaded, partly cooked wheat and *ḥarīṣah* (a sweet pastry made, of flour, melted butter and sugar) when taken frequently are said to produce worms.

Poisons: Pounded wheat is sprinkled on rabid dog bite.

54. *Ḥanzal* Colocynth *Citrullus colocynthis* Schrad.

Nature: *Ḥanzal* is of two kinds (a) male and (b) female. The male *ḥanzal* is fibrous and female is flabby, white and soft.

Choice: The best kind of *ḥanzal* is exceedingly white while the black as well as the hard varieties are inferior. When the pulp

of *hanzal* is to be extracted, the fruits must not be plucked from the plant but should be left as such, otherwise the pulp would become weak (in efficacy). The pulp should also be not collected unless the fruit becomes completely yellow leaving no trace of green colour, as otherwise it might be harmful, inferior in quality and fatal. The bark and seeds of *hanzal* must be avoided. If there is only a single fruit of *hanzal* on the plant, it would be of inferior quality and fatal. The male and fibrous kind of *hanzal* is stronger than its female and flabby kind. It must be powdered thoroughly and one should never be mistaken about it because even if a small perceptible particle is left unpowdered and mixed with gastric juices, it would develop wound and spread it around the stomach and the flexures of the intestines causing inflammation. It is, therefore, essential that first of all *hanzal* must be soaked in honey-water and then dried and powdered. For the improvement of its quality and removing its harmful effects, mixing of gum tragacanth is preferred to (arabic) gum because the latter suppresses the potency of the drug.

Temperament: *Hanzal* is hot and dry in the second degree. According to Al-Kindi it is cold and moist but this is far from truth.

Properties: *Hanzal* is dissolvent, erosive and most absorbent and its tender leaves stop bleeding.

Cosmetics: *Hanzal* is used as a massage in case of leprosy and elephantiasis.

Swellings: The tender and fresh leaves of *hanzal* dissolve swellings and mature their fluids.

Joints: It is useful in neuralgia, arthralgia, sciatica and cold gout. Fresh *hanzal* is plastered on sciatica. It is also incorporated in the preparation of the medicine to be used in sciatica and enema. Fresh *hanzal* is more useful when massaged in sciatica.

Head: *Hanzal* cleanses the brain. Mouthwash with the decoction of its roots is useful for odontalgia. It is made hollow by removing its contents and some vinegar or olive oil is cooked therein on hot ashes. The material so obtained is used as ear-drops in *tinnitus aurium* and for extraction of teeth conveniently.

Chest: Vomiting induced by it is very useful in orthopnoea.

Food: The root of *hanzal* is good for treating dropsy and suitable for the stomach.

Excretion: It purges thick phlegm and bilious humours out of joints and particularly, the nerves. It is very useful for moist and gaseous colic. Sometimes it purges out blood. If taken as a pessary, it kills the foetus. It passes out of the intestines so quickly that the anticipated effects of its bitterness cannot be observed. It is useful in the diseases of kidneys and bladder. Its dose is of two *karma* (2 gm)

or twelve *qirāt* (3 gm). It must be powdered smoothly. Sometimes, it is made hollow and stuffed with the rob of grapes or old and sweet wine and left thus for a day and night while sometimes it is placed on hot ashes till it warms up fully and then is taken orally.

Poisons: Green *hanzal* is highly purgative and emetic. It also causes severe pain which might be fatal. It is taken orally with an equal weight of gum tragacanth. The single fruit of *hanzal*, appearing on its root, is fatal in two *dāniq* (12 gm) and its bark and seeds are fatal even in a dose of 6 gm. The root of *hanzal* is useful in snake-bite and highly useful in scorpion sting. I am told by a person that an Arab, who was bitten by a scorpion at four sites, was immediately cured by administering a dose of 4.5 gm of *hanzal*. Similarly its paint is useful.

55. *Hūr* White dammer *Vateria indica* Linn.

Nature: White dammer is a common plant. It is said that the gum of the Roman kind of white dammer is called *kāhrabā* (yellow amber). We have assigned especially a separate heading for *kāhrabā*.

Temperament: White dammer is moderate but slightly dry.

Properties: It is tenuous but not severely hot.

Joints: One *mithqāl* (4.5 gm) of the fruit of this plant is useful in sciatica and the leaves of Roman variety are used with vinegar as a plaster in gout pain.

Head: When the lukewarm extract of its leaves is instilled in ear, it removes ear-ache. The fruit of white dammer is useful in epilepsy.

Eye: When applied with honey as a *kohl*, (collyrium), it strengthens the eyesight.

Excretion: One *mithqāl* (4.5 gms) of its fruit is taken in strangury. The same dose when taken with vinegar by a woman after menstruation, prevents pregnancy. Similar is the property of its leaves.

56. *Hūr i-rūmī* Roman white dammer -----

Nature: Roman white dammer is also called *ukrūfas*.

Temperament: It is highly warming in the third degree and desiccant in the first degree. Its flower and gum are also highly warming.

Head: The fruit of Roman white dammer is recommended with vinegar to be used in epilepsy.

57. *Ḥayy al 'ālam* House leek *Sempervivum tactorium* Linn.

Nature: It is *saqūṭūn* which we will discuss under the letter *Sīn*.

58. *Ḥayyah*

Serpent

N. O: *ophidia*

Nature: The serpent is used after it is boiled with water, salt and dill. Sometimes olive oil is also added to it. The salt and slough of the serpent possess properties similar to its flesh. We shall discuss various kinds of serpents in Book IV.

Choice: The flesh of female serpent is the best while the best slough is obtained from a male serpent.

Temperament: The flesh of a serpent is desiccant but its warmth is not so intense. The slough is also very desiccant.

Properties: The chief characteristic of its flesh is that it swiftly pushes the morbid matters towards skin especially when the person is not "clean". Once a man consumed the flesh of serpent and, as a result, a large abscess appeared on his neck but when the abscess was cut open there were numerous lice in it. Consumption of the flesh of serpent promotes longevity, strengthens vigour and maintains the senses and youth.

Cosmetics: Oral intake of serpent flesh produces lice and scales off the skin. The latter is attributed to the fact that it pushes the morbid matters towards the skin. It is very useful in leprosy and, when applied to alopecia, it proves to be very effective.

Swellings: The flesh and soup, prepared after discarding both extremities of the serpent, prevents the growth of scrofula. Similar is the property of its slough.

Joints: The flesh, slough and soup prepared after cutting off the head and tail of a serpent approximately four fingers in length and decocting the same in the manner we have mentioned, is beneficial in neuralgia.

Head: Serpent slough decocted with wine and instilled in the ear, cures ear-ache, Mouthwash prepared after boiling the serpent slough in vinegar, is useful in odontalgia. The best slough is obtained from a male serpent. According to Galen if a serpent is tied with several threads, specially coloured with a purple dye, and then they are encircled around the neck of the patient suffering from uvulitis and pharyngitis, it proves to be a magic treatment of the disease.

Eye: Soup and flesh of the serpent strengthen the eye-sight. Several physicians unanimously state that serpent, fat prevents cataract. Every person, however, cannot dare to take such treatment.

Poisons: When a serpent is cut and placed on its own bite, it gives relief to the pain.

LETTER Khā

1.—*Khāliduniūn* Celandine *Chelidonium*

Nature: Some physicians state that *khāliduniūn* is golden thread root which is also called *māmīrān*. Some other physicians state that the lesser celandine is called *māmīrān* and its big variety is called *zardjōbah*.

Properties: The lesser celandine is hot and ulcerative.

Swellings: When applied with wine, it is useful for herpes.

Ulcers: The lesser celandine removes scabies.

Head: Chewing of its root, sedates odontalgia.

Eye: Celandine strengthens eyesight specially when its extract is boiled on coal till it is reduced to the half of its volume. When young one of a swallow looses its eyesight, the mother carries this plant to it to restore the lost vision. That is why celandine is also called *khaffāfī* (swallowwort).

2. *Khāmālāūn (abyaḍ)* Pine Thistle *Atractylis gummifera*

Properties: Pine thistle is not to be taken orally but should be used externally. It is one of the external detergent drugs which is also used in softening and dissolving plasters.

Cosmetics: Pine thistle is painted on pityriasis.

Ulcers: It is painted on scabies and ringworm and also plastered on corroded ulcers.

Food: One *iksōnāfin* (84 gm) of its white root is taken orally with wine in case of dropsy.

Excretion: The white root of pine thistle kills worms.

Poisons: Black variety of pine thistle (*Cordopatum Corymborum*) contains something fatal.

3. *Khāniq al-dhi'b* Wolf bane *Aconitum napellus* Linn

Properties: Wolf bane causes suffocation to the wolves, pigs and dogs. It is putrefactive and thus it is not permissible for both external and internal use. Wolf bane is also called *qātil al-dhi'b* (wolf-killer). It has been discussed under the letter *Qāf*.

4. *Khāniq al-kalb* Dog's bane *Aconitum pardalianches*

Dog's bane is the same drug which is called *qatīl al-namir* i.e. panthers' bane (*Aconitum pardalianches*). It has been discussed there.

5. *Khāniq al-namir* Panther's bane *Aconitum pardalianches*

Nature: According to Dioscorides *khāniq al-namir* is a herb having thin, long and unbreakable branches. It has leaves similar to those of lablab except that they are finer, more sharp edged, strong in odour and full of viscous yellow moist contents. Panther's bane has an ovule resembling the pod of a bean of one finger long. It has small, black and hard seeds.

Properties: It causes suffocation to the panthers and leopards etc. It is not permissible for external and internal uses.

Poisons: It is said that when it is brought closer to the scorpions it makes them immobile and still.

6. *Khubbāzi* Jews mallow *Malva rotundifolia* Linn.

Nature: Jews mallow is a kind of *mulūkhiā*. It is said that the wild variety is the Jews mallow and garden variety is *mulūkhia*. There is another kind of Jews mallow called *mulūkhīa al-shajarah* which is nothing but *khatmī* i.e. marsh mallow. It is also described as *baqla yahūdia* which is possibly one of its red kinds.

Choice: The wild variety of the Jews mallow is more attenuant and dry. The excessive moistness of the garden variety exerts an adverse effect on its potency.

Temperament: It is cold and moist in the first degree but the garden mallow is said to be hot and dry. Paulos was the physician, who stated this, and it is likely that he might have referred to *baqla yahūdia* which also bears the name 'Jews mallow'.

Properties: It is laxative and more attenuant than *sarmaq* i.e. goose foot; thicker than *silq* i.e. beet and the wild variety of Jews mallow is more attenuant and dry. It is said that the garden variety is slightly warming. Due to its moistness and viscosity, it gets digested quickly specially when used with garum and olive oil. Its digestion is moderate and its moisture is said to be thicker than the lettuce. Paulos described it to be an astringent, carminative and dissolving without causing irritation and possibly he means by it *baqla yahūdia*.

Swellings: Jews mallow is useful in herpes and erysipelas. The leaves of wild Jews mallow with olive oil is useful in burns. Similar action is attributed to its douche. The garden mallow is beneficial in the initial stage of hot swellings but (in latter stages) it increases hot swellings.

Ulcers: *Khubbāzi*, especially the small variety, is useful in ophthalmic fistula. For this purpose, fresh unripe drug is chewed and then applied.

Head: Its plastering with urine is very useful in head ulcers. It is also chewed in cases of stomatitis.

Eye: It cleanses ophthalmic fistula and helps in regenerating flesh when its chewed leaves are applied with some salt.

Chest: Both the leaves and flowers of Jews mallow are lactigenous, soften and clear the chest and soothe the cough due to hotness and dryness. Its seeds are considered best for removing the dryness of the chest.

Food: The garden variety is not suitable for the stomach but dissolves hepatic obstructions.

Excretion: The flower of Jews mallow is useful in renal and cystic ulcers both when taken orally as such or with olive oil. The seeds of Jews mallow are useful in abrasions and intestinal ulcers. The branches of wild variety are good for intestines and bladder as they loosen the bowels and relieve colic. It is so when it is taken in the form of fresh juice or with wine. Sitz bath or enema of the decoction of Jews mallow is useful in hardening of the uterus. It is also a diuretic. The wild Jews mallow, which rotates with the movement of the sun, purges out immature matters and bile. Sometimes it causes hemorrhagic diarrhoea if used excessively.

Poisons: The leaves of Jews mallow serve as a soothing drug in cases of wasp-bite; particularly so when used as a plaster with olive oil. For the persons, who have taken some poison, are prescribed its seeds and they are advised for vomiting. It is also useful in the bite of trantula.

7. *Khabth*

Dross

Scoria

Choice: The most desiccant dross is the dross of iron.

Temperament: Iron and copper drosses are dry in the third degree and all other drosses are less in hotness.

Properties: All the drosses are desiccant; the iron dross is most desiccant. All types of dross absorb moisture.

Swelling: Iron dross dissolves hot swellings.

Ulcers: Silver dross is useful in scabies and prurigo. It heals ulcers and stops bleeding from piles and fistula.

Eye: Iron dross is useful in hardening of eye-lids while the lead dross is useful in ophthalmic ulcers and acts as a substitute for litharge.

Food: Iron dross absorbs moisture and removes atony of the stomach and strengthens it specially when taken with old *nabīdh* (a kind of wine) or *ṭilā* (an other kind of wine).

Excretion: Iron dross stops bleeding from piles particularly when the patient is given a sitz bath in a mixture of the dross and the old *nabīdh*. It prevents pregnancy and possesses a unique property to normalise irregular menstruation. Similarly it is useful in cases of irregular and excessive urination. Its local application strengthens the anal musculature.

Poisons: Iron dross removes the harmful effects of a drug called *fornītus*.

8—*Khubz*

Bread

Choice: A bread must be pure, salted, prepared from a properly kneaded and fully leavened flour and baked thoroughly in an oven. Stale and very hot bread should not be taken. The hot bread does not suit the human constitution. Next to the oven baked bread is that which is baked in furnace and the rest are inferior. The thick bread is better than the thin one. For making pure bread, the flour should be leavened and left till it is matured. Thereafter it is properly kneaded and salted perfectly. The bread baked in a furnace is not as good as the bread baked in an oven; the latter is baked from both sides. The bread baked on hot ashes remains unbaked inwardly. The bread dipped in water, is cooling; less nutritious and it floats in the stomach but it is suitable for those who have hot-temperament. It neither produces obstructions nor hotness. The method of its washing goes like this that the crumbs of stale bread are soaked in hot water, then this water, in which the crumbs are floating, should be replaced by some fresh water till its leaven is removed and the crumbs are fully puffed up.

Properties: Among all breads, the bread of white flour is most nutritious but is slowly assimilated. Fine flour bread is similar in properties. The coarse flour bread is full of husk. It is quickly assimilated but is less nutritious and of inferior quality. The bread, which is not fully baked, is nutritious. Similiar is the case of less leavened bread but it produces viscosity and obstruction. It is not suitable except for persons accustomed to much physical exercise. The bread baked on hot ashes belongs to the same category because its inner part is not baked perfectly. Bread soaked in water is less nutritive, deobstruent, light in weight and fast in gastric maturation. The bread prepared from wheat of low quality is similar to the coarse bread. The bread made from fine flour, honey and sesame oil produces thick humours. Crumbled bread is flatulent and slow to digest. Crumbled bread, which is mixed with almond oil and dried in shade is the best. The bread prepared with milk is nutritious, slow in assimilation and

SECTION VI

obstruent. The plaster made of bread, is hotter than that of wheat because of its saltiness.

Cosmetics: The bread made from fresh wheat, fattens the body.

Swellings: The bread made from wheat, is a very good remedy for hot inflammations. It softens and cools them when it is used with water mead and some other suitable extracts.

Ulcers: The bread is useful in ringworm when applied wet with water and salt.

Food: Hot bread produces thirst, floats in stomach due to its vaporous moistures and thus satisfies hunger quickly. Hot bread is quickly digested but slowly assimilated.

Excretion: Coarse flour bread causes relaxation of the bowels. White flour bread causes constipation. Leaven bread is laxative and unleaven bread causes constipation. The bread baked on hot ashes is constipative. Stale and dry bread also causes constipation if nothing else is mixed with it. The bread made from fine flour, honey and sesame oil, also causes constipation. It is more constipative than that of white flour.

9. *Kharāṭn*

Earthworm

Lumbricus Sps.

Temperament: In my opinion earthworms are hot.

Ulcers: The worms are crushed and plastered on the wounds of nerves. For optimum effect the plaster must not be removed for three days.

Head: The decoction of earthworm with goose fat is useful in otalgia. In toothache, it is mixed with olive oil and instilled into the ear of the opposite side.

Food: Jaundice is cured when earthworms are taken orally with *ḫilā*.

Excretion: The worms are powdered gently and taken with *ḫilā* for diuretic effect. They are also useful in calculus.

10. *Kharbaq abyad*

White hellebore

Veratrum viride Aiton.

Nature: The barks of white hellebore are small, brittle like a cracked and decayed substance, white in colour and light in weight. It resembles the roots of marsh mallow and is more bitter than black hellebore. Its plant is like the great plantain or beet but smaller than the former. It is red in colour. The length of its stem is equivalent to four joined fingers. The stem is hollow. It has numerous branches emerging from one and the same root like that in onion. It grows in stony and hilly places and is plucked and stored at harvest time.

Choice: The best variety of white hellebore is that which spreads moderately and is white in colour, easy to break, thin and voluminous in quantity. It should not be severely irritant to the tongue immediately and produces saliva. But the white hellebore, which causes irritation immediately, produces suffocation. The actions of those drugs which rectify this defect have been mentioned under the caption of 'properties'.

Temperament: White hellebore is hot and dry in the middle stage of the third degree.

Properties: The white variety is more bitter and the black one is hotter. A rat dies instantly after its consumption. Thus it is a reliable device to kill the rats. It is given to rats with honey and *sawīq*. (flour of roasted wheat or barley). Cooking with it lacerates the meat. An infusion of weaker type of hellebore is made by soaking five *darakh miāt* (20 gm) of its chopped quantity in nine *āwāq* (270 gm) of rain water. After filtration it is taken lukewarm. In another method, one *raṭl* (450 gm) of the same chopped hellebore is soaked in two *qust* (2700 ml) of rain water for three days. Then it is cooked till it is reduced to its one-third in quantity. The pieces of hellebore should then be removed from the decoction and two *raṭl* (900 gm) of pure and clean honey water be added to it. After being thickened it should be taken orally in one large spoonful either as it is or with tepid water. This is a very safe way of its use. The next safe and harmless way of its use is to crush its peel, coarsely grind it and then mix it with barley water to prevent its sticking to the throat and stomach. Another safe way of its use is to pulverize it and mix the powder with honey water. This method (the last one), however, is fatal if it remains in the passages of the body. It is necessary to take something before the intake of white hellebore such as the soup of chicken, syrup of hyssop with mint, common rue, lentil, aromatic oils like that of Indian cypress, blue lily and narcissus so that the possibilities of some ill effects may be avoided. Moreover such persons should also keep beside them the vinegar of bitter odour, apple, quince, hot bread, *sharāb-i-raihānī* (a kind of aromatic wine), errhine drugs, feathers, chair, bed, flat cushion and cupping glasses of various kinds. When the patients have mild motion, they should sip cold water and inhale perfumes and take such diet as producing good chymes. If, however, they exhibit convulsions and weakness, they should take bread soaked in wine or honey water. In most cases this method will have to be repeated by taking the bread soaked in cold water. In case the patient has hic-cough during the period of taking white hellebore, he should be advised to take honey water in which radish was cooked. But if white hellebore fails to create any movement for long, the patient should gulp honey water with tepid water in which the common rue was

cooked. Alternatively he should be made to drink water and oil and vomit being induced by a feather oiled with Indian cypress or orris root. He should also be given a swing in cradle. If suffocative symptoms appear, he should be given a decoction of three *āwāq* (90 gm) of hellebore and this will help the drug to cure the ailment. If it is not effective, the patient should be given strong enema and three *Obölūs* (18 gm) of it orally. The latter is not for the purpose of vomiting but for the removal of suffocation. He should also be made to sneeze by the use of errhine medicines. If the hiccough persists, we apply the process of cupping on the large vertebra which lies between the two shoulders. The cupping may be applied even on all the vertebrae of the back because it would remove twisting (of nerves) which generally occurs after hiccough. In addition to this, the affected organs should be massaged with any intensely warm oil. The body should also be washed with hot water or sitz bath should be given to him.

Ulcers: In this case white hellebore acts like the black hellebore.

Cosmetics: Its cosmetic actions are similar to those of black hellebore.

Head: When its powder is inhaled it excites sneezing.

Eye: It strengthens the eye sight.

Food: The white hellebore induces severe vomiting and sometimes it becomes hazardous because of its suffocating effect. Some times it is incorporated in *khabīṣ* (a sweetmeat made of dates and butter) for emetic effect but one who is afraid to become a victim of suffocation must avoid its use particularly on an empty stomach. Such people are those who are in poor health.

Poisons: Excessive use of white hellebore is fatal for human beings. It is a poison for the dogs and swines. Ingestion of the faeces of the persons who have used it, kill hens.

11. *Kharbaq aswad* Black hellebore *Helleborus niger* Linn.

Nature: The black kind of hellebore are the pieces without splits in them which are more pungent than white hellebore. Persons who pluck it, take garlic and wine as a precautionary measure against its harms. The leaves of this plant resemble the leaves of *dulb* (oriental plane tree) but the former is more black in colour. It has small purple coloured branches bearing something like a bunch. The fruit of black hellebore have thin and black rootlets emerging from a single root (point) like the bulb of onion. These rootlets are used (in medicine). It is cultivated in dry places.

Choice: The best kind of black hellebore is that which is neither old nor new, nor fat and nor thin. It should be ash-coloured, easy to break, not very dense and its innerside resembling a spider's web. It should also be sharp in taste and irritant to the tongue. The best part of the drug to be used is the small branches, collected close to the roots, peeling off the barks and drying-up the latter in shade. The dried barks are then powdered, sieved and used. The dose of its syrup is three *kurma* (16 gm). It is better to take it with rock parsley and doucus and, sometimes, it is taken in a dose of one *darakhmi* (4.5 gm).

Temperament: It is hot and dry in the third degree.

Properties: Black hellebore is dissolving, attenuant and most detergent that erodes the dead flesh. The wine, prepared from the vine grown near its root, acts as a purgative drug. One of the main properties of black hellebore is that it changes the temperament of the body and creates a new temperament of youthfulness and vigour. Many people take white hellebore to induce vomiting and loose motion but it causes neither of these effects. Nevertheless in such cases, after-effects of emetic purgative drugs will be observed. It is however suitable for men, women having masculine temperament, young and vigorous persons with a well nourished body and abundant blood. It is unsuitable for cowards and persons having flabby bodies. It is best suited to be used in the months of April and October. Persons who desire to take black hellebore should abstain from all heavy food and drinks for three days. They should enjoy spending most of the time in merriment and amusement. Moreover they should vomit twice or thrice after dinner and then take this drug.

Cosmetics: Black hellebore is anointed on *pityriasis (nigra)* with vinegar. It is similarly used in *pityriasis alba* also. White hellebore removes warts. The black and white hellebore, as evacua-tive drugs, are useful in leukoderma.

Swellings: The latex of black *kharbaq* is painted on swellings while that of white *kharbaq* is painted on scabies and ring-worms with vinegar. It is also used as a paint in gout. The latex is used as an emetic drug, white *kharbaq* cures hard fistula. For this purpose a hard mould is made from its latex and then it is inserted in the fistula and left for a few days. Later on the mould is taken out rupturing the fistula.

Joints: It is useful in paralysis and arthralgia and the evacuation by its use is a very effective remedy for all such diseases.

Head: Instillation of its decoction with vinegar in the ear, relieves *tinnitus aurium*. When used as mouth wash with vinegar, it relieves odontalgia. Ear drops of its decoction remove dulness of hearing and strengthen the hearing power. It is useful in evil thoughts,

chronic migraine and other diseases of the head, epilepsy and melancholia.

Eye: It improves eye-sight when mixed with *kohl*.

Excretion: It is useful in cases of excessive black bile, and evacuates it from all parts of the body without any difficulty. It also expels yellow bile, phlegm and all the superfluous matters mixed up with blood, from the skin and remote parts of the body. To make it more purgative, it may be mixed up with scamony, sulphur, parsley and doucus. Sometimes it is taken as a drink prepared in the following way. It is soaked in oxymel or any other sweet wine for a long time and thereafter this wine is decocted with lentil or barley or chicken (soup) and then sipped. Alternatively one *darkhami* (3.4 gm) of black hellebore is mixed with three *obulus* (18 gm) of scamony and taken orally after decocting it with lentil. We have already discussed the various methods of its administrations under the caption 'properties'. These must be kept in mind. It is highly beneficial in the swellings of intestines and bladder and for regulating menses and diuresis.

Substitutes: Mazerion and white agaric act as the substitutes of black hellebore when used in its 1/2 and 2/3 quantities respectively. According to Ibn Māsawaih white hellebore, in equal quantity, is the substitute of black hellebore.

12. *Khardal* Black Mustard *Brassica juncea* (Linn.)
Czern & Coss

Nature: Mustard is a well known herb.

Temperament: It is hot and dry in the fourth degree.

Properties: Mustard is anti-phlegmatic. Its oil is warmer than that of radish. The fumes are insect-repellent. The wild variety produces inferior humour. It is a detergent and dissolvent drug. Its cooked leaves and roots are used.

Cosmetics: It clears complexion, removes freckles and the spots due to accumulated blood. The wild variety forms a good paste for drying, strengthening and tanning hides. It produces dryness of the tongue and is useful in alopecia.

Swellings: It dissolves hot inflammations and chronic swellings. It is applied with sulphur on scrofula.

Ulcers: Mustard is useful in scabies and ringworm.

Joints: It is also useful in arthralgia and sciatica.

Head: It removes the moistures confined in the head. It is plastered on the head of persons affected with lethargus. Mustard water is instilled into the aching ear and applied in molar pain. The oil has similar applications particularly when it is decocted with

asafoetida. It is one of the drugs which remove the obstructions in the ethmoid bone. Some physicians state that it increases intelligence when taken orally on an empty stomach.

Eye: It is used as a *kohl* (collyrium) in case of day blindness and "roughness" of the eye.

Respiration: When powdered and taken orally with hydromel, it removes chronic roughness of trachea (wind pipe).

Food: It removes splenitis and causes thirst.

Excretion: It is useful in hysteria and stimulates sexual desire.

Fevers: It is also useful in intermittent and chronic fevers.

13. *Kharnüb* Nabatean carob *Ceratonia siliqua* Linn.

Choice: The best *kharnüb* is the Syrian variety in dried form.

Temperament: The Syrian *kharnüb* is desiccant and astringent. The fruits are also similar to it in temperament but are sweeter in taste. Beside these qualities, it causes constipation also. The Nabatean *kharnüb* is intensely desiccant and drying and causes no irritation. It is taken fresh and the humour produced by it is heavy and inferior in quality.

Cosmetics: Nabatean variety of unripe *kharnüb* is massaged vigorously to remove warts.

Head: Mouth wash with the decoction of *kharnüb* is very useful in odontalgia.

Food: The fresh Syrian *kharnüb* is unsuitable for the stomach and is not properly digested. The dry one is slow to digest and assimilate. Galen wished that it would have been better if this fruit was not available to us but might belong to other places (because of its unsuitability). The *yanbüt* (also a *kharnüb*) is good for jaundice.

Excretion: Sitzbath in the decoction of *kharnüb* strengthens the anal muscles. It is diuretic particularly when preserved in "condensed" grapes. The fresh Syrian *kharnüb* relaxes the bowels while the dry one causes constipation and proves to be useful in diarrhoea. The Nabatean *kharnüb* is beneficial in cases of excessive menstrual discharge both when taken orally or as a pessary. *Yanbüt* (*kharnüb*) is useful in gripes and diarrhoea.

14. *Khur'* Excrement *Faeces*

Nature: Excrements are discussed in the chapter of *zibl* (dung, faeces).

Properties: All kinds of excrements are warming, dissolving and desiccant.

15. *Khazaf*

Oven Clay

Porcelain clay

Properties: Clay and particularly the oven clay is desiccant and detergent. Most attenuant clay is the clay of the sea crab. Brick clay resembles a blood-stone in properties.

Cosmetics: The clay of sea-crab is desiccant, cleanses freckles and pityriasis.

Swellings: A *qairūfi* (a kind of ointment) is made from it to be used in scrofula.

Ulcers: Clay ointment has a good healing effect. It is useful in ulcers and cleanses scabies particularly the clay of sea-crab.

Joints: Painting of oven clay is useful in gout.

Eye: Use of oven clay, admixed with rock-salt, is beneficial in pterygium.

16. *Khas*

Lettuce

Lactuca scariola Linn.

Nature: The wild variety of lettuce resembles black poppy in properties.

Temperament: According to Galen garden lettuce is not more than but similar to that of the ponds water in coldness. Its moisture is thicker than that of *silq* i.e. beet. It is more attenuant than the moisture of country mallow. It is said that in respect of its moistening and drying properties, it stands in between cabbage, goose foot and blite. However in my opinion to describe lettuce as less malnutritious because of its coldness in the third degree, is not correct. Its coldness appears to be in the second degree.

Properties: It has neither detergence nor astringence because of the lack of saltiness and acidity. I shall explain it thus: the blood, produced by it, is better than that produced by beans. Lettuce is most nutritious in decocted form. It is useful in preventing ill effects caused by frequent change of waters. Unwashed lettuce is superior while washed lettuce is flatulent. All the beans exhibit similar change in properties on washing. Lettuce is quickly digested. When used alongwith (alcoholic) drinks, it checks excessive intoxication. The wild variety of lettuce has properties similar to that of black poppy.

Swellings: Its *ṭilā* is useful in hot swellings and erysipelas particularly when the ailments are not acute and severe.

Joints: Its plaster is beneficial in sprain.

Head: Lettuce is soporific. It cures insomnia when taken in boiled or unripe form. Similarly it is useful in delirium and sun-burns in the head region. It is a drug meant for removing the obstructions.

Eye: The latex of wild lettuce clears the corneal ulcers. Garden lettuce latex possesses similar properties. A plaster is made from it to be used in hot conjunctivitis. The latex of wild lettuce is useful in *fistula lachrymalis* but its constant use has a tendency to darken the eye.

Chest: It has a considerable softening effect on the chest.

Food: Lettuce is useful in thirst, and feeling of hotness and burning in the stomach. The garden variety is good for the stomach and quick in digestion. When taken with vinegar, it promotes appetite and proves to be useful in jaundice.

Excretion: The seeds of lettuce reduce semen, suppress libido and are useful in cases of frequent nocturnal emissions. Its leaves are less effective than seed in this respect. The latex of lettuce, when taken half *dirham* (1.75 gm) with water, evacuates aqueous chyme. The latex of a big plant of garden lettuce resembles that of wild lettuce in properties. Lettuce causes neither constipation nor relaxation of the bowels. This is because it does not possess salty, acrid or detergent properties. It is diuretic, lactagogue and emmenagogue.

Poisons: The latex of wild lettuce is taken in cases of tarantula bite and scorpion sting.

17. *Khas al-ḥimār* Dyer's bugloss *Onosma echiioides* Linn.

Nature : *Khas al-ḥimār* resembles the downy, blackish, numerous and thin leaves of lettuce. Its leaves emerge very close to the root and are seen standing on both of its sides. The colour of the root is reddish. Contact with it makes the hand and the earth red. The root is composed of earthy and aqueous substances. As a matter of fact it is nothing but *shanjār* which has been discussed.

Choice: The yellow kind is stronger and white kind is aqueous and weak.

Temperament: It is hot and dry in the beginning stage of the second degree.

Properties: Dyer's bugloss is detergent, deobstruent, attenuant and desiccant; its flower is stronger in this regard. The temperaments of its root and seeds are similar; the root is stronger particularly when dry. Paulos states that it has some extracting power and thus it helps in the expulsion of chorion from uterus.

Swellings: It is useful in hard swellings wherever they may be.

Ulcers: When applied in the form of *qairūṭī*, it heals up the wounds and its water with *qairūṭī* also has the same effect.

Joints: The plaster of its root is applied on gout and with vinegar on sciatica.

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Head: Sniffing of its extract cleanses the head. It is used with honey or as an epitheme in stomatitis.

Eye: The dry Dyer's bugloss removes scars from the eye and also thickens the ophthalmic layers.

Food: It cleanses the liver. Oral intake or external plaster of this drug, preserved in vinegar, is useful in splenic diseases.

Excretion: It is highly emmenagogue. It expels the dead foetus and kills the live foetus. The use of its pessary or sitz bath in its water, proves to be beneficial in hard swellings in the uterus. It is a strong emmenagogue for which it may be used as a pessary or orally in a dose of one *mithqāl* (4.5 gm). It is also used as a *qairūṭī* in anal rupture.

18. *Khīrū dār* Galingale *Alpina galanga* Willd.

Nature: According to Ibn Māsarjawaih it is *khūlanjān* (*Alpina galanga*).

Temperament: Galingale is hot and dry.

Properties: It is dissolving and liquefying.

Excretion: Galingale is useful in colic and nephralgia. It also increases sexual desire. Its main efficacy is, however, for nephralgia.

19. *Khashkhāsh* Poppy seed *Papaver somniferum* Linn.

Nature: There are various kinds of poppy seeds, (a) garden poppy (b) wild poppy (*glayukion*), (c) black poppy and (d) horned poppy. The latter is also called *al-bhahrī* having curved seeds. Another kind is spotted poppy which is also called *hiraqlī*.

Choice: The best and safest kind of poppy is the white poppy. The pods of all kinds of fresh poppy must be powdered and thereafter tablets should be made which are stored for future use.

Temperament: The garden poppy is cold and dry in the second degree. The black poppy is cold and dry in the third degree. It is said to have similar properties in the fourth degree.

Properties: All kinds of poppy are cooling and generally they have no nutrition value. The black poppy is inspissant and desiccant. The horned (sea)-poppy, the seeds of which are curved like the horns of an ox, is most detergent and erosive. The flowers of horned poppy remove the spots of eye ulcers.

Swellings: All the kinds of poppy, except horned poppy, are painted on erysipelas.

Ulcers: The leaf of horned poppy is useful for dirty ulcers. It erodes the excessive flesh due to its detergent and removes slough.

The flowers have a similar effect. The drug is not suitable for easily visible ulcers because of its being excessively detergent. A plaster, made with olive oil, is applied on ulcers to remove the slough.

Joints: Painting of horned poppy with milk is useful in gout. Oral intake of the roots of glayukion (wild poppy) decocted in water till the original quantity is reduced to half, is useful in sciatica.

Head: Poppy seeds are somniferous and anaesthetic specially the black poppy. It induces sleep even when used as a suppository. It stops catarrh. It is applied as a plaster on the forehead of patients of insomnia. Similar action is observed when a douche of its decoction is given. The spotted poppy induces vomiting and thereby proves useful for epileptics in a dose of one *iksōnāfin* (12 gm) administered orally with water-mead. When the head is anointed with its oil in combination with rose oil, it gives relief in headache. However it is better to avoid its use as far as possible. When its decoction is instilled in the severely aching ear, it relieves of the pain.

Eye: The cold poppy relieves of the pain when it is used in the case of severe ophthalmalgia. It is advocated only in urgency because it is dangerous as we have stated in the properties of opium. The harmful effects are reduced if it is given in combination with some antidotes.

Chest: Poppy seeds are useful in hot cough, chest congestion and haemoptysis. A lincture made from it is also very useful particularly when prepared with acacia and the extract of salsify. According to Ibn Māssah black poppy seed cleanses the chest while the husk apparently complicates haemoptysis. All the seeds of poppy are expectorant.

Food: Poppy seeds are useful in congestion of fluids in the stomach. The roots of horned sea poppy are decocted in water till its original quantity is reduced to half. This is useful in hepatic diseases and also in persons having thick humour accumulated in abdomen. Spotted poppy induces vomiting. The wild poppy seeds are said to be similar in action.

Excretion: The black and white poppy stops chronic diarrhoea. For this purpose it is powdered mildly and taken with black and acrid drink. Though it is not devoid of purgative power, concurrent intake of water removes the undesirable effects. An enema of its well cooked decoction is useful in dysentery. Its seeds, if taken orally with honey water, cause relaxation of the bowels. Oral intake of one *iksōnāfin* (12 gm) of spotted poppy induces vomiting. The seeds of spotted poppy evacuate immature phlegm. Similarly an Egyptian variety of poppy seeds are used with sweets and *īṭriyah* (a kind of sweet made

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from white and fine wheat flour). The seeds of garden poppy, if taken with honey, promote semen production.

20. *Khusa al-tha'lab* Fox testes *Orchis rubra*

Nature: Fox testes is a hard and sweetish drug.

Temperament: It is hot in the first degree and moist (in temperament) and possesses some superfluous moisture also.

Joints: Fox testes are useful in convulsions and distension of the posterior parts of the body and paralysis.

Excretion: It is useful in hysteria. It stimulates and proves helpful in strengthening the sexual desire specially when taken with wine. It may be substituted with *asqanqūr* i.e. skink (a kind of Egyptian lizard).

21. *Khusa al-Kalb* Satyrium *Orchis militaris* Linn.

Nature: Satyrium resembles the fox testes and is of two kinds; one being smaller than the other. Two pairs are found; one of them is held slightly higher and is soft while the other is lower in position and is thick. The other kind is bigger in size.

Properties: The bigger kind of satyrium has superfluous moisture.

Swellings: It dissolves phlegmatic swellings.

Ulcers: Satyrium cleanses ulcer, stops the spread of herpes; opens the mouth of fistula and heals malignant and corroded ulcers.

Head: It is useful in stomatitis.

Excretion: When a man consumes the bigger kind of satyrium, he produces only male children. If a woman consumes its smaller variety, she gives birth to only female children. It is said that the fresh drug stimulates the sexual power while the dried one weakens it. Moreover the two varieties nullify the actions of each other. This is the view which has been expressed with regard to the bigger and smaller kind of satyrium.

22. *Khusiah* Testicles *Testes*

Nature: Testicles are a kind of soft flesh of the animal organs.

Choice: The best kind of testicles are procured from young animals. The testicles of older goats, rams and oxen are indigestible. Cocks testes, particularly from fat birds are considered very suitable.

Properties: The testicles are not so good as the mammary glands except those obtained from fat cocks which are quite nutri-

tious. All kinds of testicles, whether digestible or difficult to digest, are very nutritious.

Food: Most of the testicles are difficult to digest but nutritious particularly those of large and fat animals.

23. *Khattāf* Swallow *Hirundu urbica*

Nature: Swallow is a well known bird.

Head: According to Dioscorides when the abdomen of the first offspring of a swallow is ripped open, two stones are found there. One of them is of one colour and the other is multicoloured. These two stones, if placed in a piece of dustless calf's skin and tied at the upper arm or the neck of an epileptic patient, are believed to cure the disease. Dioscorides claimed that he had himself tested this method and treated the epileptics.

Eye: Oral intake of swallow (flesh), strengthens the eye sight. Sometimes it is dried, pulverized and taken orally in a dose of one *mithqāl* (4.5 gm) administered as a syrup. Offspring of a swallow is burnt in a glass container and applied as a *kohl* (collyrium) with honey. The brain of swallow with honey is said to be useful in the initial stages of cataract. Bat brain has also similar property.

Chest: Rubbing with the ash of swallow on the palate of diphtheria patients proves to be useful. Swallow itself, when taken orally with water in dried and salted form, in a dose of one *darkhami* (4 gm), proves to be useful in diphtheria.

24. *Khiṭmī* Marsh mallow *Althae officinalis* Linn.

Nature: Some varieties of marsh mallow bear white flowers while some other varieties bear red flowers. Red flowers are most detergent. The name of the drug is derived from a Greek word which means "rich in benefits".

Temperament: Marsh mallow is moderately hot.

Properties: Marsh mallow is laxative, maturative, relaxant and dissolvent. Its seeds and roots are very potent, desiccant and attenuant.

Cosmetics: Marsh mallow is painted over pityriasis with vinegar and then the patient is exposed to sun-light. Its seeds are more effective in this disease.

Swellings: Marsh mallow softens and prevents swellings. It dissolves hematoma, matures furuncles and helps in relieving flatulent swellings and scrofula. It is used as a suppository with the gum of terebinth in uterine hardness. It is applied with sulphur on scrofula.

Joints: Marsh mallow mitigates joints-pain specially when it is

used with goose fat. It is useful in sciatica, trembling, tension and splitting of the medial muscle and the extension of nerves.

Head: Application of a plaster of marsh mallow is useful in swellings of the parotid glands.

Eye: Marsh mallow dissolves oedema and puffiness of the eyelashes.

Chest: Its seeds are useful in hot cough, evacuates sputum and stops haemoptysis by its astringency. The leaves are useful in mastitis and are incorporated in plasters for pleurisy and pneumonia.

Food: The gum of marsh mallow quenches thirst.

Excretion: The decoction of its roots, if taken orally, is useful in urethritis, burning sensation of intestines and inflammation of the anus. Its leaves are useful in severe diarrhoea. Suppository of its seeds with gum terebinth is useful in sclerosis and adhesions of uterus. The decoction of its seeds cleanses post parturition offscourings. Oral intake of a decoction of roots with wine, is useful in dysuria and calculi in urinary tract. Its seeds and gum cause constipation.

Poisons: If painted in the form of a liniment with vinegar and olive oil, it removes pain due to insect bites. Its decoction is applied in combination with good vinegar or wine to be used in the sting of honey bee. I believe that the beneficial effect is due to its local action.

25. *Khuffāsh* Bat *Maga Cheiroptera* Sps.

Nature: It is said that *shirzaq* is milk of bat. On the other hand some believe it to be bat's urine.

Temperament: *Shirzaq* i.e. bat's milk, is very hot and detergent.

Cosmetics: The oil of bat is said to control the mammary enlargement in virgin girls and prevents the growth of hair, but it is not correct.

Eye: The brain of bat is useful in the initial stages of cataract while its ash strengthens the eye-sight. *Shirzaq* is also useful in pterygium and corneal opacity.

26. *Khal* Vinegar *Acetum* Vinegar

Temperament: Vinegar is made of hot and cold substances. Both components are tenuous but the coldness is dominant. The vinegar which is pungent is hot while that which is not so pungent, is moist and cold. The coldness of the vinegar is reduced by boiling.

Properties: Vinegar is strongly desiccant. It stops inward infiltration of the matter. It is attenuant and erosive. Its oral intake or local use prevents hemorrhage. It prevents swellings and promotes

digestion. It is antiphlegmatic and suits the people having bilious temperament but is harmful in melanotic person.

Cosmetics: It is useful in blood spots (on skin). For this purpose it is painted with honey but its excessive use makes the colour of the body yellowish.

Swellings: Vinegar prevents swellings and creeping gangrene and cures erysipelas both when taken orally or applied as a paint. It relieves all kinds of creeping swellings, whitlow, herpes and erysipelas. For this effect it is used as paint.

Ulcers: Local application of a woollen pack soaked in vinegar stops the swellings of wounds. It is useful in creeping ulcers, scabies and ringworms and heals the burns more quickly than any other drug.

Joints: Vinegar is harmful for the nerves but is useful in gout if used with sulphur as a douche.

Head: Vinegar is useful in hot headache. For this purpose it is mixed with olive oil or rose oil and whipped to some extent and then a new piece of woollen cloth is soaked therein and placed on the head. It strengthens the gums. A mouth wash, or douche specially with alum, is useful in the weakness of teeth and to prevent their bleeding. Fumigation with it is useful in dysacousia and for strengthening the hearing faculty. It removes the obstructions of ethmoid bone most effectively and cures tinnitus.

Eye: Vinegar is smeared with honey to prevent dark patches but its constant use weakens the eye-sight.

Chest: Vinegar is harmful for uvula. Gargling with it prevents the flow of humours towards the throat and cures the collapse of uvula. It is sipped lukewarm in case of the presence of leeches in respiratory passages, chronic cough and orthopnoea.

Food: Vinegar is suitable for hot and moist stomach. It stimulates appetite and promotes digestion. All these properties are meant to tone up the stomach. Fumigation with vinegar dissolves dropsy but its regular use may lead towards dropsy.

Excretion: It causes coldness in uterus. Therefore after taking a mild enema an extra enema is also given with hot vinegar and salt in cases of creeping intestinal ulcers.

Poisons: Vinegar is applied on (insect) bites. It is useful as an antidote for opium and hemlock. The vinegar made from wild grapes with salt is useful in rabid dog bite. It may also be taken lukewarm following the ingestion of poisonous drugs with beneficial results.

27. *Khilāf*

Willow

Salix caprea Linn.

Nature: The leaves of willow, when plucked, yield a kind of gum.

Properties: The fruits and leaves of willow are astringent without causing much irritation but cause some desiccation. Its ash is also highly desiccant; its fresh plaster stops bleeding. When its leaves are broken, a kind of gum oozes out which is highly detergent and attenuant.

Cosmetics: Painting of willow ash with vinegar, removes the warts.

Ulcers: Plaster of willow is useful in bone wounds; particularly so when prepared from its fruits and leaves. Its ash, when painted with vinegar, removes herpes.

Head: The flowers and juice of willow relieve headache while the extract of its leaves is most suitable in suppurative conditions of the ear.

Eye: The fruits and juice of willow are applied in cases of injury of the pupil. Its gum is very useful in weakness of the eye.

Food: The juice of willow is useful in hepatic obstructions and jaundice.

Excretion: The fruits of willow are useful in haemorrhagic diarrhoea.

28. *Khamāfītūs* *Tecrium* *Teucrium chamaeophytis*

Nature: *Khamāfītūs* is also pronounced as *Kamāfītūs*. It has been discussed under the letter "kāf".

29. *Khamsah aurāq* Five-leaf-grass *Patentilla reptans* Linn.

Nature: *Khamsah aurāq* is also called *banṭāfīlūn* that has already been described.

30. *Khamir* Yeast *Saccharomyces cerevisiae* Meyen.

Nature: Yeast is hot and dry. Its moistness depends on the abundance or lack of its salt and borax content.

Properties: It has the power of detergence due to its having the properties similar to salt, borax and wheat. Its cooling power is due to its sourness. It absorbs the matters from remote parts of the body towards the surface and then dissolves them away.

Joints: Yeast is plastered in cases of pain in ventral parts of the foot.

31. *Khanāfis*

Beetle

Blatta

Head: Ear drops of oil, in which the beetle were boiled, are useful in otalgia. Powdered beetle bodies exhibit similar effects.

32. *Khuntha*

Asphodel

Asphodelus tenuifolius Cav.

Nature: The leaf of asphodel is similar to that of Syrian leek. Its stem is smooth and bears flowers. The roots are round like oak and have a pungent taste.

Temperament: Asphodel is hot and dry. Some other physicians consider it to be cold and moist but this is not correct.

Properties: Asphodel, specially its burnt root is detergent and dissolvent. In burnt form, it becomes warming, desiccant and dissolvent but its root is more effective. Its potency is similar to that of cuckoo-pint (*Arun maculatum* Linn.).

Cosmetics: Asphodel, specially its ash, is useful in alopecia and alopecia furfuracea. When the affected part is soiled with its ashes by the patient followed by a sun bath it proves to be useful in pityriasis alba.

Swellings: The root of asphodel with the dregs of wine forms a good local application for all kinds of glandular swellings and furuncles. If plastered with flour of barley, it relieves hot swellings in the initial stages.

Ulcers: Application of roots, mixed with the dregs of wine, are useful in malignant and dirty ulcers.

Joints: Asphodel is also useful in muscular fatigue and sprains.

Head: If the extract of asphodel alone or mixed with frankincense, honey, wine or myrrh is instilled in the ear, it prevents pus formation. Instillation in the ear opposite to the affected side, relieves molar pain.

Eye: The extract of its root is useful for the eye.

Chest: It cures pleurisy and cough. For this purpose a dose of one *darakhmi* (4.5 gm) is taken with wine. Oral intake of its roots with dregs of wine, is recommended in mastitis.

Food: It is beneficial in cases of jaundice.

Excretion: Asphodel is diuretic and emmenagogue. Its fruits and flowers, when taken orally with wine, are purgative. A plaster made from its roots with the dregs of wine, is good in testicular swellings.

Poisons: It is taken three drachm (13.5 gm) in the cases of insects bite. The flowers are particularly useful in scorpion and centi-

ped bites. For this purpose it is taken with wine though it may cause loose motions.

33. *Khandarūs* Roman wheat *Triticum dicocum* Schrank.

Nature: *Khandarūs* is a variety of Roman wheat.

Temperament: The nourishment, gained from it, is not much. It is colder in temperament than that of (common) wheat. It is however, very good, strengthening and rich in quality.

34. *Khūkh* Peach *Prunus persica* Batch.

Temperament: Peach is cold in the last phase of the second degree, moist in the first degree but not in the last degree.

Properties: The moistness of the peach putrefies it quickly. It is laxative and, somewhat astringent. It stops the flow of matters. Unripe peach is also astringent.

Cosmetics: Local application of juice of its leaves removes the lime-like odour of the body.

Head: The drops of the juice of its leaves kill the ear worms. It is also useful in hot or cold migrain and otalgia.

Food: Ripe peach is good for the stomach and serves as an appetiser. It should not be taken after consumption of any thing else otherwise it would spoil the thing taken earlier. It must, therefore, be taken before meals. The dried peach is slow to digest and is not good for stomach. It is however, considerably nutritive.

Excretion: To kill abdominal worms the umbilicus of the patient is painted with a paste of its leaves. If the extract of its flowers or leaves is taken orally, it also acts in the similar manner. Ripe peach is laxative while the unripe one causes constipation. Some physicians state that it stimulates sexual desire but this may be possibly true only in individuals having dry and hot bodies.

35. *Khūlanjān* Galingale *Alpina galanga* Willd.

Nature: Galingale is composed of pieces of root intertwined with each other, reddish black in colour, pungent in taste, pleasant in smell and light in weight. It is obtained from China. According to Māsarjawaih it is nothing but *khisrū dārū*.

Temperament: It is hot and dry in the second degree.

Properties: Galingale is attenuant and dissolving of gases.

Cosmetics: It improves the odour of the breath.

Food: It is good for the stomach and promotes digestion.

Excretion: Galingale is useful in colic, nephralgia and is helpful to (maintain normal) sexual desire.

Substitute: Equal weight of clove bark acts as its substitute.

36. *Khiār shambar* Purging cassia *Cassia fistula* Linn.

Nature: There are two kinds of purging cassia. One is *kābulī* and the other is *misri* (Egyptian).

Choice: The best kind is obtained from the brighter and oily stalks. Such stalks are very bright and smooth.

Temperament: It is moderate in hotness and coldness but it is also moist.

Properties: It is dissolving and laxative.

Swellings: Purging cassia is useful in hot visceral swellings. It is specially beneficial in the swellings of throat when gargled with the juice of garden night shade. When it is painted on the hard swellings, it proves to be quite useful.

Joints: Purging cassia is painted on gout and painful joints.

Respiration: It is useful in diphtheria; when used as a gargle by the drug soaked in fresh coriander water with the mucilage of the seeds of *ispaghula*.

Food: It cleanses (the foul humours of) the liver and is useful in jaundice and hepatalgia.

Excretion: It causes relaxation of the bowels and evacuates the burnt bile and phlegm. It is a convenient purgative and proves to be suitable even for pregnant women and relaxes their bowels.

Substitute: Manna in half of its quantity, the pulp of dried grapes raisin in triple of its quantity and 1/8 quantity of turpeth act as its substitutes. The dried grapes raisin can be substituted by the rob of liquorice.

37. *Khair buwwā* Lesser cardamom *Eletaria cardomomum* Maton.

Nature: Lesser cardamom is a small grain-like *qāqla* which is procured from the lower part of India (i.e. South India).

Temperament: It is hot and dry in the third degree.

Properties: It is like the cloves in potency having detergent and attenuant properties. The cloves are more attenuant than *qāqla*.

Food: It is good for the stomach and 'cold' liver. It is, however, a better food for the stomach than *qāqla*. It also stops vomiting.

Letter Dāl

1. *Dādhi* Judas tree (seeds) *Hypericum perforatum* Linn.

Nature: *Dādhi* is a seed resembling barley but its flower is larger, thinner, blackish or dark-coloured and bitter in taste.

Temperament: According to Ibn Māsawaih it is cold but it would be more correct to describe it as hot and dry in the second degree.

Properties: *Dādhi* is astringent and constipative. Its astringency prevents the *nabīdh* (a kind of light wine) of dates to become sour.

Swellings: *Dādhi* is a very softening drug for hard swellings.

Head: It produces giddiness.

Excretion: It causes constipation. Sitz bath in its decoction is very useful in proctalgia and proctoparalysis. Two *dirham* (7 gm) of *dādhi* is powdered, mixed up with olive oil and applied for having beneficial effects in piles.

Poisons: It is useful against all kinds of poisons.

Substitute: The substitute of *dādhi*, for dissolving hardness, is *Kūr* to be taken 2/3 of its weight, (i.e. false-bidellium) with juniper berry equal to half of its quantity. The latter should not be prescribed for pregnant women.

2. *Dār shisha'ān* Box myrtle *Myrica nagi* Thumb.

Nature: Box myrtle is a thick and thorny plant used by some druggists to dye the oils. It is heterogeneous in composition. Its bark is pungent, flower is of intense smell while the wood is acrid and somewhat cold. Thus it is a substance that possesses various properties. It is a warming drug because of its pungent property due to its astringence. Some physicians consider it to be the root of Indian spikenard but it is not correct.

Choice: The best box myrtle is thick, having a bark with a purple-red interior and pleasant in smell and taste. The variety which is white and tasteless is inferior.

Temperament: It is hot in the first degree and dry from the last phase of the second upto the third degree. Some (people) think that box myrtle is comparatively dry than other (myrtles). It is dry in the first degree while others believe it to be cold.

Properties: Box myrtle is dissolvent and astringent. It dissolves gases, stops secretions and bleeding and removes putrefaction.

Ulcers: It is useful in creeping and putrid ulcers.

Joints: It is specially useful in the atony of nerves.

Head: Box myrtle is good for use in cases of ozaena. For this purpose it is used as a wick. Its decoction is taken as mouth wash in case of stomatitis as well as for the protection of teeth.

Chest: A decoction made of box myrtle, is useful in haemoptysis.

Food: Box myrtle is also useful in flatulence.

Excretion: The decoction of box myrtle causes constipation. It removes the flatulence of intestines and dysuria. It is used as a suppository for removing the foetus. Sprinkling of this drug is useful in hardness and the spreading ulcers of perineum and male organ.

Substitute: The substitute of box myrtle is Nabatean carob amounting to two-third of its quantity. For optimum beneficial effect on nerves, equal quantity of Indian valerian and half quantity of doronic and fruit of tamarisk should also be taken as its substitute.

3. *Dār šini* Cinnamon *Cinnamomum zeylanicum* Blume

Nature: Cinnamon is a well known drug. It is of various kinds bearing different names at different places. Some of them are: (a) the variety which is blackish, mountainous, thick and small is considered better; (b) another variety is white, soft inflated and has roots without rind; (c) the black and smooth variety, bears a few knots; and (d) a greenish variety which has an odour resembling cassia bark. Its rind is similar to that of cassia bark i.e. red. The potency of this variety can be retained for a longer period specially when powdered and made into tablets using wine. Another variety of cinnamon called 'false' cinnamon has mild odour. This kind of cinnamon is hard and its potency is weak. The oil is extracted out of it.

Choice: The best variety of cinnamon is that which is pleasant in odour and pungent but not irritant in taste. It is uniform in colour. According to Dioscorides the best variety is black, brownish or red in colour, smooth and closely attached to its stalk. It has some sweetness, saltiness and irritation. It is not much fragile. Its odour dominates all other odours. There are some inferior varieties of cinnamon such as (a) one having an odour similar to those of rockmoss, olibanum or cassia bark; (b) another one which possesses a bad smell like that of white variety having decayed roots and (c) similarly the variety which has twisted, smooth and hard roots is also inferior in quality. The potency of cinnamon is retained by powdering and making its tablets. It will however, tend to decrease after fifteen or even less years. Only such cinnamon should be selected which is on a single root. Its crumbs are often adulterated.

Temperament: It is hot and dry in the third degree.

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Properties: Cinnamon is highly attenuant, absorbent and deobstruent. It removes various putrid, decaying and ichorous properties originating from corrupt humours. Its oil is very hot, liquefying and solvent.

Cosmetics: It is painted on lenticular reddish-black pigment spots of the skin. In case of acne it is painted with vinegar.

Ulcers: It is good to be used in ringworm and ulcers.

Joints: The oil of cinnamon is a wonderful drug for chorea.

Head: It is useful in coryza. Its oil causes heaviness of the head. It purifies the brain by absorbing the fluid from it. This drug relieves the ear of pain as such or as an ingredient of (compound) medicines meant for the ear.

Eye: It is useful in conditions of dim and dark vision both when taken orally or used as a *kohl*. It removes thick fluids from the eye.

Chest: Cinnamon is an exhilarant. It is useful in cough and it clears the chest congestion.

Food: It removes hepatic obstructions and strengthens liver and stomach. It removes fluids from the stomach and proves to be useful in dropsy.

Excretion: It is useful in uteralgia, nephralgia, uteritis and nephritis. To curb excessive action and dispersion, it is mixed with some olive oil, wax and the yellow of an egg so that it may not produce hardness in uterus and kidneys. It is diuretic and emmenagogue and induces abortion. It is useful in piles when taken along with caraway. Its oil is useful in uteralgia if the intensity is diluted by mixing it with olive oil and wax. It is a quick healer acting by its excessive potency of dispersion.

Fever: Cinnamon is beneficial in shivering fever particularly when its oil is used as a massage.

Poisons: It is also useful in poisoning due to insect bites. It is plastered with myrrh in cases of scorpion bite.

Substitute: The barks of astringent cassia, cubeb or juniper berry in its two fold quantity act as substitutes of cinnamon.

4. *Dār filfil*

Long pepper

Piper longum Linn.

Nature: Long peppers are quite small like fingertips in size and resembling the shedding flowers of willow in shape. They are, however, relatively smaller. The drug is hard and dense with a pungent taste like that of (common) pepper. It is the first fruit of pepper plant so it has more moisture. When taken orally for the first time it does not cause irritation.

Food: It dissolves the swellings of spleen when applied to it along with some strong drugs like lime.

7. *Dajāj-wa-duyūk*

Poultry

Nature: The hen and cock are both well known. Broth prepared from (the meat of) aged cocks has various properties which we shall discuss later. The method according to Galen is that the birds should be suspended for some time after the slaughter. The cocks should be made to run till they become wet with perspiration and fall down and thereafter they should be slaughtered. After that all the viscera from the abdominal cavity should be removed. It should then be stuffed with salt, stitched and cooked in two *qisṭ* (3.24 litres) of water till it is reduced to three *qūṭūlāt* (96 gm). Now this water (broth) should be consumed in one sitting. There are many more points in this respect which will be mentioned in their respective places.

Choice: Rhupos states that the best cock is that which has not croaked as yet while the best hen is one which has not laid eggs so far. Aged hen is considered inferior.

Temperament: The fat of chicken is hotter (in temperament) as compared to the meat of an adult hen.

Properties: The testes of the cocks have a very good chyme which is digested quickly.

Joints: The above mentioned type of the broth of the cocks is suitable for the patients of chorea and arthralgia. It must be prepared cooking with common polypody, dill and salt in twenty *qūṭūlī* (640 gm) of water till it is reduced to its one third or one fourth in volume.

Head: The meat of young hen strengthens intellect. The brain of the hen stops epistaxis originating from the cerebral membrane.

Chest: The soup prepared from the flesh of cock, as described earlier, is useful in asthma. Hen's meat clears voice. The soup obtained from an aged cock is useful in all the above mentioned diseases, specially when taken orally with dill and safflower. Chicken soup relieves burning of the stomach.

Food: Cock soup is useful in gastralgia caused by gases.

Excretion: Soup made from aged cocks' flesh is very useful in colic, if taken with dill and common polypody. The meat of a young hen increases the quantity of semen while its soup evacuates black bile if taken with common polypody and if taken with safflower, it purges out phlegm. It is also cooked with astringent drugs to be used in abrasions. In cystic ulcers, it is used with milk.

Fevers: Cock soup is useful in chronic fevers.

Poisons: Local application of freshly removed heart from the chest of a cock or a hen on the insect bite with necessary replacement at suitable intervals, prevents the spreading of poisoning effects. Sipping of its decoction with dill and salt, induces vomiting in cases of poisoning.

8. *Dukhān*

Smoke

Nature: Smoke is an earthy and thin substance. According to its nature it is of various kinds and all the kinds are desiccant due to their earthy substance. Moreover they have some fieriness.

Choice: The strongest smoke is the smoke of tar. Other kinds of smoke come next in the following order: (a) the smoke of fresh pitch (b) the smoke of storax (c) the smoke of myrtle (d) the smoke of olibanum and (e) the smoke of terebinth. It seems that the smoke of bitumen is possibly the strongest.

Properties: The smoke is a thin and earthy substance which is also maturative and dissolving.

Eye: The smoke of olibanum and terebinth is included in the drugs used for ophthalmic ulcers. It prevents the growth of hair (in the eye), tarsitis, corroding, lacrimal fluids without conjunctivitis and ulcers in the canthus.

9. *Durrāj*

Francolin

Francolinus perdicinae

Nature: Francolin is a well known bird.

Choice: The meat of francolin is superior to that of partridges and ring-doves. It is, however, more attenuant and desiccant than the meat of pheasant, but is lesser in hotness.

Head: The meat of francolin enriches the brain and intellect.

Excretion: The meat of francolin increases semen.

10. *Dirdār*

Elm (tree)

Ulmus composteris Linn.

Nature: Dioscorides stated that elm is a plant resembling willow called by the people of Syria as *dirdār*. Irāqī people have given it the name of *Shajarah al-baq*. It has some inflated pericarps like that of pomegranate which contain some fluid. The latter turns, aftersome time, into a bug which comes out when the pericarps burst. Similarly when the fluid, contained in the pericarp, dries up there appears a bug-like insect. The leaves of *dirdār* are edible like the common vegetables.

Properties: It is astringent and detergent. The bark and root have similar properties.

Cosmetics: The fluid of its pericarp cleanses the face and its fresh bark, if applied with vinegar, is useful in leukoderma.

Ulcers: Local application of its bark bandaged on wounds and injuries, cures them. Similarly the leaves, barks and buds are suitable for treating abscesses. The decayed and scattered barks and a flour-like substance emanating therefrom prevents the spreading of malignant ulcers particularly when used with equal weight of anise kneaded with its decoction.

Joints: Fractured bones are fomented with a decoction of its roots and leaves.

Excretion: The thick bark of *dirdār*, if taken orally one *mithqāl* (4.5 gm) with the decoction or cold water, evacuates phlegm.

11. *Durdī*

Dregs of wine

Tartar

Choice: The best and safest dregs are the dregs of old wine. Next in order are those which are similar to it. The dregs of vinegar are very potent and they should be scalded lightly after drying by a process similar to the scalding seafoam in an earthen pot or kettle. The excessive scalding of the dregs makes them white and ready to be used. Similarly all kinds of dregs should be used immediately after scalding otherwise they become weak in quality. It must be kept in a closed container which is not exposed to air. Sometimes it may be washed by copper sulphate.

Properties: The dregs of vinegar are strongest (in action), possessing detergent and astringent properties. The scalded dregs are more caustic and putrefactive as compared to their other qualities.

Cosmetics: The scalded dregs, mixed with pine resin, may be applied to the nails which have become white.

Swellings: The un-scalded dregs are good for oedema whether taken exclusively or with myrtle. These dregs subside the pimples having no ulcers.

Chest: The un-scalded dregs prevent the inflammation and bloody congestion of the breast.

Food: The un-scalded dregs prevent the flow of matters towards stomach.

Excretion: The un-scalded dregs, if plastered externally on the uterus, stop excessive bleeding and menses.

12. *Darūbaṭāris* Male fern *Dryopteris filixmas* Linn.

Nature: Male fern is found entwined round old oak trees. It resembles *sarkhas* (another variety of fern of either sex) but is smaller in size and less scarifying. Its roots are entwined with each other and have some sweetness, pungency, bitterness and astringence in addition to putrefaction.

Temperament: It is strongly hot and desiccant.

Cosmetics: It causes thinning and removal of hair because of its bitter and putrefactive nature.

Joints: Some physicians believe it to be useful in paralysis, facial paralysis and arthralgia.

13. *Darūnaj* Doronic *Doruniam hookeri* Clarke

Nature: Doronic is a woody and rooty piece with length equivalent to a finger digit or smaller. Its inner side is white, while the outer side is hard, heavy and dusty.

Temperament: It is hot and dry in the third degree.

Properties: Doronic is a carminative drug.

Chest: It strengthens the heart and proves to be useful in palpitation.

Excretion: It removes gases from the uterus.

Poisons: If plastered with fig, or taken orally, it proves to be useful in all kinds of poisons, scorpion and tarantula bites.

Substitute: Long zedoary in equal weight and cloves in its two-third quantity may be taken as its substitutes.

14. *Diflā* Oleander Oriental *Nerium odorum* Soland.

Nature: There are two kinds of oleander (a) wild and (b) aquatic. The leaves of wild variety are like the leaves of purslane but are rather thinner. Its branches are long and spreading on the earth. There are some thorns near the leaves. It grows in wild places. The aquatic variety grows on the banks of the canals and its leaves are somewhat above the ground level. Its thorns are not visible. The leaves are like those of willow and almond and have a bitter taste. The upper part of the branches is relatively thicker. The buds are like red roses. The leaves are very rough with some hair like structures on it. The fruit is hard, deobstruent and stuffed with something like wool.

Temperament: It is hot in the last phase of the third degree and dry in the second degree.

Properties: It is strongly dissolvent. Spraying of its decoction in houses, destroys fleas and termites.

Ulcers: Oleander is very suitable for treating itches, scabies and exfoliation. The juice of its leaves acts alike.

Joints: It is used as a plaster for chronic dorsalgia and *mons veneris* pain.

Head: Its flowers are errhine and used as a paint for relief in head-ache.

Poisons: It is a poison but sometimes it is used orally with wine and common rue in order to remove the poisonous effects of insects. However, in my opinion it is dangerous. Though its flower is poisonous for men, large animals and dogs, yet it is said to be useful if taken with the decoction of common rue. According to Galen, if taken in six *qirāf*, (1.5 gm) it proves to be useful in hepatalgia. Its leaves facilitate voluminous discharge of menses and urine and also remove the stones.

15. *Dulb* Oriental plane tree *Platanus orientalis* Linn.

Temperament: The bark and the nut of oriental plane tree is highly desiccant and is cold in the first degree. Both the bark and unripe fruits are highly detergent and desiccant as well as subsiding agents for diphtheria.

Properties: Its leaves and unripe fruits are used to kill black beetles. Its bark is highly desiccant. The leaf powder is damaging to the senses.

Cosmetics: The bark of oriental plane tree has detergent and drying properties. It is useful in some cases of leukoderma.

Swellings: Its leaves are useful in phlegmatic swellings, arthritis and inflammation of knee.

Ulcers: Ash of oriental plane tree is applied in cases of ichthyosis and dirty wounds with a healing effect. Decoction of the bark with vinegar is useful in burns.

Joints: The leaves of oriental plane tree are a good remedy for arthritis and hot swellings specially of the knee.

Head: The bark, decocted with vinegar, is useful for odontalgia but its powder is harmful for the ear and hearing ability.

Eye: The powder of its leaves is harmful to the eye. However, when the eye is washed with the fresh leaves or plastered with the decocted leaves, it stops the catarrhal flow towards the eye and also proves to be useful in reducing the intensity of conjunctivitis.

Chest: The powder is harmful for the lungs and voice.

Poisons: The fresh fruit of oriental plane tree is used with wine

in insect bite. The nut with the pulp is also plastered in cases of stings and bites. I have stated elsewhere that it is a poison for black beetles which are killed with its leaves and bark.

16. *Dam*

Blood

Sanguine

Nature: The blood of human beings and that of a swine is similar in all respects to each other. The flesh of both (men and swine) also resembles to a great extent. Once a man is said to have been selling the human flesh as swine meat and this was detected by the discovery of human fingers in the lump of such meat. Some people state that one who desires to make an experiment with a particular substance on human blood, he should do so on swine blood. The latter is, however, weaker than the former but both are considerably identical. We shall give an account of the statements made about the blood. Though many of them are not reliable, only the reliable ones shall be given.

Choice: The blood which is used in medicines must be taken from healthy animals. It should neither be predominant in any humour nor in putridity.

Properties: Horse blood is caustic and putrefactive. It is difficult to be assimilated; particularly when it is very viscous.

Cosmetics: The blood of a rabbit is hot. Its local application is useful in pityriasis and freckles. Bats' blood is said to stop hair growth but it is not correct. The blood of green frogs and ticks are considered more effective in this respect. Blood taken from a young deer is stated to keep the breasts in proper shape but it is not a confirmed statement.

Swellings: Bear's blood quickly matures hot swellings. Coagulated blood of goat acts similarly when applied locally. Menstrual blood is painted to treat erysipelas. Hot blood taken from an ox is applied on hard swellings and while that taken from a rabbit is painted on acne.

Joints: Local application of menstrual blood when dropped on joints is said to be useful.

Head: If the hot blood of pigeon, dove and turtle-dove is dropped on the fracture of the skull and scalp wound, it prevents swellings caused by the fall. It is particularly effective when used with tepid rose oil. Galen stated that this property is due to its tepid nature and not due to any other factor. He added that if only tepid rose oil is applied without the blood, even then the above results would be achieved. This is also said for hens' blood. The blood of an ass stops cerebral epistaxis while the blood of tortoise with wine is useful

in epilepsy. This is also stated to be true about the blood of a lamb. The blood taken from a full grown lamb is said to be useful in epilepsy but this is not correct. According to Galen this property of blood appears because it is not strongly erosive. In my opinion if the blood of full grown lamb has been found useful in epilepsy by certain experiments, it cannot be attributed to its apparent potency but to a particular inherent property.

Eye: Blood of monitor and lizard strengthens the eye sight. Blood of chameleon prevents the excessive growth of eyelashes. It is said that the blood of green frog has similar characteristic but it has not been confirmed practically. The blood of pigeon, dove, turtle-dove, and ring-dove, particularly taken from wing vessels and roots of the feathers of these birds is applied in the form of drops in ecchymosis. According to Galen it is a must for this disease and then in this case no other drug is needed.

Respiration: The blood, meat and soup of the owl are very useful in asthma. Some physicians state that the blood of bat retains the shape of the breast but this is far from truth. According to some other physicians one *qirāṭ* (250 mg) of pure, fresh and hot blood obtained from a kid is taken with vinegar for 3 days for the same purpose.

Excretion: Some physicians recommend the use of menstrual blood as a suppository to prevent conception. Use of dried and boiled blood of sheep, goat and stag cures diarrhoea. Goat blood, if taken with honey, proves to be useful in dysentery while the use of dried blood taken from a kid, removes the kidney stones.

Poisons: Intake of dried blood, procured from a she-goat, stag and rabbit, with any kind of wine, acts as an antidote for poisonous effects of Armenian arrows. Similarly the blood of a rabid dog and that of a normal dog is useful in cases of dog bite. But it is the opinion of some quacks and surprisingly also of Dioscorides.

17. *Dam al-akhawain* Dragon's blood *Calamus draco* Willd.

Nature: Dragon's blood is a well known red substance.

Temperament: It is not exclusively hot. Some physicians consider it to be cold with dryness in the second degree.

Properties: It causes constipation and stops bleeding.

Ulcers: Dragon's blood heals fresh ulcers and wounds.

Food: It strengthens the stomach.

Excretion: It causes constipation and is useful in abrasion and anal rupture.

Substitute: According to some physicians lettuce acts as its substitute in all respects.

18. *Dimāgh*

Brain

Cerebrum

Choice: The best brain is procured from birds particularly the mountain birds. Among the animals, the brains of lamb and calf are the best.

Temperament: It is cold and moist.

Properties: It produces phlegm and thick humours.

Head: The brain of the hen is useful in cerebral epistaxis while the brain of a camel, when taken with the vinegar, is useful in epilepsy.

Food: When the brain is digested, it becomes nauseous and mars appetite. It must be taken with condiments and, if vomiting is desired, it should be taken after meals. It is slow to digest as it adheres to the stomach.

Excretion: It causes relaxation of the bowels. Duck brain is one of the ingredients of drugs used in the treatment of proctitis.

Poisons: Consumption of all kinds of brain is very beneficial in cases of poisoning and animal bites.

19. *Dand*

Croton

Croton tiglium Linn.

Nature: Chinese croton is similar to pistachio nut. The croton of Sijistān is like the red castor seed having blackish spots. Indian croton is smaller than the Chinese variety and bigger than that from Sijistān. The pulp of croton is muddy-yellow in colour. One of its chief characteristics is that its pulp is gradually reduced in quantity with the passage of time and finally disappears. It, however, lasts longer in its habitat.

Choice: Chinese croton is considered as the best variety. Sijistānī croton is inferior in quality, slow in action, troublesome and causing gripes. Chinese croton should be peeled off using a (iron) knife. It should never be touched with lips because it fades the natural colour of the lips and makes them like those of persons affected by leukoderma. When it is peeled off, there emerges a tongue-like thin structure nearly a half *habbah* (63 mg) in weight. These "tongues" must be removed before using the pulp.

Temperament: It is very hot.

Cosmetics: Evacuation induced by taking croton and with some softening drugs, keeps the hair black.

Excretion: Its excessive use causes diarrhoea. Its dose is about 200 mg. The drug purges out excess of fluids, black bile and

phlegm from the joints. It should be taken only in cold countries by cold tempered persons and must never be taken exclusively. Many people have ventured to take about two *daniq* (12 gm) of it, preceded by some corrective drugs. However, this will be suitable for persons having a strong temperament and strength to tolerate diarrhoea. For this purpose it should be powdered and mixed with starch and saffron. If it is used with any purgative, then it should not be mixed up with opium or any such strong drug. It may, however, be mixed up with turpeth, juice of fig, the extract of absinth, indigo seeds and saffron in two-fifth of its given quantity.

20. *Dūd*

Worm

Nature: Worms are also termed as kermes insect and *dūd al-ṣabbāghīn*. The potency of this drug is similar to that of white lead but the former is more tenuous and settling. Some physicians state that these worms are picked up from various sources including the oak tree.

Temperament: The fresh kermes insect is cooling and contains considerable dryness.

Properties: Kermes insect is the same that is called *dūd al-sabbāghīn*. It is purple in colour, desiccant and has no irritant effect. According to Galen it is moderately astringent.

Ulcers: *Dūd al-qirmiz* i.e. kermes insect is used in neural wounds in a powdered form along with wine, vinegar or honey. It is said that if the multilegged worms found under a particular kind of scorpion are taken in a dose of one *mithqāl* (4.5 gm), they cure malignant diseases like convulsions and tetanus.

Head: The multilegged worms, found under a particular kind of scorpion, are powdered with the peel of pomegranate and rose oil and then the drug is used as ear drops in ear-ache.

Chest: The red multilegged worms, which are found under the sea-scorpion, shrink when touched, but if applied to the palate with honey, they prove to be useful in diphtheria. Similar effect can be achieved by its oral use. It is also said to be useful in asthma and orthopnoea.

Food: These worms are also useful in jaundice if taken with wine.

Excretion: Intake of the multilegged worms, found under the *hubāb* (a species of serpent) and scorpion, alongwith wine, is beneficial in dysuria.

Poisons: Worms, found on vegetables, are useful in insect bite when applied as a powder.

Temperament: It is hot and dry in the second degree. Blue lily oil and jasmine oil are both hot and dry in the third degree. Nettle oil and carthum seed oil are hot in the first and moist in the second degree. Narcissus oil is hot in the second and moist in the first degree. Oils of yellow gilli flower and persian lilac are hot and moist in the third degree. Oils of bitter almond, vine twigs, rose, mandrake and quince are similar to each other in cooling and astringent properties. Chamomile oil is moderately hot. Dill oil is similar to it but is slightly more warming. Narcissus oil resembles dill oil in actions and properties. It has a strong smell; hence it is not suitable for the head unlike the dill oil. Violet oil is not astringent but it has some cooling properties. Oil of common rue is dissolving. We do not propose to deal with the method of preparation of these oils here, this we shall do in the pharmacopoeial part. Moreover it is not within the scope of present discussion to describe the compound oils, like the costus oil and boxmyrtle oil and also their procurement and uses. All these details shall be discussed in the pharmacopoeial part.

Properties: Almond oil, particularly the bitter almond oil, is deobstruent. Apple oil and quince oil have the property of astringency and cooling. Chamomile oil has a sedative effect in painful conditions. It removes dense matters and dissolves the gases. Oil of blue lily is softening and strengthening for the organs and it is maturative and sedative for painful conditions. The myrtle oil stimulates and strengthens the organs. It is more cooling than the quince oil and prevents the trickling of matters. The oil of common rue is a potent dissolvent of flatulence and it resembles the oil of bay tree. The former, however, is more warming. Both of them soothe chronic pains and dissolve gases. *Costus arabicus* oil is useful in various epidemic outbreaks (by purifying the atmosphere), turning the polluted and filthy air and stagnant water into fragrant and pleasant ones.

Cosmetics: The oil of bay tree is useful in alopecia. Myrtle oil strengthens hair roots as well as blackens them. Costus oil preserves the beauty of the hair. The almond oil, specially that from bitter almonds, if used with honey, root of blue lily and melted wax, is beneficial in facial wrinkles, freckles and other ugly marks. Its decoction is painted for beneficial effect in dandruff and crusts. Castor oil is good for lentigo and freckles. Fenugreek oil is very good for improving the complexion specially around the eye orbits.

Swellings: The almond oil is useful in the swellings due to sprains. The oil from blue lily is beneficial for and dissolvent of chronic swellings.

Ulcers: Castor oil is useful in thick pimples and scabies, fenugreek oil in favus and myrtle oil in ulcers. Costus oil expeditiously removes scabies and itch.

Joints: Almond oil is useful in sprains. Chamomile and blue lily oils are beneficial in fatigue while dill oil is good for the persons affected with cold.

Head: Almond oil is useful in throbbing headache tinnitus and "whistling" sensation in the ear. The bitter variety of almond oil has many beneficial effects. It is attenuant and is particularly useful for ear ailments e.g. obstructions, tinnitis and worms.

The rose oil is good to be used in encephalitis and in the initial stages of swellings. It strengthens the faculties of the brain and intellect. Because of its moderate temperament, Galen stated that the rose oil warms up the extremely cold body and cools down the hot body. In my opinion it is more likely to normalise the hot bodies than warming up the cold ones.

Oils of bay laurel and common rue are good to be used in chronic headache. Fenugreek oil is useful in dandruff. Castor oil is beneficial in cases of ulcers and swellings of the head and also in otalgia.

Alimentary Organs: Almond oil is a good remedy for splenitis but it is rather heavy for the stomach.

Excretion: Bath of nettle oil and carthum seeds oil are laxatives. Rose-oil relaxes the bowels and is helpful when there is some (humoral) matter which needs to be evacuated. It may also stop bilious diarrhoea. Castor oil serves as a purgative and expels tapeworms. Sweet almond oil is good to be used in nephralgia, dysuria, cystolith, cystalgia, uteralgia, uteritis and hysteria. Blue lily oil facilitates delivery and relieves uteralgia both ways, when taken orally or as an enema. Fenugreek oil is useful in cases of sclerosis of uterus, uterine abscess and mogitocia. Caster oil is useful in anal swellings uterine cramps and prolapse of the uterus and also in mogitocia.

Fevers: Chamomile oil is far better than rose-oil to be used in prolonged fevers while dill oil is good for shivering fevers.

Substitute: The substitute of balsam oil is fresh myrtle oil or oil from juda's tree seeds in equal weight alongwith the half quantity of coconut oil and one fourth quantity of old olive oil. The substitute of the oil of bay laurel is the oil of fresh asphaltum. Bay laurel oil acts as a substitute for blue lily. Carthum seeds oil is the substitute of nettle oil but it is weaker than the latter. The substitute of henna is the oil of sweet marjorum. Oils of water lily and violet are substitutes for rose oil. Radish or linseed oil is the substitute for castor oil but vice versa is not true.

25. *Dīnārwaīh* Dill *Anethum graveolens* Linn.

Nature: Dill is the same drug as *ḥaza* and *zūfrā*. They will be discussed in the chapter under the letter "Za".

26. *Diodār* Deodar *Cedrus deodara* Loud.

Nature: *Diodār* is a kind of juniper tree. It is also called *Ṣanobar al-hindī*. Its wood is similar to that of long zedcary. It has some bitterness. The latex of deodar is hot, pungent and dipsetic.

Temperament: The dryness of *diodār* is in the third degree which is more than its hotness.

Properties: Its latex is pungent, burning and has some astringency.

Joints: It is good to be used in relaxed nerves, paralysis and facial paralysis to such an extent that no other drug can match it in efficacy.

Head: It is useful in the cold diseases of the head, apoplexy and epilepsy.

Food: The milk of *diodār* (latex) is dipsetic.

Excretion: It dissolves kidney and bladder stones and causes constipation. If the patient is given a sitz bath in its decoction, it relieves the patient of the paralysis of the anus.

The letter 'Dhāl'

1. *Dharārīḥ* Spanish fly *Cantharides vesicatoria*

Nature: Spanish fly is an insect like bed bug and bigger than the fly having black spots on its red body. A kind of spanish fly found in wheat and breeding there, is considered hotter. It is better to store the flies in an earthen pot, the mouth of which is tied with a piece of neat and clean linen cloth. Afterwards the mouth of the pot should be made upside down and then the vapours of a mixture of refined and boiled "wine-vinegar" should be made to pass through it till the flies die. The dead flies should now be collected in a piece of linen and kept.

Choice: The most effective spanish flies are those which are multi-coloured having longitudinal yellow lines on their wings and also having some resemblance with cockroach in size. The varieties with one uniform colour are considered weak in action.

Temperament: According to some physicians the spanish flies are excessively hot but some other physicians opine them to be hot

and dry in the second degree. The latter statement appears to be correct.

Properties: The flies are intensely pungent, putrefactive and burning.

Cosmetics: They are used as a paint to remove warts. If a *qairuḥī* (a kind of ointment) made from the flies is applied, it proves to be useful in onychomycosis (whiteness of the nails) but such application may remove the normal nails. It removes pityriasis and leukoderma if used as a paint with vinegar. When painted, after being powdered with mustard, it helps in hair growth. Similar action is produced if the flies are cooked with olive oil till it becomes thick.

Swellings: If it is painted on the cancerous swellings it dissolves them.

Ulcers: Its paint is useful in scabies and ringworm.

Eye: Ibn Māswiah stated that it effectively removes pterygium.

Excretion: Some of the spanish flies are potent diuretics and are even useful in dropsy. They are also included in diuretic, emmenagogue and ecboic medicines without causing any harm. Some physicians state that one spanish fly should be taken orally by the patient who is suffering from ailments of the bladder if no other treatment is available. If taken in a dose of three *ṭasasij* (80 mg) orally, it causes ulceration in the bladder. Galen stated that the ulceration of the bladder by spanish flies is due to its property of bringing down irritant matters that found in the body as no organ is free from such matters.

Poisons: Some people believe that the wings and feet of the spanish fly possess contradictory properties if one is taken orally after the other. It is said that when it is taken in a dose of one *mithqāl* (4.5. gm), the body (of the patient) would be swollen and the urine would be transformed into blood resulting death on the same day.

2. *Dharīrah*

Chiratta

Swertica chirata Ham

Nature: Chiratta has been dealt with under the chapter *qaṣab al-dharīrah* but here we would like to discuss another aspect of its actions.

Ulcers: It is said that nothing is more useful in burns than chiratta with rose oil and vinegar.

Food: It is useful in the inflammatory conditions of the stomach, intestines, liver and also in dropsy.

3. *Dhanab al-Khail*

Horse tail

Equisetum arvense Linn.

Nature: 'Horse-tail' is a plant that grows in pits and ditches. It consists of two hollow, woody, hard, rough and knotty branches

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of red colour. Close to every knot, there are branches like the leaves of lemon grass. These branches are thin and dense and spread over adjacent areas from both sides. They resemble the tail of a horse. Its roots are hard.

Temperament: It is cold in the first degree and dry in the second degree.

Properties: It is astringent specially its extract is extremely desiccant without causing any irritation. Moreover it is very useful in cases of bleeding.

Ulcers: It wonderfully heals ulcers and wounds. Neural ulcers and wounds can also be cured by its use.

Joints: It is painted or plastered for beneficial effect in contusion of the middle part of the nerves. Moreover, it reduces the size of enterocele.

Food: It is useful in inflammations of the stomach and liver as well as in dropsy.

4. *Dhahab*

Gold

Aurum

Nature: Gold is a fine substance.

Temperament: It is moderate and tenuous.

Properties: The filings of gold are incorporated in the medicines for melanotic diseases. For the purpose of treatment and to cauterise the patient gold cautery is the best.

Cosmetics: In keeping in the mouth, it removes halitosis. It is used as a paint or syrup in compound medicines for alopecia and furfuracia.

Eye: It strengthens (improves) the eye (sight) if applied as a *kohl* (collyrium).

Chest: It is very useful in cardialgia and palpitation as well for those who are in the habit of self conversation, (a kind of melancholia) especially in initial stage.

Letter Rā

1. *Rātīnaj*

Pine resin

Colophong

Nature: Pine resin is a kind of gum obtained from pine tree.

Temperament: It is hot in the third and dry in the first degree.

Ulcers: It granulates hard parts of the body but causes pain in the soft parts. It cures ulcers if used with pomegranate flower and other ones having similar properties.

2. *Rāzyānaj* Fennel *Feoniculum vulgare* Mill.

Nature: Fennel resembles the seeds of celery. The larger seeds (of celery) are identical to the wild fennel but are weaker in potency. The smaller variety is stronger than the large wild fennel.

Temperament: The wild fennel is very hot and dry in the third degree while the garden fennel is hot in the second degree.

Properties: It removes obstructions.

Eye: Fennel strengthens the eye-sight; specially its gum is more useful. It is beneficial in the initial stages of cataract and also after the secretions appear in the eye. Democritus (494 B.C.) believed that the insects take fresh fennel as food in order to improve their eye-sight. Similarly the vipers and snakes rub their eyes against it when they come out from their places of hibernation to achieve improvement in eye-sight.

Chest: The moist kind of fennel particularly the garden fennel increases the secretion of milk.

Food: It is useful in cases of nausea and burning sensation in the stomach when taken with cold water but it is slow to digest and inferior in nutrition.

Excretion: Fennel is diuretic and emmenagogue. Its wild variety is particularly deobstruent; the wild and river fennel have some benefits for the kidney and bladder. The wild variety is specially useful in strangury and it helps in cleansing the women after child birth. It causes constipation when taken along with its root.

Fevers: Fennel is useful in chronic fevers and when taken with cold water, it proves to be useful in nausea and feeling of burning in the stomach during fevers.

Poisons: Its decoction with wine is useful in insect bite cases. Its root is powdered with water and painted over the bite of mad dog.

3. *Rāsīn* Elecampane *Enula helenium* Linn.

Nature: It is a kind of garden elecampane. There is also another variety having branches of one span up to a yard long. It spreads over the earth like wild thyme and the leaf of lentil. Its root is the most useful part.

Choice: A drink made from it is stronger and superior in all respects. If it is preserved with vinegar its hotness is reduced.

Temperament: It is hot and dry in the third degree. As it contains superfluous matter, its application does not warm up the body.

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Properties: Elecampane is useful in all kinds of cold pains, severe gas troubles and flatulence. It is a rubefacient and strong detergent drug.

Joints: It is useful in sciatica and arthralgia. Plaster of the root and leaf is useful in cold pains and contusion of the muscle.

Head: It causes headache but removes phlegmatic hemicrania particularly when applied as a douche.

Respiration: Licking it with honey is helpful as an expectorant medicine and it is very effective in this respect. It purifies the lungs when administered together with some linctus. It belongs to a class of drugs which are attenuant and strengthening for the heart. The method of its application is that 50 *mithqāl* (225 gm) of elecampane is mixed up with six *obōlusāt* (36 gm) of grapes juice and kept. It should, then, be taken after three months. This method of application clears the lungs and chest.

Excretion: The decoction of the root of elecampane is diuretic. A wine prepared from it has particularly the same effect. The person who is accustomed to take elecampane regularly will not suffer from frequent urination.

Poisons: Elecampane, specially the Egyptian variety, is useful in cases of insect-bite.

4. *Rāmak* Extract of galnut

Nature: *Rāmak* is an extract of galnut.

Temperament: It is cold and dry.

Properties: *Rāmak* is an astringent, attenuant and constipative drug. It stops the flow of matter towards the affected parts and brings down the temperature.

Food: Its intake with myrtle water strengthens the stomach.

Excretion: It causes constipation.

5. *Ri'ah* Lungs *Pulmones*

Properties: Lungs are less nutritive and tend to be phlegmatic.

Ulcers: Application of camel lungs cures abrasions caused by leather boots after they are heated. Pig lungs act similarly and also prevent swellings.

Chest: Fox lungs are useful in asthma if taken orally in dried form.

Food: It is easy to digest.

Excretion: It causes constipation.

6. *Rabītā'* A crab like stone _____

Nature: *Rabītā'* is a stone like crab.

Temperament: It is cold and moist in the second degree.

Properties: It is absorbent and detergent. It has a potency similar to that of crab.

Eye: It strengthens the eye-sight.

7. *Rabīthā* Sardine _____

Temperament: Ibne Māswaih states that it is warmer than the sand lizard.

Food: It is useful for stomach and dries up the fluids therein particularly when taken with common rue, black cumin, celery and olive oil.

Excretion: It is an aphrodisiac drug.

8. *Rittah* Soap nut *Sapindus trifoliatus* Linn.

Nature: *Rittah* is an Indian soap nut. Its fruit resembles that of hazel nut in size. A clattering sound is produced when two fruits are rubbed together. The kernel comes out after breaking the pericarp like a coconut.

Temerament: It is hot and dry.

Swellings: It is painted on scrofula with vinegar.

Ulcers: It is useful in scabies and itches (prurigo).

Joint: It removes the troublesome gases circulating in the posterior parts of the body.

Head: In case of facial paralysis its sniffing is very useful and, similarly, it is beneficial in hemicrania and headache. As a snuff, it is useful in epilepsy, giddiness, mania and melancholia. It has been successfully tested as a useful drug for facial paralysis when taken as a snuff for three consequent days. This treatment enables the fluid and phlegm to flow out profusely from the nostrils and the disease is cured within three days. During this process the patient of facial paralysis must be confined to a dark place. Soap nut is useful in conditions associated with immature gases also.

Eye: If applied as a *kohl*, it proves to be useful in cataract. The extract of the small soap nut, if sniffed with the water of sweet marjorum, is particularly useful in vascular keratitis and day-blindness. Moreover, its application with antimony sulphide is said to be useful in squint.

Alimentary organs: The meal prepared by it is very slow to digest.

12. *Rakhmah* Vulture *Pseudogyps bengalinis*

Head: Gall-bladder of vulture, together with violet oil, is instilled into the ear opposite to the affected side in case of hemicrania and otalgia. The children suffering from hydrocephalus are made to sniff it or it is used as ear drops in such cases.

Eye: Its gall-bladder, mixed with cold water, is applied as a *kohl* in corneal opacity.

Excretion: It is said that fumigation with excreta of vulture expels the foetus.

Poisons: Ibn Bitriq described the use of its gall-bladder, dried under shade in a glassware as a *kohl* in cases of snake bite. It should be applied in the eye of the affected side. I do not agree with his view. Some people state that they have found it to be useful in scorpion, snake and wasp poisons. If this is true it should be applied as an epithem.

13. *Raşāş* Lead *Plumbum*

Nature: Lead has already been mentioned under the heading 'Usrub'. It is a burnt lead. White lead and its other kinds will be discussed in the book of pharmacopoeia.

Choice: Its tenuous variety is called burnt lead or white lead.

Temperament: It is cold and moist.

Properties: Burnt lead possesses rarefying, attenuant and dissolving properties and also stops bleeding while the white lead is agglutinant and cooling. Its potency is similar to that of burnt copper sulphate; the dross of lead is equivalent to the burnt lead in potency.

Swellings: When it is dissolved in a wine or in any other cold extract, it proves to be useful in swellings.

Ulcers: Lead is useful in malignant and creeping ulcers. White lead fills up deep wounds with flesh and makes them cicatrizing.

Poisons: Rubbing with white lead is beneficial in the bites of marine scorpion and sea dragon. During the burning process it is necessary to take some safeguards against its smell.

14. *Raḡbah* Alfalfa *Medicago sativa* Linn.

Nature: *Raḡbah* is a drug called *qat* which has been dealt with under the letter *Qāf*.

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15. *Ra'ādah* Electric ray (fish) *Silurus electruans*

Head: It is said that when *ra'ādah* is placed on the head of the patient, the headache is relieved. Galen attributes this property to the fish when it is alive but, according to his experience, the dead fish does nothing. This fish, therefore, acts as a (local) sedative.

Joints: Paulos states that local application of a decoction of this fish in oil cures fresh cases of arthralgia.

Excretory organs: Application of its suppository constricts the prolapsed anus instantly and also removes the piles.

16. *Ra'y al-ibl* Camel's thistle *Echinops echinatus* Roxb

Temperament: Camel's thistle is hot, attenuant and desiccant in the second degree.

Properties: It is said that the poison of snakes and insects does not harm the camels because of their grazing on this herb which develops a kind of antidote in their bodies.

Poisons: It is taken orally in cases of insect bite.

17. *Ra'i al-ḥamām* Columbine *Jateorhiza palmata* Miers

Nature: Columbine is a herb bearing grains resembling myrtle grains. The former are, however, more dusty in colour. Its pulp is similar to that of peeled lentil in colour and somewhat sweet in taste.

Temperament: It is hot in the first degree as well as moist and dry in the second degree.

Ulcers and wounds: It heals up the wounds. Plastering it with vinegar, prevents the spread of malignant ulcers.

Swellings and pimples: It dissolves the phlegmatic ulcers.

Cosmetics: Its decoction blackens the hair.

Excretory organs: The decoction of its branches is diuretic and emmenagogue. Washing with it helps to expel the foetus and relieves the vaginal itching.

18. *Raqāqis* Satyrion *Satyrion minus*

Nature: It is said that satyrion is a Persian drug resembling garlic. It is found in pairs intertwined with each other and having split ends.

Excretory organs: It profusely increases the seminal fluid.

19. *Rimād*

Ashes

Cinder

Properties: All types of *rimād* are detergent and desiccant though their qualities may be different. Treated ash with water loses its detergent property and produces agglutinance and desiccation without causing irritation. Ash-water is grouped under putrefactive drugs; the most effective ash-water is that of fig and poisonous latex bearing plants. The detergence and desiccation of all other types of ash-water is less than those of the two mentioned above. Ashes of mazerion (*māzriyūn*) is most detergent and putrefactive. Ashes of some kinds of wood like oak is astringent and it stops bleeding.

Swellings: The ashes obtained from lizards is painted over scabies and ringworm.

Ulcers: Fig ash-water heals the malignant ulcers and it clears the excessive flesh from wounds. It is useful in deep and large wounds because it reaches and affects the decaying flesh. Moreover it regenerates fresh flesh and sticks well on cuts and wounds.

Joints: In cases of fall from a high place, the ash-water especially that of fig alone or together with some oil, is taken orally. In fatigue, however, it is applied or rubbed with some oil which induces perspiration. It is highly beneficial in neuralgia and paralysis.

Head: Ash-water, specially that from oak, strengthens the gums.

Eye: Ashes from mazerion (*māzriyūn*) improves the eye-sight.

Respiration: Mazerion ash is useful in cynanche specially when given with *dawā 'al-khṭāṭf*.

20. *Rummān*

Pomegranate

Punica granatum Linn.

Temperament: Sweet pomegranate is somewhat cold in the first degree and it also contains some moisture. The sour variety is cold and dry in the second degree.

Properties: The sour pomegranate specially its syrup checks yellow bile and prevents the flow of superfluous matters towards viscera. All kinds of pomegranate, including the sour variety, are detergent and astringent but the sweet variety is laxative. The nutrient content of these fruits, though less in quantity, is of high quality.

Cosmetics: Pomegranate seeds are painted with honey on whitlow.

Ulcers: The seeds of pomegranate are painted with honey on malignant ulcers and their calyx, particularly in burnt form, are applied to the wounds. The flowers of pomegranate are adhesive to wounds because of their hot property.

Head: *Rummān* with honey is useful in odontalgia and otalgia. It is also used as a nasal paint. Powdered seeds of pomegranate, are

mixed with honey and painted for beneficial effects in stomatitis. The sweet pomegranate, if decocted with wine then powdered and applied, is highly beneficial for inflammation of the ear. Wine of pomegranate and its concentrated juice, specially the sour one, is useful for treating the after-effects of intoxication.

Eye: The extract of sour pomegranate with honey is useful in pterygium. The extract of sweet or bitter pomegranate is mixed up with honey and kept in the sun for several days to be used in cases of burning sensation in the eye and hemeralopia (sunblindness).

Chest: The sour pomegranate causes roughness in the chest and throat whereas the sweet variety softens and strengthens the chest. When the seeds of pomegranate are taken orally with rain water, they stop haemoptysis. All the varieties benefit in cases of palpitation and "cleanse" the heart.

Food: The sour pomegranate is useful when there is burning sensation in the stomach. The sweet variety is suitable for the stomach because it has some astringent and attenuant properties. Sour pomegranate is harmful for the stomach; particularly its seeds are not suitable for this organ. Its *sawiq*¹ improves appetite in pregnant women. The concentrated juice of sour pomegranate has the same property. The seeds of pomegranate, if taken after meals by the patients suffering from fever, prevent the "ascent" of the feverish vapours (towards upper parts of the body). It is considered better to take it before meals. In this way it prevents the ascendance of matters from the lower parts of the body. The sour pomegranate is sometimes more useful for stomach than apple and quince but its seeds are less effective. The calyx of the pomegranate flower is its most astringent part. Generally all kinds of pomegranate, whether sweet or sour, are astringent.

Excretion: Both the sweet and sour varieties are diuretic but sour pomegranate has more diuretic property. The seeds of pomegranate with honey are useful in anal ulcers. The sour variety is harmful for the anus and intestines. The flour of roasted pomegranate seeds is useful in bilious diarrhoea and it strengthens the stomach. The root bark of pomegranate, if used with *nabidh* (a kind of immature wine), removes ordinary worms and tapeworms, both when taken as such or in the form of a decoction.

Fevers: Pomegranate with a sourish taste is useful in hot fevers and feeling of burning in the stomach. The sweet variety is, generally harmful to the patients of hot fevers.

¹ Flour of roasted wheat or barley.

21. *Rūbiān* Shrimps *Crangon vulgaris*

Nature: Galen stated that shrimp is, similar to the crab in all respects.

Temperament: Māsarjawaih stated that it is moderately hot and moist particularly before it is mixed up with salt.

Properties: Shrimp is a good nutritive but the old salted shrimp produces black-bile and severe itching.

Swellings: Galen stated that it softens hard swellings.

Food: Shrimp produces good nutriment.

Excretion: It increases the quantity of semen, stimulates sexual power, causes relaxation of the bowels and expels tapeworms.

22. *Ribās* Ribes *Rheum ribes* Linn.

Nature: Ribes is a plant which grows on mountains during the spring season and it possesses properties similar to that of unripe grape-juice and orange.

Temperament: It is cold and dry in the second degree.

Properties: It is refrigerant, styptic and anti-pyretic.

Swellings: Ribes is useful in plague.

Eye: If the extract of ribes is applied as a *kohl*, it proves to be useful for improving the eye-sight.

Excretion: It is useful in bilious diarrhoea.

Fevers: It is beneficial in measles, small-pox, plague and other epidemics.

23. *Raihān* Sweet basil *Ocimum basilicum* Linn.

Nature: Sweet basil is a well known plant having two kinds.

Excretion: If powdered and applied as a paint, it is useful in piles. An ointment prepared with its oil is useful in anal swelling.

Raihān Sulaimāni Basil of Solomon *Ocimum basilicum* Linn.

Nature: Basil of Solomon is a plant which is found on the mountains of *Isfahān*. It is similar to the fresh dill. Its leaves are said to resemble those of marsh mallow. It bears small flowers which spread over a tree similar to lablab. It seems there is some controversy in this regard. According to the other view it is *Jamsafrum* (Basil of Solomon) because common people, generally, believe that *Jam* is nothing but Solomon.

Properties: It is attenuant and desiccant.

Swellings: It is useful in erysipelas if painted with vinegar. It is also painted on phlegmatic swellings.

Ulcers: It is painted with vinegar on creeping ulcers.

Joints: It is an effective treatment for gout.

Head: It is useful in facial paralysis.

Excretion: Basil of Solomon is applied as a pessary in case of uteralgia.

Poisons: It is also painted on scorpion bite.

25. *Riwand* Himalayan rhubarb *Rheum officinale* Baillon

Nature: According to some physicians *riwand* is the root of *behman* which is found in China and is imported from that country.

Choice: For adulteration the decoction of the plant is prepared then the water is removed to yield its dried extract. The latter is sold under the name of Himalayan rhubarb. But this variety of rhubarb is thick and very astringent while the pure rhubarb is considerably rarefied and with little astringency which on chewing, gives a taste of saffron.

Properties: Rhubarb plant is composed of watery, airy and earthy substances. It is bitter in taste due to its fiery nature. Its softness and astringency is attributed to its earthy substances. The latter is the main factor responsible for its astringent action. Pure rhubarb, however, has very little astringent property.

Cosmetics: Rhubarb is useful in freckles and other skin marks specially when it is painted with vinegar or used as an evacuative drug.

Swellings: It is plastered in combination with some liquids on hot swellings.

Ulcers: Its paint with vinegar is useful in ringworms.

Joints: It is most useful in cases of injuries caused by falls and beating. According to Khūzī, two *dirham* (7 gm) of rhubarb together with *jilā'* (a preparation by grapes water) taken orally with *sharāb-i-raihānī* (a kind of wine) is used in *fusūkh* (rupture or discontinuity of the muscles). The drug together with its own oil proves to be useful in rupture or discontinuity, pain and extension of the muscles.

Chest: It is useful in asthma and haemoptysis.

Food: Rhubarb is useful in the diseases of liver and stomach including weakness and painful conditions of these organs, as hiccough, intestinal rupture etc. It emaciates the spleen.

Excretion: It is useful in sprue, gripes, dysentery, nephralgia, cystalgia, uteralgia and bleeding.

Fevers: Rhubarb is beneficial in chronic and intermittent fevers.

Poisons: It is also beneficial in insect bite. Its dose is equal to that of white agaric.

Letter Zā

1. Zāj

Vitriol

Ferrous sulphate

Nature: In spite of the colour differences between *qalqadis* (white), *qalqand* (green), *sūrī* (red) and *qalqaṭār* (yellow) vitriols, all the varieties are soluble substances. They are in the form of stones which are not soluble but the substances of vitriol are soluble. Sometimes they are found in liquid form but after sometime becomes condensed and solid. *Qalqaṭār* is yellow vitriol, *qalqadis* is white vitriol, *qalqand* is green vitriol and *sūrī* is red vitriol. All these vitriols are soluble when boiled in water except the *sūrī* variety which is highly condensed and compact. The green vitriol is more coagulant and suitable than the yellow one. All kinds of vitriol have the same temperament which is in conformity with their respective colours. Galen suspected that red vitriol probably comes from the yellow vitriol because once he witnessed yellow vitriol together with red vitriol; the former falling off from the latter. But this is not true.

Choice: The Egyptian red vitriol is stronger than the Cyprus variety but for ophthalmic diseases the vitriol from Cyprus is considered stronger. Unburnt vitriol is also stronger while the burnt one is attenuant. White and green vitriols are more attenuant, the yellow one is moderate while the red variety is thicker and not readily soluble in water. The potency of vitriol which is glittering in golden colour is approximately similar to that of the yellow vitriol. The best yellow vitriol should be brittle, bronzy, pure and not very old. The hard inkstone, also called *Sahīr*, is good. Its oily substance is glittering and its potency is equivalent to the yellow vitriol. The best red vitriol, imported from Egypt when broken yields some black particles. It is porous and possesses a stinking smell and an astringent taste.

Temperament: It is hot and dry in the third degree.

Properties: All kinds of vitriol are caustic, produce dandruff and are astringent. Red vitriol is less irritant than the yellow variety. White vitriol is most astringent while the yellow one is moderately so.

Swellings: The yellow vitriol is useful in erysipelas and creeping ulcers.

Ulcers: All kinds of vitriol are useful in wet scabies and favus. Yellow vitriol as well as the other varieties are sometimes used in the form of a suppository to be placed inside a fistula to remove the cavities.

Joints: Red vitriol, mixed with wine, is used in the form of an enema to treat sciatica.

Head: The vitriol, specially its yellow variety, is useful in epistaxis when administered as nasal drops. They are useful in cases

of rodent ulcers and malignant gum swellings. Its suppository, if soaked with honey and placed in the ear, cures auricular ulcers and the pus formed therein. When filled in the teeth cavities using the thin pipes, it stops dental caries. The red vitriol, known as *sūrī*, strengthens shaky teeth particularly the molars. The burnt vitriol, when mixed with hermodactyle and placed under the tongue, cures ranula. A *qairūfī*, prepared from it specially from the red vitriol, proves to be useful in gangrenous stomatitis and rodent ulcers of the nose and mouth.

Eye: All kinds of vitriol, particularly the yellow one, are useful in the hardness, roughness and scabies of the eye-lashes.

Respiration: Its use dehydrates the lungs swiftly which in most cases proves to be fatal.

Poisons: It is poisonous because of its dehydrating property for the lungs.

2. Zabad

Butter

Temperament: Butter is hot and moist in the first degree; the moistness is, however, higher.

Properties: Butter is maturative, disolvent and relaxant. Its dispersion in moderate bodies is slower than that in hard bodies. In soft bodies its dispersion is easy. The fumes emanating from butter are desiccant, mildly astringent and relieve the pains due to the infiltration of matter towards an organ.

Cosmetics: Its massage nourishes and fattens the body.

Ulcers: It is useful in the nerve-wounds as it fills up and cleanses the neural ulcers.

Head: Butter alongwith some other drugs is prescribed in cases of meningeal wounds, parotitis, lagophthalmos, swellings in the mouth and gums and stomatitis. Its painting on the gums of infants facilitates easy growth of teeth.

Respiration: Its use is beneficial in cases of cold and dry cough, particularly when given in combination with almonds and sugar. It is also useful in pleurisy and pneumonia. It is expectorant and proves to be a maturative drug specially when used with almond oil and sugar. Generally it is highly maturative. When used as such its cleansing property becomes less than its maturative property but when used with sugar, the order is reversed. Licking about 1.5 *ūqīā* (45 gm) with honey stops haemoptysis and is useful in cases of spitting yellow bile.

Excretion: Butter is laxative but its excessive use causes purgation. It is taken as enema in case of hard swellings of intestines,

uterus and testicles. It is incorporated in the medicines intended to be used in the wounds close to the orifice of the bladder.

Poisons: Butter is an anti-poisonous drug and it proves to be useful in cases of snake bite specially as a local applicant.

3. *Zabad al-bahr* Sea-foam *Alcyonium*

Nature: Sea-foam is of five kinds: (i) Spongy in shape and stinking in smell like the stench of rotten fish. This type is thick and found at shores. (ii) Spongy in shape but light, long and having the characteristic odour of sea weeds. (iii) Rosy and purple in colour. (iv) Resembling dirty wool and light in weight. (v) Mushroom shaped with a smooth exterior and rough interior and having no smell.

Temperament: It is hot and dry in the third degree.

Properties: Sea foam is a cleansing, detergent and caustic drug. Its third variety is more attenuant as compared to the other types.

Cosmetics: The burnt sea-foam, specially of the third variety is useful in alopecia. The mushroom shaped sea-foam is used for depilatory purposes and also in pityriasis. Other two spongy varieties. are incorporated in lotions and other medicines to be used in acne, freckles, and allied facial marks. The rest are considered to be depilatory. The smooth kind of sea-foam is most suitable for cleansing purposes particularly the teeth.

Swellings: The smooth kind is applied on claval swellings while the rosy variety is applied on scrofula.

Ulcers: The sea-foam in general and both the spongy kinds in particular, are useful in cases of ulcerating scabies and ringworm.

Joints: The rosy kind of sea-foam is applied on gout with wax and rose oil.

Food: This variety is also useful in splenic diseases and dropsy.

Excretion: The rosy variety is beneficial in cases of dysuria, nephralgia and for removing fragments of cystic calculi.

4. *Zibl* Excreta _____

Nature: There are different types of excreta depending on the type of the animals. Variations are observed within the same class of animals also. This is particularly true in human beings. The excreta of dove is not used due to its excessive heat. Similarly the excrements from hawk, falcon, sparrow-hawk and all other predatory birds are rarely used because of their excessive heat.

Temperament: Excreta contains no cooling or moistening properties. The droppings of pigeons are the hottest among the

excrements used while the dung of domestic animals is inferior as compared to that of stray animals.

Properties: Goat dung, specially of the mountain goat, is used in cases of bleeding. The burnt or unburnt dung of ass is also useful in bleeding. Pigeon droppings make a rubefacient drug and become dissolving when used with barley. The burnt dung of goat is tenuous but not warming.

Cosmetics: Sheep dung together with vinegar, is used in cases of herpetic, claval and thymic warts. The excrement of locust is used in freckles and pityriasis. Similar properties are attributed to the excrements of rice-fed starling, lizard and monitor which improve the complexion. Goat dung specially in burnt form, is applied in alopecia. Mouse excreta is used for similar purposes. Pigeon droppings constitute one of the colour-improving drug. The dung of mastigure is a tested drug for clearing freckles.

Swellings: Application of cow dung with vinegar on hot abscesses gives relief to the patient. The dung from goats and sheep is used with vinegar, wax and rose oil in cases of burns. Pigeon droppings are used with honey in eczema and burns. Goat dung is used in cases of ichthyosis and the dung of bustard and rice-fed starling is used in ringworm.

Ulcers: Excreta of a dog, living on bones, is used with honey in chronic ulcers.

Joints: Cow dung is plastered on sciatica. Similarly the goat dung, specially from the mountain goats, is applied with the fats of swine in cases of gout and sciatica. Dried swine dung with vinegar is taken orally in muscular fatigue. Its *qairūfi*, is applied on tortuosity and hardness of the nerves. Pigeon droppings are applied to arthralgia. The dung from goats, specially mixed with vinegar, is useful in hardness of the joints and their inflammations which is confirmed by practical experience. These properties are mentioned according to the observations of Galen. Similar properties are also exhibited when it is used with barley flour. It is more suitable for those persons whose flesh is relatively rough and dry.

Head: The dung of an ass is inhaled in severe epistaxis. In such a case the moisture of the dung is also squeezed and instilled in the nose to stop bleeding. Pigeon droppings are useful in favus. Galen stated that he had himself used the droppings from wild pigeons along with the seeds of garden cress in a kind of headache known as "helmet headache" and it brought him relief. Similarly he applied cow dung in cases of parotitis.

Eye: The dungs of monitor, mastigure and crocodile are remedies for corneal opacity. Pigeon droppings are similarly useful for this

disease. The excrement of a swallow shows wonderful effects in the opacity of cornea. I have myself successfully used it with honey. Mouse excreta also proved to be useful in cases of corneal ulcers including those with pus.

Chest: Swine dung, administered with water or wine, is useful in haemoptysis and pleuralgia. The dung of bones-fed dog may be rubbed against the palate in cases of diptheria. The faeces of a child may be used similarly for this purpose. Thus the patient does not need to be venesected. It is, however, essential that the child should be fed on the bread made of lupin so that the stench of faeces is minimized. Cow dung alongwith some aromatic substances is useful in consumption and allied lung affections.

Food: Goat dung specially of the mountain goats, is useful in jaundice. It is also to be taken with some aromatics as indicated by experience. This is also useful in dropsy as a plaster or paint. These must be applied in the sun.

Excretion: The prolapsus uteri should be treated with the fumigation of the dung of a bull. Goat dung, specially of the mountain goats is an emmenagogue. It causes abortion and dissolves the hardness of spleen. Experience has shown that dried and powdered dung in the form of a pessary is useful in uterine bleeding, specially in combination with frankincense. Chicken droppings should be taken in colic. Wolf dung is also useful in cases of colic without swelling. For this purpose the dung is to be taken diluted in water or a decoction or with any aromatic preparation. The dung should be procured from a wolf which has taken thorns or the herb of Indian bedellium along with the roots and it should contain some white bone-pieces. This kind of dung should be suspended around the neck after putting it either in the wolf skin or as a suppository made from the wool of a she-goat which escaped from the wolf or alternatively in the skin of stag or as Galen once did it, in a silver vessel. It must be suspended around the waist of the patient and thus it would be beneficial for the colic pain. According to Galen when this dung is taken or used at a time of respite it would stop pain gradually by its desiccating property. Vulture excreta causes abortion specially when inhaled. Mouse excreta, if taken with frankincense or any wine, dissolves the stones (of kidneys or bladder) and also loosens bowels of the children when used as a suppository. An enema of pigeon droppings is useful in colic pain. The excreta of a dog, living on bones, is beneficial in diarrhoea and intestinal ulcers. For this purpose, it is taken as an enema or as a syrup decocted with milk along with some pieces of iron or stones. It is said that a suppository made from dung of an elephant stops pregnancy.

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Poisons: Goat dung, specially from the mountain goats, decocted with vinegar and wine, is applied on insect bite. According to Galen, it also cures the cases of snake bite. The dried dung from a wild ass, if taken with wine, is very good remedy for scorpion's sting. Experience has shown chicken droppings to be an antidote for suffocating fungi. It expels viscous and thick humours. Goat-dung possesses absorbing properties. It absorbs the poisons of wasp. Fumigation with the dung of bulls drives away the bugs.

5. *Zabīb* Raisin *Vitis vinifera* Linn.

Zabīb will be discussed under the chapter 'inab' (*Vitis-vinifera*).

6. *Zujāj* Glass

Temperament: Glass is hot in the first and dry in the second degree.

Cosmetics: It cleanses teeth and helps in the growth of hair if applied as such or "washed" with jasmine oil.

Properties: It contains some astringent and tenuous properties.

Head: Washing the hair with it, removes the dandruff and also it cleanses the teeth.

Eye: Glass cleanses the eye and removes corneal opacity. The burnt glass is more effective.

Excretion: The powdered and burnt glass is very useful in bladder and kidney stones specially when taken orally with wine.

7. *Zadwār* Larkspur *Delphinium denudatum* Wall.

Nature: As far as I know *zadwār* is, actually, *jadwār* (which has been discussed under the letter "Jīm").

8. *Zarāwand* Indian birthwort *Aristolochia indica* Linn.

Nature: According to Dioscorides Indian birthwort is of various kinds: (a) long, (b) round and (c) an elongated cylindrical variety which resembles vine-stalks. The round variety is also called 'female' variety. Its leaves resemble the leaves of the plant *qissūs* (*Labdanum*), which is a kind of *lablāb* having a round shape and intense fragrance. Indian birthwort has various soft branches springing out from a single and long root. The inner portion of its flower is red, cap-shaped and emits a fetid smell. The long variety also called the 'male' variety and has longer leaves. Its branches are nearly a hand-span in length which bear pear-shaped purple coloured flowers with a fetid odour. Its root is also a hand-span

long with thickness of a finger. The gold coloured long variety has thin leaves resembling the house leek and its flowers are like those of common rue. Its root, which is very long and thick-skinned, is used by druggists for the preservation of oils.

Temperament: All kinds of Indian birthwort are hot in the third degree and dry in the second degree.

Properties : Indian birthwort is detergent, attenuant, deobstruent, rarefying and an absorbent drug. It also extracts out thorns and spines. The long variety is considered best for promoting the growth of flesh and for healing ulcers because it is more sweet and warm. Besides these effects, the round variety is very deobstruent and attenuant. The potency of long variety equals that of the round variety in its warming action but it is probably superior in tenuity. The round variety is more attenuant; hence it effectively alleviates the pain attributed to gases. The third variety, which resembles the vine-stalks, is weakest in action.

Cosmetics: Indian birthwort is useful in pityriasis and is useful for clearing dental sordes. It improves the complexion.

Ulcers: Indian birthwort specially its long variety cleanses dirty and malignant ulcers. It is also used for itchthyosis. It prevents the formation of putrid flesh in deep ulcers and when used with orris root, it fills up the ulcers with flesh.

Joints: It is useful in cases of tearing of muscles. The drug, specially its round variety, is applied as a paint to gout. It is useful in muscular fatigue and its oral intake in patients of gout is beneficial. No other drug can match its efficacy in tetanus.

Head: It removes the dirty ear-wax. When instilled in ears with honey, it strengthens the faculty of hearing and prevents the formation of pus therein. Intake with pepper cleanses the 'superfluous matters' from the brain and proves to be useful in epilepsy. It strengthens the gums.

Chest: Round birthwort is good to be used in asthma. It cleans the (congested) chest and lungs and its oral intake with water is useful in pleurisy. The round variety is most potent.

Food: Indian birthwort is good to be used in hiccough and splenic disorders, specially when taken with oxymel. If painted with vinegar on splenic region, it proves to be very good. The round variety is most effective in all such cases.

Excretion: When one *darkhami* (4.5 gm) of powdered birthwort is taken orally, it purges out phlegmatic humours and bile. It is also useful for gastric diseases. Both the long and round varieties of Indian birthwort, if taken orally with myrtle and pepper, remove

Excretion: It causes constipation and proves to be useful in cases of gases in the uterus.

Poisons: It is very useful in insect-bite cases coming next only to larkspur in efficacy.

Substitute: Its one and a half quantity of doronic, two-third quantity of wild endive or half quantity of citron seeds act as substitutes for long zedoary.

11. *Zirnikh* Yellow arsenic *Arsenic trisulphide*

Nature: Arsenic is a mineral substance which is of three kinds; (a) white (b) yellow and (c) red.

Choice: The best one is a dark red powder bearing a sulphur-like odour. The best among the yellow varieties is the Arminian variety which should be unadulterated, golden in colour and thin in texture resembling the yellow talc.

Temperament: It is hot in the third degree and dry in the second.

Properties: All kinds of arsenic are putrefactive and irritant but the red one is considered better than *qalqandifun* (green vitriol).

Cosmetics: It is depilatory and is used with pine resin in alopecia.

Ulcers: It is applied in combination with fats on the wounds.

Pimples: Local application with fats and oil is useful in scabies, 'wet' favus and putrefaction. It is caustic to skin. It is smeared with myrtle to remove lice and blood spots. Application with pitch removes nail-scratches and lice.

Head: Its *qairūfi*, specially prepared from the red variety, is useful in ulcers of the mouth and nose including the rodent ulcers.

Respiration: Oral use with mead and honey water is prescribed for patients suffering from the spitting of blood and purulent matter. It is fumigated with pine resin in cases of chronic cough, haemoptysis and pyoptysis. It is also incorporated in medicines used for asthma.

Excretion: Local application with rose oil helps in treating cases of pimples and polypus ani.

Poisons: The sublimated yellow and white arsenic are fatal.

12. *Zarrin darakht* Persian lilac *Melia azadirachta* Linn.

Joints: Persian lilac is useful in sciatica.

Excretion: The juice of the leaves of Persian lilac with *maybukhtaj* (a kind of grapes wine) is used in cases of dysuria and dysmenorrhoea and for removing coagulated blood from the bladder.

Poisons: Persian lilac is useful in insect-bites.

13. *Za'rūr* Azarole *Mespilus azarolus* Linn.

Nature: According to Dioscorides azarole is a thorny plant having leaves similar to those of English hawthorn (*Crataegus-oxycantha*). Its fruits resemble apple but are smaller in size, red in colour and have a good taste. Each fruit bears three seeds and therefore, the people call it *ṭariqūnīqūn* which literally means a drug having three seeds. A kind of azarole is called *malth al-'ajm*. Some other kinds of azarole are known to Greeks by the names *haiqilmūn* and *busṭāniūn*. Sometimes azarole is described by Unani physicians as wild apple. Azarole plant is similar to the plant of apple. Its leaves are also identical with those of apple but the former are smaller in size. The roots and fruits of azarole are round. These are edible and pungent in taste. The lower parts of the plant are broad and bear yellow fruits.

Temperament: Some experts opine it is cold and moist.

Properties: It is more astringent as compared to the service tree (*Sorbus domestica*). It eliminates yellow bile and prevents excessive secretions. In this respect it is more effective than any other fruit.

Head: *Haiqilmūn*, a kind of azarole, causes headache.

Food: *Haiqilmūn* is harmful for the stomach.

Excretion: It is constipatory but does not retain urine.

14. *Za'farān* Saffron *Crocus sativus* Linn.

Choice: Fresh saffron of good quality is characterized by nice colour and fragrance. The upper part of its stigma should be whitish in colour and without fungal infestation. It should neither be too compact and thick nor crumbling and it should not easily impart its colour on touch.

Temperament: It is hot in the second and dry in the first degree.

Properties: Saffron is an astringent and dissolvent drug. It is also maturative due to its astringent and adhesive properties. It is moderately hot and deobstruent. According to Galen its hotness is more than its astringence. Its oil is warming. Khūzī stated that it does not bring about any change in humours but maintains their balance. It reverses putrefactive processes and strengthens the viscera.

Cosmetics: Its oral use improves the complexion.

Swellings: Saffron is a dissolvent of swellings. It is also painted on erysipelas.

Head: It induces headache and is harmful for the 'head' in general. It is occasionally used orally in combination with *maibukhtaj* (a kind

of wine). It is a sedative and it weakens the senses. When taken with wine it enhances the intoxication rendering the person uncontrollable. It is useful in hot swellings of the ear.

Eye: It strengthens eye-sight and prevents the morbid matters affecting it. It is useful in day blindness. Its collyrium is beneficial in cases of blue discolouration of the eyes, particularly when there is a complication of some other ailment.

Respiration: It is exhilarant and a cardiac tonic. Saffron, specially its oil, is inhaled by the patients of diaphragmitis and pleurisy of the false ribs. It acts as an expectorant and strengthens the respiratory organs.

Food: It is an emetic drug. It reduces the appetite because it counters the gastric acidity which stimulates appetite and strengthens the stomach and liver because of its warming, tonic and astringent properties. Some physicians have the opinion that saffron is good for spleen.

Excretion: It is a diuretic and a stimulant of sexual desire. It is prescribed in hardness, blockage, adhesions and malignant ulcers of the uterus specially when used with wax or with the yolk of an egg and with its double quantity of olive oil. According to some physicians it is given orally to the women suffering from labour pain to facilitate quick delivery.

Poisons: It is said that the three *mithqāl* (13.5 gm) of saffron makes a man so overjoyed that, as a result, he dies (of shock).

Substitute: Its equal quantity of *costus arabicus* and one fourth quantity of nard and one sixth part of cassia barks act as substitutes for saffron.

15. *Zift*

Pitch

Pix nigra

Nature: Pitch is of two kinds. One is marine pitch which is a black liquid used for preparing ointments. It is a variety of pitch jews. The other kind is wild pitch found in hill regions. It oozes out from carob tree and some varieties of pine trees. Initially it is moist but, when decocted, it becomes dry. Mostly it is derived from carob tree which is also called *qaḍm quraish* i.e. fir. The oil of pitch is similar to the resin of cedar tree. It is obtained by two ways. In the first method its oil is extracted by cooking the fresh one in order to be dried. Alternatively a piece of woollen cloth is suspended (over the boiling pitch), and when sufficiently wet by the vapours, it is squeezed in another vessel. It is also possible to distil it using a retort. This is a very good way of distillation which is more hygienic and it prevents it from evaporation.

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Properties: It is a detergent, and warming drug which maturates thick humours. Moist pitch is highly maturative while the dried pitch is highly desiccant. The latter is used for the preparation of ointments.

Cosmetics: It removes the whiteness of the nails, attracts blood towards organs and fattens the body; specially when it is repeatedly applied and detached. It is painted on fissures in feet and other organs. Its plaster grows hair in cases of alopecia.

Swellings: Pitch, specially the fresh pitch, softens hard swellings. It is used with barley flour in scrofula. Its application with sulphur or barks of carob tree prevents the spread of herpes. It proves to be useful in all types of gland abscesses.

Ulcers: It removes ringworm and granulates deep ulcers, specially when used with the flour of frankincense and honey. It dries up ulcers having harmful fluids. Dry pitch possesses similar properties and it is highly desiccant for the wounds.

Joints: It is useful in the muscular swellings.

Head: Both the dry and moist pitch are good to be used in ulcers of the head.

Eye: The fume of pitch beautifies the eyelashes. It promotes growth of eye-lashes, prevents epiphora, granulates eye-ulcers and it immensely improves eye-sight.

Respiration: Pitch is useful in dry and cold cough specially when used with almond and sugar. It acts similarly in case of pleurisy and pneumonia. It facilitates maturation and expectoration of phlegm. When used with almond oil, it fully matures the matter but its exclusive use reduces its cleansing effects as compared to its maturative property. Combination with sugar, however, results otherwise. Licking one and half of *ūqia* (45 gm). with honey prevents haemoptysis and purulent discharge. The fresh pitch, when rubbed against palate, is good for use in diphtheria.

Excretion: Pitch is laxative and its excessive use causes purgation. It is used as an enema in cases of hot and hard swellings of intestines, uterus and testicles. It is incorporated in medicines intended to be used in wounds at the cystic opening. Its local application cures the anal ruptures.

Poisons: The pitch is an antipoisonous drug and as a paint it proves to be useful in snake bite cases.

Substitute: The substitute of fresh pitch is opoponax-galbanum.

16. *Zammārah al-rā'ī*

Water plantain

Alisma platago Linn

Temperament: Water plantain is hot and dry in the beginning of the second degree.

Properties: It is said to dissolve edema.

Excretion: Through an experiment Galen discovered that decoction of water plantain dissolves the renal stones. Some other physicians believe it to be useful in intestinal ulcers, gripes and uterine ailments. It is diuretic and is beneficial to be used in hernia.

Poisons: One or two *mithqāl* (4.5 or 9 gm) of water plantain acts as an antidote for the poisonous effects of sea-rabbit or opium consumption.

17. *Zanjār* Verdigris Basic acetate of copper

Nature: *Zanjār* is of various kinds. It is obtained by: (A) Letting the copper interact in dregs of vinegar. For this purpose either the copper dust is sprinkled over vinegar and buried in a damp place or a pot containing vinegar is covered by a copper vessel and left for a while till verdigris is obtained. It is then scrapped and preserved. (B) Mixing copper with sal ammoniac and burying them in a damp place is a well known method of *zanjār* preparation. (C) A very refined variety of *zanjār* is obtained by pulverizing the sublimate of vinegar using a copper pestle and mortar in scorching sunlight. The process is continued till adequate reaction has taken place. Thereafter it is mixed with some alum and salt, and is pulverized and kneaded till it is coagulated. Afterwards some (extra) vinegar and a little quantity of urine of a child is sprinkled over it before keeping it in a damp place. Finally it is collected and desiccated. (D) Sometimes *zanjār* is found with the stones obtained from copper mines. (E) It is also found as such in (copper) mines.

Choice: The best *zanjār* comes from mines. The most potent variety is that which is obtained from scales and burnt copper. The *zanjār* prepared by using vinegar, is more diluent as compared to that wherein *ammonium chloride* is used.

Temperament: It is hot and dry in the fourth degree.

Properties: *Zanjār* is detergent and pungent. It is equally corrosive both for hard and soft flesh. In the form of a *qairūtī* it becomes moderately desiccant without causing any irritation.

Ulcers: Its *qairūtī* prevents creeping ulcers and cleanses the foul ones. It is a treatment for ulcerous scabies, leukoderma and pityriasis particularly when used with terebinth resin and *sodium nitrate*.

Head: Puffing up the nose with *zanjār* prepared from *ammonium chloride*, alum and vinegar, is useful in the putrefactive conditions and malignant ulcers of the nose. Simultaneous filling of the mouth with water prevents the powder from going towards the throat. Use of *zanjār*, obtained from iron along with vinegar strengthens the gums.

A *quirūti* is prepared for the swellings of the gums. The *zanjār* of copper possesses similar properties.

Eye: *Zanjār* cleanses the eyes and is useful in thick, hard and painful eyelids. It is incorporated in medicines prepared for eye-ulcers and also facilitates epiphoral secretions. Before using it as a *kohl* (collyrium) the eye should be fomented with a sponge dipped in hot water.

Excretion: *Zanjār* is incorporated in medicines prepared for piles. Suppositories prepared from *zanjār* and gum ammoniac are stuffed in the cavities of piles.

18. *Zanjabil* Dried ginger *Zingiber officinale* Rosc.

Nature: Dried ginger is a well known drug which resembles pepper in nature but it has no tenuity. It deteriorates because of its superfluous moisture content and, therefore, its warming property is more lasting than that of pepper. This is also attributed to its dense nature resembling the garden cress, mustard and wild rue.

Temperament: It is hot in the last phase of the third degree and dry in the second degree. It contains some superfluous moisture. The preserved dried ginger is hot and dry but is devoid of superfluous moisture. That is why it increases the quantity of semen.

Properties: Dried ginger is quite hot. It produces warmth after a considerable time because of its superfluous moisture content but the warmth is of higher degree. It is laxative and dissolves flatulence. Preservation with honey absorbs some of its superfluous moisture rendering it to be more desiccant.

Head: It enriches the faculty of memory and removes the moistness in the region of the head and throat.

Eye: If used orally or as a *kohl*, it cures dim vision caused by moistness of eyes.

Food: It is a digestive drug suitable for the 'coldness' of the liver and the stomach. It dries up the (excess) moistness of the stomach produced by the intake of fruits.

Excretion: The preserved (*murabba*) and unpreserved forms of dried ginger stimulate the sexual desire and slightly relax the bowels. According to Khūzī it causes retention (constipation) but in my opinion this happens only when the cause (of loose motions) is indigestion and viscosity of the humours.

Poisons: Dried ginger is useful for countering poisonous effects of insects.

Substitute: The substitute of dried ginger is pellitory.

19. *Zanjabil al-kilāb* Dog's bane *Apocynum venetum* Linn.

Nature: Dog's bane is a well known bean resembling the water pepper (*polygonum hidropiper*). Its leaves are like those of willow but are more yellow in colour. Its branches are red with a taste of dried ginger. It is fatal for dog.

Temperament: It is hot in the second degree and dry in the first degree.

Cosmetics: Fresh pounded dog's bane along with its seeds cleanses undesirable spots on the face, freckles and chronic lentigo.

Swellings: A plaster prepared from fresh dogs' bane pounded with its seeds dissolves swellings.

20. *Zanjafar* Cinnabar *Mercuric sulphide*

Nature: According to a group of physicians the potency of cinnabar is similar to that of white lead but others have the opinion that it resembles haematite in potency.

Temperament: It should be appropriate to describe it as hot and dry, perhaps, in the last phase of the second degree. Whatever is said against this is based on ignorance.

Properties: According to some physicians its potency of astringence is more than its absorptive power. Others hold an opposite view.

Ulcers: Cinnabar heals ulcers and wounds. It granulates ulcers and prevents ill effects of burns and *miliaria rubra*.

Head: Cinnabar prevents dental caries.

Substitute: The substitute of cinnabar is litharge (impure oxide) of lead.

21. *Zowān* Darnel *Lolium temulentum* Linn.

Nature: I believe that this name 'Zowān' is used by the people for two things: (a) a grain similar to wheat used for making bread. It is also called *al-zowān al-muktīb* (tars darnel). (b) a toxic substance of inferior quality which is mixed up with the grains. We are not concerned about the latter in the present context.

Choice: The best darnel is that which is light in weight, unspoiled and unbroken but becomes viscous when chewed. It is reddish in colour and has some acidity. Paulos states that its potency is similar to that of wheat both in hotness and coldness. Moreover, it is desiccant and agglutinant.

Zūfā raṭḥ

Nature: *Zūfā raṭḥ* (possibly a coagulated sebaceous secretion) is a filthy substance found sticking to the wool of the hips of Arminian

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sheep. It is gathered when the animal rubs or drags along some milky herbs. So it acquires the qualities resembling the latex of these herbs. Sometimes it is found in a liquid form. This is decocted to make it viscous.

Temperament: *Zūfā raṭb* is hot in the second and moist in the first degree.

Properties: It is a maturative and dissolvent drug.

Swellings: *Zūfā raṭb* is used as a plaster to dissolve hard swellings and callus.

Food: When painted or taken orally, it proves to be useful in the 'coldness' of the liver.

Excretion: *Zūfā raṭb* dissolves the conditions of hardness around bladder and uterus. It cures the 'coldness' of bladder, uterus and kidneys.

23. *Zūfā yābis*

Hyssop

Hyssopus officinalis Linn.

Nature: Hyssop is a herb. It is of two kinds: (a) hill variety and (b) cultivated variety.

Temperament: It is hot and dry in the third degree.

Properties: It is tenuous like common thyme.

Cosmetics: Its oral intake improves the complexion and local application on the face removes the undesirable spots.

Swellings: If taken with wine, it dissolves the hard swellings.

Head: The decoction of hyssop with vinegar relieves odontalgia. Vapours from a decoction using the drug along with its stalks specially with fig prove to be beneficial in *tinnitus aurian*. A funnel is used to enable the vapours reach the ear.

Eye: It is decocted and used as a plaster in ecchymosis and dead blood spots under the eye-lids.

Chest: It is useful for chest, and lung affections e.g. asthma and chronic cough. Similarly its decoction with fig and honey also gives relief in such diseases specially with hard swellings and orthopneic respiration. Its gargle is also useful in inflammatory conditions with suffocation due to internal causes.

Food: It is plastered with borax and fig on splenic region of the abdomen. It's oral intake is useful in dropsy.

Excretion: When administered with caraway and orris root, it removes phlegm, ring worm and other worms. This combination makes it highly purgative.

24. *Zūfrā*

Goldy-locks

Iphiona sps.

Nature: Dioscorides states that goldy-locks is a plant which grows abundantly in *Linfūriā* on the hill of *Aqābīs* which is close to Egypt. The local people call it *fānā kathīr* i.e. *jāoshīr*, because its root and stem resembles the plant of *jāoshīr*. Its potency is also similar to *jāoshīr*. It grows on lofty, rough and shadowy mountains particularly wet places and around the small canals. Its knotty and thin stem is similar to the stem of dill while its leaves resemble those of sweet melilote but they are smoother and more fragrant than the latter. The end of the stem is thin and bears a cluster-like structure of fennel sized seeds which are black and hollow. These seeds are pungent in taste and fragrant. The roots are white and odorous like the roots of *fānā kathīr*. According to a group of physicians it is a plant bearing seeds resembling those of asafoetida. These are called *al-hadhā*. It also resembles common rue which is called *dinār waih*.

Temperament: It is hot and dry.

Properties: Goldy-locks dissolves flatulence and also is a warming drug.

Food: It digests food and is useful for the stomach in cases of flatulence and phlegmatic swellings.

Eye: The seeds and the roots of goldy-locks are useful in cases of dark sightedness and for cleansing the eyes.

Ulcers: It is useful in the pain due to scabies and itches.

Excretion: Its roots and seeds increase the viscosity of semen. Its potency resembles that of common rue, when taken orally it acts as an emmenagogue and a diuretic drug. Use of a pessary in women patients elicits similar actions.

Poisons: Its oral intake or use as a paint is beneficial in cases of bites and other insects.

25. *Zahrah*

A kind of herb

Nature: *Zahrah* is of two kinds. The whole plant is considered hot and dry. It is desiccant, lengthens the hair and is a good remedy for removing dandruff.

26. *Zahrah*

Syrian cloves

Nature: *Zahrah* is a plant which is of two kinds: One has thin, lenticular leaves, with branches spreading a hand-span in length and thin roots. It grows in high saltish lands and possesses a saltish taste.

The other kind has a good purple colour and is similar to *Teucrium chamaephytis*.

Ulcers: It is used as a wound healing agent.

Head: It dissolves superfluous matters to such an extent that its second variety proves to be useful in epilepsy. For this purpose it is taken orally with oxymel.

27. *Zahrah al-nuhās* Red oxide of copper *Flos aeris*

Properties: Red oxide of copper is astringent, corrosive and irritant.

Ulcers: It erodes out excessive flesh from the ulcers.

Head: It is one of the drugs which dry up ear-ulcers. Its white variety, when powdered and puffed into the ear, removes chronic deafness. It is also rubbed with honey in cases of tonsillitis and uvulitis.

Excretion: A dose of four *obötūs* (3 gm) of red oxide of copper evacuates thick humour and yellow water from the body. It is also incorporated in the medicines used for drying up the piles and *prolepsus ani*.

28. *Zibaq* Quick silver *Mercury*

Nature: Quick silver is of two types: (a) obtained as such from mines (b) extracted from ores by means of fire as is the case of silver and gold. If the ore is pure and not contaminated with dust and stone pieces, it looks like cinnabar. Though it resembles cinnabar in appearance but it is not the same. Galen and some other physicians are of the opinion that quick silver is also a synthetic material like impure lead oxide obtained by means of fire. If it is so then gold should also be categorised as a synthetic product like impure lead oxide because the ore of mercury has a resemblance with cinnabar. It is, therefore, thought that mercury is obtained from cinnabar by heating the ore in an earthen pot when mercury rises up (to the surface). However this is not correct because cinnabar is constituted by mixing sulphur and mercury. Later on it is possible to extract mercury out of this cinnabar as it is obtained from mineral origin as an essence of mercury (that is to say mercury and cinnabar are obtained from the same mine).

Temperament: Quick silver is cold and moist in the second degree.

Properties: The sublimate (*mercuric chloride*) of quick silver is astringent.

Cosmetics: Pounded quick silver with rose oil is useful in lice, ticks and nits (eggs of lice) infestation.

Ulcers: Calcinated quick silver with rose oil is useful in scabies and malignant ulcers. It can also be used in combination with other medicines in cases of scabies.

Joints: Fumes of quick silver causes paralysis, trembling (chorea) and interlocking the organs with each other.

Head: Its fumes cause ozostomia and also reduce the hearing power.

Eye: Its fumes adversely affect the eye-sight.

Excretion: According to Paulos some people use calcinated quick-silver orally in cases of ileus.

Poisons: Intake of the sublimate of quick silver is fatal due to its severe erosive property. Effective treatment to counter this condition is to induce vomiting and take milk. Galen admitted that he had no experience in this connection. Some people state that the pounded quick silver is fatal due to its heaviness as it erodes whatever comes in its contact. This assumption has no foundation. It kills the rats and its fumes drive away the insects and snakes.

29. *Zaitūn (al-zait)* Olive (oil) *Olea europea* Linn.

Nature: Olive-oil is, sometimes, extracted from unripe olive and, sometimes, from ripe olive. The oil, extracted from unripe olive, is called *zait al-infāq*. Olive oil, extracted from moderate (between ripe and unripe) red olive, is also moderate in action. The oil is sometimes extracted both from garden and wild varieties of olive. Old olive oil is used in plasters and resembles castor, reddish and black cumin oils, in potency. The latter i.e. black cumin oil, is warmer but is identical in action. It is advisable to smear the leaves and branches of *zaitun* with honey before burning them.

Choice: The best olive oil for healthy persons is that which is called *zait al-infāq*. The best gum obtained from wild olive should irritate the tongue. The variety which does not cause irritation is considered useless.

Temperament: *Zait al-infāq* is cold and dry in first degree. According to Rhupos it has some superfluous moisture. Oil of mature olive is moderately hot and somewhat moist. On being treated with water it becomes moderate in moisture content and dryness as it also grows less hot. In short the ripe variety of olive is hot while its oil is moderately moist. The unripe olive is cold; its bark and leaves are also cold. When *zait al-infāq* is relatively stale, it acquires a nature similar to that of sweet olive oil.

Properties: All kinds of olive oil strengthen the body and tone up its activity. It brings down (excessive) body temperature. The

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wild olive oil, if decocted in a copper pot till it coagulates, becomes similar to the extract of ophthalmic barberry in potency. Salted olive water is stronger than salt-water in cleansing and purifying properties. The best olive oil for healthy persons is *zait al-infāq*. Stale olive oil is not severely irritant. The olive (fruit) as such is only slightly nutrient.

Cosmetics: The leaves of wild olive are good to be used in whitlow. They are rubbed to prevent perspiration. The oil of wild olive is similar to rose oil almost in all respects. Its daily use keeps the hair and protects them from premature greying. The leaves of olive are decocted in grapes water till the liquid becomes thick as honey. This is painted over decaying teeth to facilitate their extraction.

Swellings: The oil of the wild olive is useful in erysipelas, herpes, urticaria and for dissolving hot inflammations. The resin oozing out from olive wood is used as an ingredient of ointment meant for scabies and ringworm. The dregs of olive oil are used in hot glandular inflammations; specially so in combination with olive leaves.

Ulcers: The oil of wild olive which is extracted from unripe variety is useful in wet and dry ulcers and scabies. The leaves of wild olive are used in cases of creeping erysipelas, foul malignant ulcers, urticaria and herpes. When the dregs of olive oil are used with pine thistle and specially the infusion of lupin, it proves to be useful in both the human and animal scabies. Local use of *zaitun al-mā'* treated with water and salt, prevents formation of blisters in burns. Besides it cleanses dirty ulcers. The gum of wild olive is useful in ulcerous scabies and ringworm. It is incorporated in the ointments intended for treating wounds.

Joints: Enema with salted water of olive helps in case of sciatica. The use of olive oil treated with water is suitable for neuralgia and sciatica. Stale olive oil is beneficial for the patients of gout, specially when used as a paint.

Head: The leaves of olive are decocted with grape-water till the liquid becomes thick as honey. This substance is painted to remove the decaying teeth. The oil from wild olives is similar to the rose oil in its usefulness in headache. The liquid extract of wild olive is dried and made into tablets for treating otorrhoea. Mouth wash with the oil of wild olive is useful in (bleeding) gums and for strengthening the shaky teeth. The gum obtained from wild olive is useful in odontalgia. Stuffing with this gums is specially beneficial in tooth-decay. Local use of an oil obtained from scorpions, however, considered the most suitable in cases of odontalgia. Chewing of olive leaves is good for stomatitis.

Eye: It is applied as a *kohl* (collyrium) in cases of dark sightedness. Its dregs are incorporated in eye medicines. Its burnt leaves act as a

substitute for copper sulphate in eye diseases. Its gum is useful in hemeralopia, thickening and opacity of the cornea. The extract of its leaves is useful in *protrusion oculi*, corneal ulcers and cataral flow. The cultivated variety is more suitable for the eye as compared to the wild variety. Its gum clears the eyes, and is used in cases of dirty ulcers, cataract and corneal opacity.

Chest: Fumigation with black olive along with its nut benefits in asthma and lung diseases.

Food: The dregs of olive oil are applied on the abdomen of dropsy patients. The olive itself is slow in 'maturing' (the food). The saltish olive, due to its dense nature acts as an appetizer. It strengthens the stomach and produces astringent chymes. The olive, treated with vinegar, is very active and swift agent for promoting digestion and *zait al-infāq* is particularly suitable for the stomach.

Excretion: When taken orally with *murry* (a kind of pickle or vinegar) before meals, it causes relaxation of the bowels. When nine *ūqiah* (270 gm) of olive is taken with hot water or barley water, it acts as a purgative. It is decocted with common rue to be used in gripes and worms. It is also useful in inflammatory colic. It is taken as enema in cases of stercoral colic. A pessary made from its extract is indicated in leucorrhoea and uterine hemorrhage. It is plastered (on abdomen) with barley flour in chronic diarrhoea. The thickened and stale olive oil, mixed with the water of unripe grapes, is useful in internal ulcers of anus and uterus, specially when applied as an enema. The gum of olive is a diuretic and helps in expulsion of foetus.

Poisons: When the olive oil is taken with hot water as an emetic, it reduces the intensity of the poisons. The gum obtained from wild olives is believed to be fatal drug.

Substitute: The substitute of olive oil is castor-oil.

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1. *Sādāwarān* Iron rust *Ferric oxide*

Temperament: Iron rust is cold in the second and dry in the third degree.

Properties: It stops bleeding.

Cosmetics: It also prevents falling of hair.

Substitute: The extract of ophthalmic barberry in its equal quantity and the trachea reed in its 1/3 quantity are its substitutes.

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2. *Sādḥaj* Cassia cinnamon *Cinnamomum tamala* Nees

Nature: The potency of cassia leaves is likened to that of nard but the latter is mild. The leaves and branches of the plant are similar to those of sweet basil and its flowers are withered. In India the plant grows at muddy places near the stagnant water. Its leaves float on the surface of water as is the case of a well known plant called 'water-lentil' which has no links with the roots. Sometimes its leaves are tied *in situ* with a thread to enable its drying. Occasionally people mistake them to be the leaves of Indian nard because of their resemblance in potency. Its oil is like that of bachelors' buttons and saffron but it is superior in potency.

Choice: The best cassia cinnamon is that which is fresh, whitish and unbroken. Its fragrance spreads like that of Indian nard and it should not be mouldy, saltish and soft.

Temperament: It is hot and dry in the second degree.

Properties: When its pieces are sprinkled over clothes they protect them from moth.

Cosmetics: It gives a pleasant odour to the body. For this purpose it is kept under the tongue.

Swellings: After powdering and decocting it with rose-water, it is applied as a plaster on hot swellings. It is also a good drug to be used in hot swellings of the eye.

Food: It is more useful for the stomach and liver than Indian nard.

Excretion: Its diuretic activity is also more than that of Indian nard.

Substitute: The equal quantities of macer, nard or cassia barks act as substitutes for cassia leaves.

3. *Sām abraş*

Newt

Cosmetics: Plastering the affected part with crushed newt expels the thorns, warts and spikes. Similarly it extracts out the nail-like warts. Application of dried newt mixed with oil promotes hair growth in cases of baldness.

Properties: A sitz bath in the decoction of newt's urine and blood has a wonderful (curative) effect in children suffering from hernia. A little quantity of musk with the urine or blood of the newt is applied on the meatus of children. This treatment is highly beneficial in hernia.

Head: It is said that the liver of the newt alleviates molar pain.

Poisons: Newt is ripped open and placed on scorpion bite.

4. *Sibistān* Sibestan *Cordia latifolia* Roxb.

Nature: Sibestan is also called *Makhītā*.

Temperament: It is somewhat moderate in temperament.

Properties: It is laxative.

Chest: It softens the throat and chest (organs).

Food: The use of sibestan, specially its seeds with *sanjabūyah*, quenches thirst.

Excretion: It loosens the bowels.

5. *Sidr* Christ's thorn *Zizyphus spina christia*

Nature: We have already discussed it with *nabq* (lote tree).

6. *Sadhāb* Common rue *Ruta graveolens* Linn.

Nature: Wild rue is more blackish in colour than Syrian rue.

Choice: Cultivated rue growing near the fig tree is considered the best.

Temperament: It is hot and dry in the second degree. Dry variety is hot and dry in the third degree and the wild variety is hot and dry in the fourth degree.

Properties: Common rue is an erosive, dissolvent, potent carminative vessel cleansing, ulcerative and astringent drug.

Cosmetics: It is applied with *sodium nitrate* on *pityriasis alba*, warts and yaws. It marks the unpleasant smell of garlic and onion and proves to be useful in alopecia.

Swellings: Wild rue is pounded and plastered with salt on the organs affected by hot swellings. It dissolves scrofula in throat and armpit. The gum of common rue is more potent as compared to that procured from other varieties.

Joints: If taken orally or applied as a plaster with honey it proves to be useful in paralysis, sciatica and arthralgia.

Head: It marks the unpleasant smell of garlic and onion. It is plastered with *sawīq* in cases of chronic headache. Sniffing it with vinegar stops epistaxis. Instillation of its hot extract prepared with pomegranate peel clears the ear, and gives relief in ear-ache, tinnitus and sonitus. It kills the ear-worms and expels alive worms from the ear. It is painted on the ulcers of the head.

Eye: It strengthens the eye-sight specially when its extract is taken orally or used as a *kuhl* alongwith the extract of fennel and honey. Moreover it is plastered with *sawīq* in cases of throbbing sensation in eyes.

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Chest: Rhupos is a witness of the usefulness of a decoction of fresh common rue with dry dill in chest pain and difficult breathings.

Food: It is plastered with fig in anasarca. Intake of its decoction in wine is also useful in such cases. It brings relief in case of phlegmatic hiccough when one to two *dirham* (3.5 to 7 gm) of its seeds are taken orally. It is an assimilative, appetizing and strengthening drug for the stomach. It is also useful in splenic diseases.

Excretion: Common rue makes the semen dry (viscid and retentive) and reduces the sexual desire. Both the varieties of common rue cause constipation and relieve gripes. It is taken as an enema in case of colic. It is applied with honey on anal ulcers. After boiling with oil, it is taken orally to kill the worms. Both the varieties evacuate superfluous matters of the body by an excessive discharge of urine but cause constipation. A plaster with the leaves of bay tree is applied in testicular inflammation.

Fevers: If taken orally or painted with its oil, it proves to be useful in shivering fevers.

Poisons: Common rue counters all poisons. If consumption of poison is suspected or there is insect bite it is advised to take 3.5 gm of its seeds and leaves together with wine. In such cases it is, specially, taken orally with powdered fig and walnut. Excessive use of the wild rue is, however, fatal.

7. *Sirāj al-quṭrub* Devil's apple *Mandragora officinarum* Bertol.

Nature: Devil's apple is a plant resembling hyssop.

Choice: Its seeds are used in medicine.

Temperament: It is hot in the first and dry in the last phase of the second degree.

Properties: Devils apple is deobstruent but its astringence is dominating enabling it to stop bleeding.

Ulcers: It is a healing drug.

Head: Its plaster, stops epistaxis.

Chest: It stops haemoptysis.

Excretion: Its enema proves to be useful in intestinal ulcers.

8. *Sarkhas* Male fern *Dryopteris filix-mas* Linn.

Nature: Male fern is called *kail dārū* in Persian. The pieces of its roots are found twisted with some other parts which can be easily scrapped away. It is of two types: male and female; the former is stronger.

Temperament: It is hot and dry in the second degree.

Properties: It is desiccant without causing irritation. There is some bitterness and astringence in it.

Wounds: Common fern is a healing drug. The female variety is dried, powdered and sprinkled over the wet and difficult ulcers which are cured as a result of this treatment.

Excretion: It kills the tapeworms and other worms specially when taken with honey wine. An oral dose of four *mithqāl* (18 gm) is taken with scamony and hellebore. It must be taken after consuming some garlic otherwise it might kill the foetus.

9. *Sarṭān bahrī*

Sea crab

Cancer marina

Nature: By the term 'sea crab' we do not mean every crab living in the sea, but only a particular kind of marine crab having a stone like body.

Properties: Sea crab in burnt form (ash) is the most attenuant drug.

Cosmetics: In burnt form it cleanses the teeth and removes freckles and pityriasis.

Ulcers: The burnt crab dries up ulcers and is also useful in scabies.

Eye: It prevents tears. It is rubbed with salt on pterygium. A special kind of suppository is made from it (for eyes). It is also rubbed on eyelids affected with scabies.

10. *Sarṭān nahrī*

River crab

Cancer fluvial

Nature: River crab is a well known animal.

Properties: It is difficult to digest but is rich in nutritive value. Cooking with black gram enhances its quality. It facilitates expulsion of thorns and glass pieces. Sea crab is very attenuant.

Cosmetics: The ash from burnt river crab mixed with decocted honey, forms a good local application for pedal fissures caused by cold exposure. River crab in burnt form is incorporated as an ingredient of medicines for pityriasis and freckles.

Swellings: Application of river crab dissolves hard swellings.

Chest: The flesh and soup of the river crab is useful in phtysis particularly when administered with ass-milk.

Excretion: Its ash is good for treating anal fissures.

Poisons: Its oral intake or plaster is useful in cases of scorpion and trantula bites. Its ash is used with honey in patients bitten by a mad dog. With gentian it forms a well known medicine to be used in rabid dog bite cases. Its effects and uses will be discussed in the chapter

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related to the poisons (in volume IV). When this drug along with sweet basil is brought near a scorpion, it is believed to kill it.

11. *Sarmaq* Goose foot *Chenopodium album* Linn.

Nature: Goose foot is the same drug which is called *qaṭaf*. It is abundantly found in Syria.

Temperament: It is cold and moist in the first degree but according to some experts it is moderate.

12. *Surunj* Red oxide of lead *Plumbic oxidum rubrum*

Nature: Red oxide of lead resembles the blood stone in action but it is more potent.

Temperament: It is cold and dry.

Properties: It is an astringent drug and possesses some coldness of white lead but is more tenuous. It prevents bleeding.

Ulcers: It is applied on burns in the form of a *qairūft*.

Excretion: It stops bleeding.

13. *Sarw* Cypress *Cypressus sempervirens* Linn.

Nature: Cypress is a well known tall tree. It does not shed leaves even in summer and winter and remains ever-green by nature. Its taste is pungent but slightly acid and much bitter. Its acidity is more than its bitterness. Its strong pungent and intense properties enable it to easily affect the organs and produce an astringent action without causing any irritation. It antagonises all warming drugs because of its non-absorbing nature.

Temperament: It is hot in the first and dry in the second degree. According to some experts it is highly cold. They consider it to possess varied properties. Its intense warmth enables it to easily carry the astringent effect to the deeper organs of the body.

Properties: Its leaves and nuts are astringent. It has some fluid dissolving power. Its nuts are comparatively stronger than all parts of its leaves. The leaves are adhesive, styptic and remove putrefaction.

Cosmetics: It removes the (ugly) spots and marks on nails when its decoction mixed with vinegar and lupin is used as a paint. Its leaves remove pityriasis and act as a hair darkening agent.

Ulcers: The soft and fresh leaves, fresh branches and the nuts of cypress, heal up the wounds of hard organs. It is also beneficial in erysipelas and herpes particularly when used with the barley flour.

Joints: A plaster made from its nuts and leaves is good to be used in hernia. Application with barley-flour is useful in erysipelas and allied diseases. It strengthens nerves and if used as a plaster it reduces enterocele. It strengthens and stabilises the flabbiness of the joints.

Head: The nuts of cypress are pounded lightly with fig and applied to the nose in the form of a suppository to remove excessive flesh. Its decoction with vinegar alleviates tooth-ache.

Chest: Its nuts are taken orally with wine in cases of haemoptysis, dyspnoea, orthopnoea and chronic cough. The decoction of cypress possesses similar properties.

Excretion: The leaves of cypress are taken with a preparation called *ṭilā*. In this form it is useful in strangury and for checking the superfluous matters from going towards the bladder. The leaves are also useful in intestinal ulcers.

Substitute: The pomegranate peel in its half quantity and red sarcocolla weighing equal to it act as substitutes for cypress.

14. *Sarish*

Asphodel

Asphodelus tenuifolius Cav

Nature: Dioscorides states that some people call it (this drug) as *sarish* because it is obtained from a plant of the same name. It is a well known drug. Its leaves are like those of Syrian leek. Its stem is smooth bearing flowers, called *anbāriqūn*, on the one side of it only. Its roots are long, round and resemble those of a big oak tree. It is considered to be hot in potency.

Temperament: It is hot in the first degree.

Properties: It is warming.

Swellings and pimples: When applied together with flour (of roasted wheat), it proves to be useful in the initial stages of hot swellings.

Ulcers: Its plaster is useful in filthy ulcers, wounds, ulcerated carbuncles and burns.

Cosmetics: A plaster of its ash helps in hair growth in cases of alopecia. Before plastering the hairless part should be rubbed with a piece of woollen cloth. Smearing with asphodel root and vinegar after similar rubbing with a piece of cloth in the sun, cures *pityriasis alba*.

Organs of the head: If asphodel alone or in combination with olibanum, honey, wine and warmed Egyptian origan is instilled into the ear opposite to the affected side, it relieves molar pain. The juice of its roots is mixed with old sweet wine and decocted myrtle to form a medicine for the ear.

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Organs of the eye: Medicine prepared by similar methods and used with *ḥilā* (a kind of wine) proves to be a good treatment for a variety of ocular pains.

Organs of the chest: When two *mithqāl* (9 gm) of asphodel is taken with *ḥilā*, it proves to be useful in pleurodynia, cough and muscular fatigue. Its roots, decocted with the dregs of wine and applied as plaster, are very useful for mastitis.

Excretory organs: A dose of one *mithqāl* (4.5 gm) with *ḥilā* is diuretic and emmenagogue.

Poisons: Three *mithqāl* (13.5 gm) is taken orally in cases of insect bite. Plaster of its leaf is also useful in insect bite. In case of scorpion bite oral intake of its nuts and flowers proves to be very useful.

15. *Saṭrūniūn*

Fox testis

Orchis rubra

Nature: Dioscorides states that some people call it *ṭariqāli* which means "three-leaf" grass. This is because mostly it grows with three leaves bending over the earth like the leaves of yellow dock or the flowers of orris. Its leaves are, however, smaller than those of yellow dock. These leaves are dark-red in colour resembling the blood. Its stalks are thin and long about an arm-length in size. Its flowers are like those of white orris. Its roots are similar to wild onion. In size, they resemble an apple with the red exterior and white interior. Its whiteness is similar to the white of an egg. It is sweet in taste. These plants grow on hillregions having adequate sunlight.

Properties: It is said that if a man keeps the root of this plant in his hand it would instantly prepare him for coitus. Oral intake with wine would similarly stimulate the sexual desire as with the use of skink.

Joints: When taken with black and astringent wine, it is said to be useful in such cases of paralysis which turn the head and neck backwards.

16. *Su'ālī*

Coughwort

Tussilago farfara Linn.

Nature: Coughwort is hot and moist in substance.

Temperament: It is hot and moderately pungent.

Pimples: Its leaves facilitate rupture of carbuncles and dissolve them in initial stages. Fresh coughwort matures the swellings which resist natural suppuration.

Ulcers: It removes ulcerative scabies.

Eye: It is incorporated in the drugs prepared for strengthening the eye-sight.

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Excretion: It expels and dissolves stones and proves to be very useful in strangury, weakness and 'coldness', (atony) of the stomach. Similar action is also seen in case of renal diseases. It is very useful in the 'coldness' of uterus and also in piles.

Fevers: It is useful in septic fever.

19. *Al-safānī* Camel's thistle *Echinops echinatus* Roxb.

Al-safānī has already been discussed under the letter "Alif".

20. *Safarjal* Quince seed *Cydonia oblonga* Mill.

Nature: Quince seed is a well known drug. If the ash of its branches and leaves is washed, it becomes like copper sulphate. The concentrated juice of quince remains active due to its sound astringency while that of apples becomes sour because the latter possesses cold aqueous humour.

Choice: The roasted quince is lighter and more useful. The method of its roasting comprises of scooping out the seeds, filling the cavity with honey, covering the whole quince with clay and placing it on hot ashes.

Temperament: Quince is cold in the last phase of the first and dry in the beginning of the second degree.

Properties: Quince is an astringent and strengthening drug. Its flowers are also astringent. Its oil has also the similar properties. Sweet quince is less astringent and its seeds are laxative without being astringent. It prevents the superfluous matters from permeating viscera.

Cosmetics: Quince prevents perspiration. Its oil is useful in cracking of skin due to cold.

Pimples: Its oil is also useful in herpes.

Ulcers: Its oil is applied on malignant ulcers.

Joints: The excessive use of quince produces neuralgia.

Eye: Roasted quince is applied on the hot swellings of the eye.

Respiration: Its extract is useful in the orthopnoea, asthma and haemoptysis. The seeds are useful in dryness of the throat, and soften the wind-pipe. Its mucilage also lubricates the windpipe and thus removes its dryness.

Food: It is useful in cases of vomiting and hangover. It quenches thirst and strengthens the stomach when it is prone to be affected by superfluous matters. Its syrup, infusion and decoction are taken as a dessert after the intake of wine to prevent hangover. A syrup prepared from quince forms a very effective medicine for treating the loss

of appetite. *Maibah* (a quince preparation) strengthens the stomach and prevents phlegmatic vomiting.

Excretion: Quince is a diuretic but it is said that this is an indirect effect of its astringency. The decocted quince with honey is very diuretic but, sometimes, causes relaxation of the bowels. It causes no constipation, produces colic and gripes. It is useful in dysentery and stops bleeding. It is useful in cases of burning. Urination, especially when its extract or oil is instilled into the meatus. Its oil is useful for kidneys and bladder. When taken after meals, it causes relaxation of the bowels but its excessive use expels the undigested food. Its decoction is given as an enema in cases of prolapsus ani and prolapsus uteri.

21. *Safand asfand* Syrian rue *Peganum harmala* Linn.

Temperament: Syrian rue is hot and dry in the third degree.

Properties: It is pungent and bitter.

Poisons: It is useful against all kinds of poisons.

22. *Safandūliūn* Wild cumin *Heracleum spendilium*

Swellings and pimples: Wild cumin is applied with common rue on herpetic swellings.

Ulcers: It is applied with common rue on fistula.

Head: Patients suffering from coma are fumigated with it, while the patients of phrenitis and lethargus are treated by smearing their heads with its oil. Its fresh extract is instilled into the purulent ear. It is also useful in cases of epilepsy.

Respiration: It is useful in difficult breathing and asthma.

Food: The root of wild cumin is useful in hepatalgia and jaundice.

Excretion: It expels phlegm and proves to be useful in hysteria.

23. *Safidūs* Wild cucumber *Momordica elaterium* Linn.

Nature: Dioscorides states that *safidūs* is the same drug which is called *qiththa' al-himār*. We have already described it as wild cucumber under the chapter dealing with the letter "Qāf". The readers are, therefore, advised to look there for its actions, properties and related aspects.

24. *Saqmūniā* Scammony *Convolvulus scammonia* Linn.

Nature: Scammony is an extract of lablab-like plant. It remains potent for thirty years. Dioscorides described it as a plant having

three big branches emerging from a single root. Each branch measures three or four cubits in length and is greasy and fibrous. The leaves of the plant are similar to those of *'asna* or *lablāb* but comparatively thinner. It is triangular in shape and bears white, round and hollow flowers resembling a bouquet with a strong odour. Its root is white, full of latex and as long as a fore-arm. The latex is obtained from upper end of the root by cutting and scooping it out in a circular manner. Thus the latex flows from the cavity and gets accumulated in a pearl shell. Some people dig a circular pit around the root and line it with some leaves of almond tree. Thereafter they make cut-marks on the root. As a result, the latex of the plant flows down to be collected in a pit. When it gets somewhat dried up, it is taken out as scammony. The best scammony is one which is pure, light and soft. One who desires to test this gum (for purity), he should not be contented with its white appearance but should also bring it near the tongue (to taste it), because the whiteness may also be present when it is mixed with the latex of euphorbia and pea-flour.

Choice: The best scammony bears a bluish white colour like that of the pieces of pearl shell. It is very detergent. It is easy to be rubbed and readily soluble. The bluish variety on being dissolved in water produces a milky white solution. The best way of its use is to cook it with apple to be followed by mixing it with the water of celery. Then it becomes almost harmless. The kind of scammony, which is called *jarmaqānī*, is inferior. To improve the effectiveness of the scammony, it should be roasted with apple after placing it in a paste of flour or alternatively it should be mixed with anise and doucus, and then smeared with almond oil.

Temperament: Scammony is hot and dry in the third degree but its hotness is more than its dryness.

Properties: It is detergent and dissolvent but acts 'like an enemy' for the stomach and liver.

Cosmetics: It cleanses pityriasis, leukoderma and freckles.

Ulcers: When decocted with honey and olive oil and used as a plaster, it dissolves inflammatory swellings of ulcers.

Joints: It is also plastered on the aching joints and hip after mixing it with vinegar and roasted flour.

Head: Its root or the extract is applied locally with vinegar and rose oil in chronic headache. Application of scammony mixed with vinegar and rose oil also cures the patients suffering from chronic headache.

Chest: It is harmful for the heart.

Food: It is very harmful for stomach and liver. The severity is, however, reduced by fifty percent when it is mixed up with the seeds

of celery. It causes pain, nausea and thirst. It also reduces appetite.

Excretion: Scammony purges out the yellow bile forcefully. Its actions vary from place to place. So some books by physicians have recommended its oral use in a larger quantity. It is harmful for intestines and is used as a pessary inducing abortion. Oral intake of the root of its plant, in a dose of 3.5 gm, purges out bile and phlegm. Some physicians state that if scammony is taken in a large quantity i.e. half *dirham* (1.75 gm), it would initially cause retention of fluids followed by pain, nausea and cold perspiration. Sometimes its purgative action is so severe that it becomes fatal. According to some physicians, aged scammony in smaller doses, proves to be a diuretic without causing purgation. Similar is the action when it is taken orally with aloes, salted lupin and aromatic seeds. When used as a pessary with a piece of cotton it kills the foetus. When it becomes harmful, it can be corrected by decocting it with the water of sour quince, apple or rose. Incorporation of sumach in as much quantity as it can be kneaded with it, is also useful. From this its pills are made, dried in shade and kept to be used as per requirement.

Poisons: It is taken orally or used as a paint, it proves to be very useful against poisons of scorpions.

25. *Saqūrdiūn* Water germander *Teucrium scordium* Linn.

Nature: *Saqūrdiūn* is a kind of wild garlic which is smaller than the garden variety. Its leaves and stems are long and bear white flowers. It has been dealt fully under 'garlic'.

Temperament: It is hot and dry upto the fourth degree.

Properties: Water germander is attenuant, deobstruent and detergent.

Ulcers: It heals up big and malignant ulcers.

Joints: It is very suitable to be used in cases of tearing of muscles.

26. *Saqūlūqandriūn* Spleen wort *Asplenium* sps.

In Syria it is called *kaf al-nasr*.

Nature: It is said that spleen wort is a hilly plant growing in shadowy places. Some experts state that it is one of the kind of squill but, according to others, it is something different.

Temperament: It is hot in the first and dry in the second degree.

Properties: It is attenuant and dissolvent and does not possess much hotness.

Food: With oxymel it becomes a wonderful drug for spleen. The use of its leaves decocted with vinegar for forty days, cures splenic disorders. It is also useful in hiccough and jaundice.

Excretion: It removes renal and cystic stones. Wearing it round the neck is said to prevent pregnancy.

27. *Sakbīnaj*

Sagapanum

Ferula persica

Nature: Sagapanum is a gum procured from a tree which itself has no use. It is said to be a kind of galbanum which undergoes some transformation and yields sagapanum.

Choice: The best varieties of sagapanum are those which are relatively thicker and cleaner with a red interior and white exterior. It readily dissolves in water contrary to the samples adulterated with galbanum particularly with white galbanum. The best variety is called *asfahānī* sagapanum.

Temperament: It is hot in the third and dry in the second degree.

Properties: Sagapanum is a dissolvent attenuant, carminative, warming and detergent drug.

Joints: It is useful in paralysis, as well as dislocation of muscles and ligaments. Its oral intake purges out (harmful) matters accumulated in the hips. Its enema elicits similar action. It is also used in cases of cold and malignant arthralgia.

Head: It relieves the headache caused by cold and gases. It is also useful in epilepsy.

Eye: As a *kohl*, it proves to be useful in dim vision, thickness of the eyelids and the (ugly) spots in the eye. It is one of the best drugs used for treating cataract. Application of its powder with vinegar cures the sty.

Chest: It is useful in chest pain, pleurisy and chronic cough. Three fourth of a *dirham* is taken with the juice of common rue in dyspnoea. It effectively clears the chest (congestion) and expels immature humours.

Food: It is useful in dropsy and removes 'yellow water' (ascitic fluid.)

Excretion: It is useful in colic pain and gripes both when taken orally or used as an enema. It removes stones, stimulates sexual desires and is useful in uteralgia. When taken with honey wine it proves to be an emmenagogue, kills foetus, relaxes the bowels mildly and expels viscous humours and yellow water.

Fever: It is useful in intermittent fevers.

Poisons: It is taken orally with wine in cases of insect bite and all the other fatal poisons. Its action is stronger than that of galbanum.

It is also useful in all these cases if applied as a '*luṭūkh*' (a smearing drug).

28. *Suk* A strong preparation of *Emblica officinalis* Gaertn
myrobalan

Nature: Chinese *suk* is the real *suk* which is obtained from myrobalan but now (in the time of Avicenna) due to its scarcity, people prepare it from gall-nut and unripe dates in the same manner as in the case of *rāmak* (a compound preparation).

Temperament: Simple *suk* is hot in first and dry in the second degree.

Properties: It is an astringent and a tonic for the viscera. When used with aromatics, it proves to be deobstruent and dissolvent.

Joints: *Suk* is good for use in neuralgia.

Excretion: Some people believe that aromatic *suk* stimulates sexual desire, causes constipation and proves to be useful in bleeding.

29. *Sukkar* Cane sugar *Saccharum officinarium* Linn.

Nature: Sugar cane and sugar have the same temperament but the former is more laxative.

Temperament: The coldest variety of sugar is the sugar-candy which is also more tenuous. It is mainly considered to be hot in the last phase of the first degree and also possesses some moistness. Old sugar, however, is believed to be dry in the first degree with some moistness. All varieties of sugar become dry with a certain lapse of time.

Properties: Cane sugar is laxative, detergent and abluent. *Sulaimānī* sugar, particularly the sugar candy, is the most laxative variety. The honey prepared from sugar and cane sugar is in no-way less detergent and purifying. On becoming old, all the sugars turn to be tenuous.

Eye: A gum-like substance oozing from the sugar-cane cleanses the eye.

Chest: It softens the chest and relieves it of dryness and roughness.

Food: It is good to be used in cases of excess yellow-bile formation by the stomach. However after being transformed into yellow bile it becomes harmful. It is a deobstruent drug. It is dipsetic but this quality is less than that in its roots particularly the old roots. The old sugar produces turbid blood and cleanses out the phlegm of the stomach. Sugar cane prevents vomiting.

Excretion: Sugar is purgative particularly that which is obtained from sugar-cane. Its action is like the ordinary salt in this respect.

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Sulaimānī and red varieties of sugar are most laxative. They may cause flatulence but in some cases are also believed to remove flatulence. Its oral intake with almond oil proves to be useful in colic.

30. *Sukkar al-'ushr* Sweet exudate of *Calotropis procera*
saccharum Willd.

Nature: *Sukkar al-'ushr* is the manna found on *saccharum* in the form of salt like crystals having some sweetness, pungency and bitterness. It is of two kinds: one called *yamanī* is white and the other known as *Hijāzī* is blackish in colour.

Properties: Being pungent it is also detergent.

Eye: *Sukkar al-'ushr* strengthens the eye-sight.

Chest: It is useful for the lungs.

Food: Ingestion with camel-milk is useful in dropsy. It does not induce thirst unlike other kinds of sugar. This is because it has relatively little sweetness. It is good for the stomach and liver.

Excretion: *Sukkar al-'ushr* is useful for kidneys and bladder.

31. *Sulḥafāt* Tortoise *Testudo elegans*

Nature: *Sulḥafāt* is of two kinds: one is land-tortoise and the other is sea-tortoise.

Organs of the head: The blood of land-tortoise is said to be useful in epilepsy if taken as *nushūq* (powdered or liquefied drug used as a snuff). The bladder of tortoise is useful in stomatitis and is also instilled into the nostrils of epileptic patients.

Chest: Its eggs are recommended for treating the cough in children. Its gall bladder is used as an epitheme in diphtheria.

Poisons: The use of blood alongwith rennet of sea tortoise is good for treating insect bites. It is also useful for those who have consumed poisonous milky plants.

32. *Salkh al-ḥayyah* Slough _____

Nature: Slough has already been discussed in the chapter dealing with the snakes.

33. *Silq* Beet *Beta vulgaris* Linn.

Nature: There are two kinds of beet: one is blackish due to dark green colour while the other kind is well known,

Temperament: According to some physicians beet is hot and dry in the first degree but, in fact, it possesses composite properties. Some other physicians consider it to be cold but regarding its moist nature there is no doubt.

Properties: Beet is boraceous, attenuant, dissolving and more deobstruent as compared to the goose-foot. It is also laxative. The black beet is astringent, particularly when taken with lentil. It is dissolvent due to its alkalinity and astringent earthy nature. All kinds of beet are inferior in chyme formation and are relatively less nutrient than beans.

Cosmetics: A decoction or extract of beet leaves is useful in cases of cold eruptions, alopecia and freckles. The affected organs should be washed with *sodium nitrate* before applying a plaster of the leaf extract. Its juice removes warts and kills the lice.

Swellings: It is boiled and plastered to dissolve and mature the swellings. It is useful for treating purulent pustules i.e. it dissolves them.

Ulcers: Its boiled leaves form a good application for burns and while painting with honey it is useful in ringworm.

Head: Sniffing of its water alongwith cranes' gall-bladder removes facial paralysis and nasal ulcers. Instillation of lukewarm beet, removes ear-ache. Hair wash with it removes the dandruff.

Food: Its root is not suitable to be used in gastric ailments as it induces emesis. This is largely attributed to its alkalinity which causes irritation. It produces bad chyme. It washes off the stomach by its alkalinity with considerable irritation particularly in the sensitive stomach. It is less nutrient but more deobstruent for removing liver obstructions as compared to the country mallow, particularly when used with mustard and vinegar. Similarly it is effective in splenitis. It must be taken with garum and condiments.

Excretion: Black beet is said to cause constipation specially when taken with lentil but the other kinds are laxative. Boiled beet after removing its water and used in smashed form, undoubtedly causes constipation. It is also used as an enema for the evacuation of faeces. All the kinds of beet produce flatulence, borborygmus and gripes. It is good to be used in colic if taken with condiments and garum.

34. *Salūthūn*

Spider wort

Cyanotis axillaris

Nature: Dioscorides states that according to some people spider-wort is the same plant which is called by Syrians as *al-'ankabūt* i.e. spider. Its leaves are like those of the white pine thistle. Freshly boiled plant is taken orally with salt and oil.

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Alimentary organs: Intake of one *mithqāl* (4.5 gm) of the latex of spider wort alongwith the exudate of roots and honey water, induces severe vomiting on the same day.

35. *Salikhah* Cassia bark *Cinnamomum cassia* Blume.

Nature: It is said to be the peel of the root of Syrian mulberry. It is of several kinds: (a) A red variety which is pleasant in taste and smell, (b), a kind having a taste similar to that of the common rue, (c) a blackish purple variety with smell resembling the smell of rose, (d) another black but malodorous variety having thin and cracked peel (e) a whitish kind having a smell similar to that of leek and (f) the last variety which has a thin and hollow stem. This according to some physicians bears a substance resembling cassia bark and treated as cinnamon but some other physicians opine that cassia bark is found only on the cinnamon tree. When cassia bark is found alongwith cinnamon, its potency is almost similar to the later. Some other physicians, however, consider it to be weaker in potency. The best variety is procured from the cinnamon tree.

Choice: The variety of cassia bark which is red, pure, smooth, composed of thick and long wood and a compact odourous stem with a narrow bore is considered the best. It irritates the tongue. The black variety is inferior. The aerial roots are medicinally useful but the wood is devoid of such properties.

Temperament: It is hot and dry in the third degree.

Properties: Cassia bark dissolves thick gases. It is slightly astringent and considerably pungent and tenuous. Because of its pungency, it is erosive. Its astringent nature helps the action of other astringent drugs. Its dissolving properties facilitate the purgative drugs to elicit their affects. These inherent dissolving, astringent and attenuant properties of cassia bark strengthen the organs.

Swellings: It dissolves hard and cold visceral swellings.

Ulcers: Cassia bark is painted with honey on acne.

Eye: As the cassia bark is astringent and dissolvent it is incorporated in medicines prepared for treating eye diseases.

Chest: It is useful in chest affections.

Food: A syrup made from cassia bark or its infusion in a wine is beneficial for the liver and stomach.

Excretory Organs: Cassia bark promotes the urinary and menstrual discharge particularly when their retention is due to the presence of thick humours. It is useful in nephralgia and cystalgia. A sitz bath in the decoction of cassia bark facilitates dilation of the uterus and makes it more slippery. Its oral use or fumigation is also a good

remedy for treating difficult micturation. Some physicians opine that the cassia bark helps to expel the foetus.

Poisons: Cassia bark is taken orally in case of snake-poisoning.

36. (A wild bean)* (Anonymus) _____

Nature: This is a wild bean which is pungent in taste and possesses a little bitterness. It is used orally as such or in the form of a decoction.

Alimentary organs: It is good for the stomach. Oral intake of its decoction proves to be useful for treating gastralgia, nephralgia and hepatalgia.

Excretory organs: It is a purgative.

37. *Summāq* Sumach *Rhus coriaria* Linn.

Nature: There are two kinds of sumach: One is *khurāsānī* and the other is *shāmī*. The latter is smaller in size and is red like lentil. It is suitable for conditions in which acacia and rose are suitable. Its concentrated decoction in water, which is as thick as honey, is useful in all those ailments in which the extract of ophthalmic barberry is administered.

Temperament: Sumach is cold in the second and dry in the third degree.

Properties: *Summāq* is astringent, strengthening and obstruent but the vinegar (prepared from *summāq*) is more attenuant. *Summāq* stops bleeding. Some physicians believe that even by suspending it (around the neck), it acts as an antihemorrhagic drug. It prevents the flow of bile towards the viscera.

Cosmetic: The decoction of *summāq* which is used by tanners, blackens the hair.

Swellings: Its application as a plaster prevents necremia and hematoma caused by contusions. It is useful in whitlow and stop further growth of swellings.

Ulcers: *Summāq* prevents spreading of malignant ulcers.

Joints: A douche with its decoction relieves the organ of the sprain and associated swellings.

Head: It stops pus formation in the ear and local application of its gum on the decayed teeth cures tooth-ache.

Food: It is a stomachic and promotes digestion. It quenches thirst and improves appetite due to its sour taste. It relieves bilious nausea.

Excretion: It causes constipation, stops (excessive) menstrual flow and haemorrhage. It removes abrasions. It is taken as an

* This drug is mentioned without name in all of the available editions. The manuscript also, on which this critical edition is based, does not mention its name.

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enema in dysentery, leucorrhoea and piles. Administration in food is suitable for treating persons suffering from chronic diarrhoea, intestinal ulcers and sprue.

38. *Summānī* Grey quail *Coturnix*

Nature: Quail is a well known bird.

Organs of the joints: Prolonged use of the meat of quail may cause convulsions and distension. This is attributed not only to the fact that these birds pick hellebore but also to their inherent properties. I think that quail picks hellebore due to the similarity of the birds' temperament with it.

39. *Simsim* Sesame *Sesamum indicum* Dc.

Nature: Sesame seeds are rich in oil content. The oil becomes rancid quickly. According to some physicians it is of no use except for causing and moistening effect in the people having malanotic temperament. *Arsimūn* is a variety of sesame which is unpleasant in taste.

Choice: Its seeds elicit stronger effects than its oil.

Temperament: It is hot in the middle and moist in the last phase of the first degree.

Properties: Sesame is agglutinant, laxative and moderately warming. Its oil and decoction is also similar in properties. Its oil is thick. The fried seeds are relatively less harmful.

Cosmetics: It removes hematoma spots from the skin. It is useful both by oral intake and as a paint in cases of ruptures and roughness in malanotic patients. It is a fattening drug; specially so when in peeled form. It lengthens the hair particularly when used in the form of an extract of its plant and leaves. It softens the hair and removes dandruff. Its oil, decocted with myrtle, preserves and strengthens the hair.

Swellings: It dissolves hot swellings.

Ulcers: Sesame is applied on burns. When its oil is taken orally, specially with water of raisin and infusion of aloe, the phlegmatic and sanguinous itches are cured.

Joints: It is applied as a plaster in hardening of the nerves.

Head: Sesame oil is used with madder and rose to treat headache caused by (excessive) heat. The extract of the plant removes dandruff.

Eye: It is applied on throbbing and swollen eyes.

Chest: Sesame is good to be used in dyspnoea and asthma.

Food: It is harmful for the stomach, and causes nausea. It reduces appetite but increases the urge to eat at short intervals. When

taken with honey its harmful effects are removed. It hampers digestion and softens the viscera. The roasted sesame is less harmful. As a food it is extremely oily and induces thirst. In unpeeled state, it gets assimilated quickly but slows down the assimilation of food if taken without peel.

Excretion: Sesame is useful for colon. Its infusion is a potent emmenagogue and consequently it expels the foetus. When fried sesame is taken with poppy and linseed in moderate doses, it promotes semen formation and also stimulates the sexual desire.

Poisons: Sesame is useful for treating cases of bites by horned snakes.

40. *Samak*

Fish

Piscis

Choice: The best fish should be moderate in size. It should not be very big, nor hard of its flesh or dry or greasy. It should neither be brittle, nor full of mucous and intense smell. It should be delicious and palatable. It should not be excessively greasy, thick, fatty or pungent. The best quality fishes do not become fetid quickly after taking out of water. Smaller fish is to be selected amongst hard-fleshed fish and bigger fish is to be chosen amongst soft fleshed ones. The hard-fleshed and saltish fish is considered better than the fresh one. Among different kinds of fishes, carps (*shabbūf*) are the best followed by barbels (*binny*), and snake-fish (*mārmāhī*). Sea-crocodile is considered harmless, *Rajaziah* and *sahm* fishes are thick. *Kan'ath* and snake-fishes are regarded to be good and *farsūk* as the best. In respect of the source, the choice should be in the following order: Fishes which live in rocky water then the fishes which live in sandy water, then come those which live in clear, sweet, flowing water free from straw and putrid matter are good. The habitations should not be in marshy places with seepage. These places should be away from lake without adequate canals and springs. The sea-fish is believed to be light and of good quality. The best fishes are found in deep sea waters. Fishes living in open waters exposed to freely blowing winds are better. The varieties found in turbulent and wavy waters are considered good because such fishes have to struggle more than those living in stagnant waters. The sea-fish is soft and excellent specially that which lives in rocky or sandy seashores. The fish which moves from sea to sweet water canals against the flow of water is also fine because such fish has to struggle harder as compared to the other fishes.

In respect of feeding habits, the fish which feeds on good grass and plant roots is better than that which lives upon the rubbish disposed of from towns into the water. The latter type of fishes take

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inferior plant roots as food. These fishes, however, may be wonderfully pleasant in taste. The best form of its intake is the soup followed by roasted and fried fishes. The fried and spiced fish suit only to the people having a strong stomach. The roasted one is more nutritious but is slow to be assimilated while the reverse is true for the cooked fish. To make a good decoction of fish the water is boiled and then the fish is dropped in it. Fresh and salted fish is considered best. Next in order of wholesomeness is the fish which is preserved with vinegar and spices. The water, in which salted fish, particularly the eel is boiled is highly cleansing. This water is used in dry enemas.

Temperament: All types of fish are cold and, moist but some fishes are relatively more warming e.g. sword-fish, eel and snake fish. The salted fish is hot and dry. These two temperaments (hot and dry) develop in intensity with age. Salted fish resembles garum in all respects.

Properties: Fresh fish produces aqueous phlegm, relaxes nerves but is generally unfavourable except for the persons having relatively 'hot' stomachs. It produces somewhat dilute blood. The ashes of the skin of *sifyānūn* fish, which is found around Jerusalem, is sprinkled in the eyes of the animals to remove corneal opacity. Among all the varieties the salted fish, particularly eel, is used to remove the arrow-tips from the body.

Ulcers: The burnt heads of *samāris* fish remove the excessive flesh and stop the spread of creeping ulcers as it also helps in extracting warts and clearing pimples. The water of salted fish is useful for treating and washing putrid ulcers. The sardine fish and such other small varieties are good for treating the putrid ulcers.

Joints: Frequent enema with an infusion of salted fish is very useful in coxalgia. Fresh salted fish softens the nerves.

Head: A mouthwash prepared from a kind of small fish, named by Syrians as *Ṣīr*, and garum proves to be very useful for treating the patients of malignant stomatitis. When a live electric-ray-fish is brought near the head of a patient, it serves as a sedative and relieves head-ache.

Eye: Rubbing with skin of sword fish proves to be useful in itching of eye-lids. Its burnt skin is incorporated in the medicines for the eye. Application with some salt in the eye removes pterygium. All kinds of fresh fish produce hemeralopia.

Chest: The use of fresh eel cleanses wind-pipe and clears the voice. Salted fish as a whole or the heads of small dried fishes are useful for treating the swelling of uvula. Intake of fish-gel with some soups stops haemoptysis.

Excretion: The cistern of sword fish, though difficult to digest, relaxes the bowels. Eel flesh also relaxes the bowels, specially when taken in fresh state. All kinds of fish soups are laxative. The heads of the small salted fishes cut into the pieces form a good remedy for the anal fissures. Specially useful in this respect is *kausaj* i.e. shark fish. The fishes called *sarak*, snake fish, *farsin* and eel, increase sexual desire. They should be taken when fresh and hot.

Poisons: The heads of salted *simārūs* in burnt form are applied on the bites of scorpions and mad dogs. Similarly all kinds of fish and their soups are an antidote to poisons taken orally or infiltrated through bites. If the soup of the fish known as *ohūṭādis* is taken orally or the part of the body bitten by horned snake and rabid dog is douched with it repeatedly, it proves to be useful.

41. *Saman*

Cooking butter

Nature: The action of cooking butter is similar to that of common butter. It is strong in maturing, relaxing, loosening and warming properties. For details, please refer to '*zud*' discussed under the letter "*Zā*". Some additional matter is given below.

Temperament: *Saman* is hot in the first degree with some moistness.

Properties: It is maturing and dissolvent for soft and average bodies but not for the hard bodies. Its actions differ from butter by being relatively more maturing, relaxing, dissolving and less warming than butter.

Swellings: It matures the swelling specially at the base of the ear (parotitis). These effects are particularly exhibited in children and women but not in hard bodies.

Head: It also matures parotitis in soft bodies.

Chest: Cooking butter softens the chest and matures superfluous matters specially when used with honey, sugar and bitter almonds.

Excretion: Its use with almond, may sometimes cause constipation due to the astringence (of the combination) but in most cases it relaxes the bowels.

Poisons: It is an antidote for the oral poisons.

42. *Samūrniūn*

Wild celery

Apium petroselinum Linn.

Nature: *Samūrniūn* is the wild celery which has already been discussed.

43. *Sunbul* Nard *Nardostachys jatamansi* DC.

Nature: Nard is of two kinds: (a) *Sunbul al-ṭib* (*Nardostachys jatamansi*) which is Indian spikenard and (b) *nārdīn* which is also called Roman nard (*sunbul-rūmī*). Roman nard is weaker than Indian spikenard and *Sūrī* variety in all properties except in promoting diuresis. Roman nard resembles the *sūrī* variety of nard in potency. It is small plant which is collected alongwith its roots. It may sometimes be adulterated with a similar looking plant. The latter can be differentiated from the genuine plant by an obnoxious smell. The mountain nard and its leaves resemble those of safflower. Its branches are also similar but are comparatively yellow in colour, smooth and without thorns. It has generally two or more roots. It bears no fruits or flowers.

Choice: According to Dioscorides the best nard is one which is rich in reddish hair. It is fragrant like the Indian cypres. Small nard causes irritation to the tongue. The Indian and *sūrī* varieties of nard are weaker and longer. Most of its varieties are intertwined and have a stinking odour. Its fibres can easily be rubbed to yield large quantity of a black powder. This is soaked in hot water and decocted to be adulterated with antimony sulphide sold in the market. Its whiteness, acidity, weak potency, lack of taste and smell indicate it to be adulterated. The black Indian variety is better than the red one. The best *nardīn* is one which is fresh, fragrant multirooted, and quite compact so that it can not be easily rubbed. *Nārdīn*, which has a stem of whitish colour, is of no use particularly when it has a foul odour.

Temperament: Nard is hot in the first and dry in the second degree.

Properties: It is deobstruent and dissolvent. The Indian variety is most astringent but its hotness is less than its desiccation. Initially it appears to be tasteless but later on some hotness and pungency is felt. There is some fragrant powder in nard which, if sprinkled stops perspiration. The earth, found around the plant of nard is used as a washing powder for the hand as it is good and fragrant.

Swellings: It is a dissolvent drug.

Head: It prevents catarrh and strengthens the brain.

Eye: Its use as a *kohl* (collyrium) applied with an eye-pencil helps the growth of eyelashes. I think it is quite effective in this respect.

Chest: All kinds of nard are useful in palpitation. It clears the chest and lungs and prevents infiltration of the catarrh causing matters towards these organs.

Food: Nard removes the obstructions of the liver and stomach and strengthens them. It protects all these organs from jaundice. It

prevents matters moving towards the stomach and relieves irritation. Oral intake with any kind of wine proves to be useful for the spleen.

Excretion: All varieties of nard are diuretic but Roman nard is stronger in this respect because it is warmer and less astringent. It is diuretic and is useful in all kinds of uteritis. For this purpose the patient is given a sitz bath in its decoction. It is useful in nephralgia, prevents the flow of matters towards intestines and stops excessive bleeding from the uterus.

44. *Sandrūs* Sandarus *Trachylobium horne mannianum*
Heyne.

Temperament: Sandarus is hot and dry in second degree.

Properties: It is an astringent and potent hemostatic drug. The wrestlers use it to loose (extra) weight, become stronger and prevent breathlessness or panting.

Cosmetics: Its daily intake with three-fourth of its quantity of water and oxymel, makes the body slim.

Ulcers: Fumigation with sandorus dries up the fistulae.

Head: Its fumes stop catarrh. It possesses the property of effectively in soothing odontalgia and setting the gums properly.

Chest: It is useful in palpitation in a manner similar to the yellow amber. It stops bleeding and 'moist' asthma because of its desiccant nature. That is why the wrestlers use it for preventing panting.

Food: It proves to be useful in splenitis when the patients take it orally.

Excretion: It is good for treating chronic diarrhoea and its fumes are useful in piles.

45. *Sūranjān* Hermodactyle *Colchicum luteum* Baker

Nature: Hermodactyle is the root of a plant bearing white and yellow flowers. These flowers blossom first in the valleys and at the base of the mountains. The plant leaves spread over the earth.

Choice: The best kind of hermodactyle should have a white exterior and white interior and it should not be brittle. Both red and black varieties are inferior in quality.

Temperament: Hermodactyle is hot and dry upto second degree. It possesses superfluous moisture. Some experts believe the white variety to be mild in hotness and all other varieties to be strong in potency. If it were not so, it would have not been a purgative. Some others argue that if it was hot, it should have been irritant to the ulcers

Temperament: The white lily known as *sausan āzād'* is hot and dry in the second degree. Wild orris root is highly warming and desiccant.

Properties: The root of the plant is desiccant and moderately detergent. Its oil, whether simple or perfumed, is most dissolvent and laxative. Orris root is stronger than other varieties in potency. It should, however, be considered as an astringent drug. It is a remedy for painful conditions and putrefaction.

Cosmetics: It is useful in freckles and pityriasis specially the root has this property. If used as a wash, it cleanses and brightens the face and removes wrinkles thereon.

Swellings: The leaves and seeds are pounded together thoroughly and used as a plaster for beneficial effect in erysipelas. Similarly it is applied on immature phlegmatic swellings, ulcerative scabies, slough and favus particularly in combination with other drugs.

Ulcers: The root of the plant is useful in hot-water burns owing to its desiccant and moderately detergent nature. Similarly a decoction of *sausan* leaves heals up the ulcers. Best results are achieved when it is used with rose oil. The extract of the roots of orris and its other varieties is decocted with vinegar and honey in a copper vessel to be used in chronic ulcers and wounds. The cultivated variety is the most useful drug for treating burns and scalds.

Joints: It is highly beneficial in nervous breakdown.

Head: The decoction of its root, particularly of wild variety, is taken as a mouth wash for relieving toothache. Oil from the root is suitable for treating ulcers of the head. A decoction of its husk is instilled into the ear to remove tinnitus.

Chest: Root of *sausan*, specially the *īrsā*, is useful in orthopnoea.

Food: It is useful in splenitis. The drug and particularly its oil, is not suitable for the stomach.

Excretion: Its oral intake or application as liniment or its oil is dissolving, deobstruent and softening for the hardness of the uterus. Similarly a decoction of its root with rose oil, forms a matchless remedy to be used in uterine diseases. The oil of orris root expels foetus and prevents gripes. If the root is decocted alone with vinegar or with the henbane seeds and wheat-flour, it relieves hot swellings of the testicles. It is a soothing drug for the patient of biliary ileus. Oral intake of 1.5 *ūqīah* (45 gm) of its oil proves to be purgative. The oil of orris root opens the mouth of pile nodules. Similar property is attributed to the root of *sūs*.

Poisons: It is useful in cases of insect bite and scorpion sting. Oral use of the drug or its extract, syrup or seeds is beneficial in bites

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by all types of insects. Its oil is an antidote against the harmful effects of henbane, coriander and fungus.

48. *Soqūtan* House leek *Sempervivum tectorum* Linn.

Nature: It is said that *soqūtan* is *Ḥayy al-‘ālam*. It is believed to be a kind of *luffāh* i.e. mandrake. It is also said that *soqūtan* is of two kinds: one is rocky and the other is non-rocky.

Temperament: It is predominantly cold and dry and moderately hot and moist.

Properties: It is moderate in potency which accounts for its attenuant and diluting properties. Because of its viscosity like that of wild onion, it proves to be a dissolvent drug. This means that it is an agglutinant and astringent drug. It is odourless and has no sweetness but produces saliva. It combines the pieces of meat in the pot till it becomes a single lump.

Joints: The decoction of *soqūtan* resolves the continuity of nerves and muscles, whether the disruption lies in the middle or at the extremities. It removes (excess) fluids from the joints.

Chest: It removes dryness of the throat and stops haemoptysis and, if used with hydromel, it clears the lungs.

Excretion: *Soqūtan* is useful in intestinal ulcers, abrasions, hydrocele, nephralgia and excessive menstrual bleedings.

49. *Saulān* Juice of buck thorn *Rhamnus persicus* Boiss.

Nature: *Saulān* is a Roman drug.

Temperament: It is hot and dry upto the fourth degree.

Properties: It burns the skin.

Head: The use of its grain alongwith beet juice as a snuff proves to be useful in facial paralysis.

Eye: *Saulān* dissolves the swellings and irritation in and around the eyelids.

50. *Sawīq* The powdered fried wheat or barley ———

Nature: *Sawīq* has been discussed under the chapter dealing with wheat and barley.

Chest: It is useful in chest and lung affections.

51. *Siyūn*

Water parsnip

Sium aquaticum

Nature: *Siyūn* is a water cress found in stagnant waters. It has a mild aroma. It has already been described under the letter "Qāf".

Excretion: Water parsnip is useful in calculus both in decocted and undecocted forms. It is also a diuretic and proves to be useful in dysentery.

52. *Sisārūn*

Nature: *Sisārūn* is the wood obtained from black cumin having somewhat bitter and astringent taste.

Temperament: It is hot and dry in the second degree.

Properties: It is a dissolvent and mildly astringent drug.

Food: Decoction of its root is useful for the stomach.

Excretion: Decoction of its roots acts as a diuretic.

53. *Sisāliyūs*

Lovage

Levesticum officinale Koch.

Nature: *Sisāliyūs* is nothing but a kind of Roman asafoetida. It is indeed similar in appearance but is slightly large in size and comparatively whiter in colour.

Temperament: It is hot and dry in the second degree.

Properties: Lovage is dissolvent, attenuant and carminative. Its roots and seeds relieve the patient of colic and dissolve congealed phlegm. It enhances breeding activity in animals. Its intake with wine particularly in combination with pepper protects against cold exposure while travelling.

Joints: It is useful in backache.

Head: It is also quite suitable to be used in epilepsy.

Chest: Lovage is useful in asthma, dyspnea, orthopnoea and chronic cough particularly when the roots and seeds are taken together. when the powder of its root is kneaded with honey and licked, it clears viscous fluids from the chest.

Food: It dissolves flatulence and relieves one of visceral pain. Its roots promote digestion and are useful for the stomach.

Excretion: It relieves gaseous gripes and facilitates easy delivery in all types of animals. It cures dysuria, uteralgia and hysteria. It proves to be useful for treating pain in viscera. The use of an extract of the plant stem and fresh seeds in a dose of three *obūlūsāt* (22.5 gm) with *maibukhtaj* (a kind of wine) for ten days, cures nephralgia. In nut-shell, it is useful for kidney.

Letter Shin .

1. *Shābābak*

Nature: *Shābābak* has some resemblance with southern wood in potency.

Temperament: It is hot and dry in the second degree.

Head: *Shābābak* is useful in epilepsy and prevents excessive salivary flow trickling from the mouth of children.

Substitute: Sweet marjorum acts as a substitute for *shābābak* in respect of its usefulness in treating epilepsy and other diseases.

2. *Shādhanj*

Blood stone

Haematites lapis

Nature: Blood stone is obtained from mines. Sometimes magnet stone is burnt to yield blood stone having the same action.

Choice: The best kind of blood stone is that which is brittle, even and bears a hard striped surface. It should not be contaminated with dirt.

Temperament: The unwashed blood stone is hot in the first and dry in the third degree. The washed one is cold upto the third degree depending on the quality of washing and it is dry in the third degree.

Properties: It has severe astringency. When blood stone is rubbed and dissolved in water, this property becomes more apparent. It also possesses warming and astringent potency. It is mildly warming, rarefying and considerably desiccant. According to some experts it has some resemblance with pyrite in potency but it is relatively more dry and less hot in nature without causing any rarefaction and detergence.

Ulcers: It is used as a dusting powder to remove excessive growth of flesh.

Eye: It is used in combination with the white of an egg to cleanse and heal ulcers of the eye. As a single drug it proves to be useful in treating the roughness of eyelids. Hot swellings on the eye-lids should be treated initially with dilute application followed by gradually increasing concentrations. It may also be used as a dusting powder in cases of excessive growth of flesh. Sometimes it is applied as such for treating ulcers of the eye.

Excretion: It is taken with wine in dysurea and persistent menstruation. Blood stone corrects the irregularity of seminal emission.

3. *Shāhtarj*

Fumitory

Fumaria officinalis Linn.

Choice: The best fumitory is that which is green, fresh and bitter.

Temperament: It is cold in the first and dry in second degree.

Properties: Fumitory purifies blood and removes obstructions. It is cold because of its astringent taste and hot due to its bitter taste. The seeds of fumitory are stronger (as compared to its other parts).

Ulcers: It is taken orally in case of itching and scabies.

Head: Fumitory strengthens the gum.

Food: It strengthens the stomach and removes hepatic obstructions.

Excretions: It relaxes the bowels and is also a diuretic. Its oral dose ranges between ten *dirham* (35 gm) to half *raṭl* (223 gm). It is taken with sugar. The dose of dry fumitory, when used in the form of decoction with other drugs is upto ten *dirham* (35 gm). Powdered fumitory should be taken from three to seven *dirham* (10.5 to 23.5 gm).

Substitute: The substitute of fumitory is *senna makki* in half of its quantity specially in cases of scabies and chronic fevers.

4. *Shabb*

Alum

Alumen

Nature: According to Dioscorides there are many varieties of alum but three of them are used in medicine viz. (a) cracked (b) moist and (c) round. The first i.e. cracked variety is called *yamānī* alum. It is yellowish white and astringent with some sourness resembling that of the burnt alum. Another kind which is stony and astringent in taste is not considered to be (genuine) alum.

Temperament: It is hot and dry in the second degree.

Properties: It has the potency of resistance and desiccation and stops all kinds of bleeding and flow of superfluous matters towards an organ. It is more astringent than the white acanthus; its barks and roots are specially so. These two (barks and roots) are believed to be stronger in all respects.

Cosmetics: Alum is applied with pitch water in cases of lichen, lice, ozostomia and stench of the armpit.

Ulcers: It is applied on complicated and corroded ulcers in combination with equal weight of dregs of wine. It is also applied on rodent ulcers and burns in combination with *Indarānī* salt in equal proportion.

Head: Its decoction, when used as a mouth wash, is beneficial in odontalgia.

5. *Shibth*

Dill

Peucedanum graveolens Berth.

Temperament: The warming property of dill is in between the second and the third degree and desiccating property is in between the first and second degree. In burnt form, however, both the proper-

ties i.e. warming and desiccating are changed to the second degree.

Properties: It is maturative for cold humours, sedative for painful conditions and is a carminative drug. Its oil also possesses similar properties. In fresh state, it is strongly maturative while the dried form is very dissolving.

Swellings: It matures swellings.

Ulcers: Its ash is useful in flabby ulcers.

Joints: Dill oil is useful in neuralgia and allied diseases.

Head: Dill, and particularly its oil, is soporific. Its extract is useful in melanotic otalgia and dries up (excessive) ear secretions.

Eye: Its constant use weakens the eye sight.

Chest: Dill and its seeds are lactagogue specially when taken with the lactogenic soups.

Food: It proves to be useful in cases of hiccough attributed to the floating food material in the stomach. Galen believed dill to be harmful for the stomach and considered its seeds to be purifying.

Excretion: Dill is useful in gripes. Its enema or sitz bath inhibits semen formation. Its seeds stop the growth of piles while its ash is good for gastric and penial ulcers.

6. *Shabram*

Spurge

Euphorbia pityusa Linn.

Nature: Spurge grows in gardens. Its stem is thin, even, smooth and fibrous. I believe that its leaves are soft and resemble those of tarragon.

Choice: The best quality of spurge should be light in weight and reddish in colour like that of an entwined skin-membrane. Its fibres should be thin. Spurge having two thick and slightly red stalks with light pulp is considered good. The hard and the thread-like spurge is inferior in quality, The Persian variety is also of inferior quality. These varieties should not be used (in medicine).

Temperament: Hunain states that spurge is hot in the first phase of the second degree and dry in the last phase of the third degree. As far as its milk is concerned, these qualities are of higher order tending towards the fourth degree.

Properties: It is astringent and pungent. It possesses the potency of opening the mouth of the vessels. That is why its use is abandoned. Even on improvement, it can be of no benefit as discussed elsewhere. In nutshell it is harmful, particularly to the people having hot temperaments.

Head: The milk of spurge facilitates tooth extraction.

Food: It is harmful for the stomach and liver and is taken orally for treating dropsy. For this purpose it should be soaked in the juice

of endive, fennel and garden-night-shade for three days. This material on drying is used for making tablets with requisite quantities of Indian salt, turpeth, myrobalan and aloe. In this form it becomes most beneficial.

Excretion: Spurge is incorporated in purgatives to purge out black bile, phlegm and water. In ancient days the physicians used it for this purpose but later on, after noticing its harmful effects on libido, semen formation and opening the mouth of anal vessels, they gave it up. Sometimes even after using corrective procedures, no gain is achieved. This is because the method involves repeated soaking of unpounded drug in pure milk continuously for a day and night weakening it in potency and eliminating its property of removing bad humours. One who can not avoid its use, should mix it up with anise and fennel. Its dose ranges from one *dāniq* (6 gm) to four *dāniq* (24 gm). It should be noted that these uses and doses pertain only to the herb and not to its milk. The milk is absolutely of no use and probably nobody ever took it orally. To control excessive diarrhoea caused by it, the patient should be given sitz bath in cold water. In colic pain it should be taken with gum ammoniac, false bedellium, sagapanum and a little quantity of the wolf's dung. This has been dealt with under the chapter on colic.

Fevers: As it causes fever, it is advised that its use should be avoided during temperature.

Poisons: Two *dirhan* (7 gm) of spurge is fatal.

7. *Shajarah al-baq*

Elm tree

Ulmus dryopteris

Nature: Elm tree is the same drug which is called *dirdār* described earlier under the letter "*Dāl*".

Temperament: Elm tree is cold and dry in the first degree.

Cosmetics: It is painted with two *dirham* (7 gm) of vinegar on exfoliation.

Ulcers: It heals up the fresh wound. Its fibres are wrapped around the wounds (as dressings) to cure them.

8. *Shajarah maryam*

Greek cyclamen

Cyclamen europaeum Linn.

Nature: Cyclamen is also called *bukhūr-i maryam*. Cyclamen is said to be of three kinds; one is fruitless and the two other kinds bear fruits.

Head: Cyclamen is useful in cold coryza.

Eye: It is also beneficial in cases of catarrh.

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9. *Shahm*

Fat

Sevum adeps

Nature: Fat is a well-known substance.

Temperament: The fat from (uncastrated) males is more warming and drying than that of castrated animals. The fat obtained from aged animal is lighter.

Properties: Duck fat is more attenuant and warming than the fat from a hen. Fat procured from a cock is in between of these two in quality. Camel fat is extremely warming. The properties of cow's fat lie between those of lion and goat. Bear's fat is tenuous. Fat of male animal is stronger in all respects. Wild ass's fat is the most astringent and the fat from a he-goat is considered a very dissolving agent.

Cosmetics: Bear and goose fats are useful in alopecia. Fat obtained from an ass is also useful for this purpose. It is also useful for removing the body scars and spots. Goose fat is useful for treating eruptions on the face and lips.

Swellings: Swine fat is used in swellings. Fat procured from a lion dissolves the swellings and their hardness.

Ulcers: Fat from an ass is useful for treating burns.

Joints: Camel fat is useful in convulsions.

Head: Goose-fat removes otalgia. Similarly the fat from a fox is very useful in otalgia. Hens' fat is useful in the dryness of the tongue.

Eye: The fat obtained from fishes is useful in cataract. If used with honey, it improves the eye-sight. The fresh snake-fat is useful in day-blindness as well as in cataract. Its application prevents re-growth of the plucked hair on eye-lids.

Excretion: Goat fat is useful in conditions of inter intestinal irritation. It is also useful in ulcers of the intestines; the fat from a she-goat proves to be more effective than that from a pig in this respect. This is because of its quick coagulating property but the swine-fat is considered as the most soothing drug for treating irritation. Fumigation with hump of a camel is used for beneficial effect in piles. All kinds of soft fats, like that from a hen and similar birds, are useful in uteralgia but the stale fats are harmful. Goose fat is useful for the uterus.

Poisons: Swine fat is useful in cases of insect bite. Fats procured from an elephant or a stag, when smeared on the body, drive away the insects while that from a she-goat removes the ill effects of spanish flies i.e. cantharides vesicatoria.

10. *Sharbīn* Cedar tree *Cedrus libani* Loud.

Nature: *Sharbīn* is also called cedar tree. It has already been discussed as *Qaṭrān* in an earlier chapter. We propose to describe here only the properties related to the tree. The latter belongs to pine species. Its fruit is similar to that of cypress but is somewhat smaller in size. It has two kinds of thorns: (a) long and (b) short.

Properties: The bark of this tree is astringent.

Head: One, who takes the fruit of this tree in excessive quantity is liable to suffer from headache due to its warming properties. Besides there may be irritation due to alimentary disorders. When its leaves are decocted with vinegar and used as a mouth wash, it removes odontalgia.

Chest: Its fruits are useful for controlling cough.

Food: The fruits are harmful for the stomach due to inherent irritant properties but are useful for the liver.

Excretion: The fruit of *Sharbīn* is useful for treating strangury. When taken with pepper, it becomes diuretic. The use of its barks as a fumigant expels foetus and placenta. Oral intake as a single drug induces constipation and sometimes it may cause strangury.

Poisons: The fruit of *sharbīn* is taken with wine to counter poisonous effects of a sea-rabbit. Its massage with fat obtained from a stag repels the insects.

11. *Sha'r* Hair *Pile pilus*

Properties: The burnt hair are strongly warming and desiccating.

Cosmetics: Burnt hair clean the teeth and its solution promotes hair growth.

Ulcers: Burnt hair facilitate rapid drying up of the wet, filthy and flabby ulcers.

Poisons: Human hair are plastered with vinegar in cases of rabid dog-bite.

12. *Sha'r al-ghūl* Maiden hair fern *Adiantum capillus-veneris* Linn

Nature: *Sha'r al-ghūl* is a plant to be uprooted with its roots from the earth. It is somewhat reddish black in colour. Its roots and upper parts are wide-spread and crooked.

Temperament: It is hot and dry.

Chest: It clears chest and lung congestion.

13. *Sha'ir-wa-sult* Barley and pearl-barley *Hordeum vulgare* Linn.

Nature: Barley is a well-known grain. Its peeled variety is termed as *sult* or pearl barley but both are similar in actions.

Temperament: It is cold and dry in the first degree.

Properties: It is detergent and-comparatively less nutritious than wheat. Barley water is more nutritious than its flour. To both is attributed the property of reducing the intensity of humours. The water of pearl-barley enhances moistness in the body. All kinds of barley water are flatulent.

Cosmetics: Its hot liniment is applied on freckles.

Swellings: A broth like decoction prepared in combination with pitch resin and water is applied on hard swellings. Barley with or without husks is also applied on hot swellings.

Ulcers: A decoction with strong vinegar is applied as a plaster to cure ulcerated scabies.

Joints: Its plaster with quince and vinegar on gout stops the flow of superfluous matters towards joints.

Chest: Barley water is useful for treating diseases of the chest. Its intake with fennel seeds enhances milk secretion. Application of a plaster prepared with its flour, melilote and the husk of poppy seeds proves to be beneficial in cases of chest pain.

Alimentary organs: Barley water is not suitable for the stomach.

Excretion: Its flour causes constipation. Its decoction has a similar action. The husk of barley is diuretic. Wheat-husk is highly diuretic.

Fevers: Barley water elicits a cooling and moistening action in fevers. In case of hot fevers plain barley is used and in cold fevers it is used with celery and fennel. The oral intake of its decoction prepared with fig and water mead is useful in phlegmatic fevers.

14. *Shafūdis*

Wild cucumber

Temperament: *Shafūdis* is hot in potency.

Properties: Its extract is taken orally in painful conditions.

Cosmetics: The fresh wild cucumber is taken with wine in cases of pityriasis.

Ulcers: It promotes adhesiveness in chronic ulcers and is also sprinkled to remove the growth of excessive flesh.

Joints: It is painted with vinegar on gout. A *qairūfī* is prepared with it to be used in spinal pain.

Respiration: A cough lincture is prepared by mixing it with some sweets.

Food: Two *dirham* (7 gm) of wild cucumber is taken orally with honey wine in cases of the irritation in the stomach.

Excretion: It is taken with two *dirham* (7 gm) of honey wine in dysentery and dysuria. Use of its suppository by a female patient helps in regular menstruation.

15. *Shāqaiq al-nu'mān* Red anemone *Anemone coronaria* Linn.

Nature: The distinguished physician Dioscorides states that some people call red anemone as *Armiyūn* and *'aminūn*. It is of two kinds: (a) wild anemone and (b) garden anemone. The garden anemone is also of two kinds: one having red flowers and the other bearing milky white and purplish flowers. Its leaves are similar to those of coriander but are comparatively thinner. The external parts of the plant are close to the ground level with its thin green branches spreading over it. The red variety bears poppy-like flowers having black or bluish-black tips in the centre. Its knotty roots are equal to or bigger than that of olive tree in size. It is an entangled mass. The wild variety is bigger than the garden variety. Its leaves are comparatively wider and harder. The cluster of seeds is longer than that of garden variety. The colour of the flowers of wild variety is dark red. Its roots are numerous and thin. Some of these varieties are black in colour and more pungent than the other varieties. Due to ignorance some people fail to distinguish among wild red anemone, *dahmūniā al-barri* and poppy, having red flowers and flower-tips. Yellow thistle has some resemblance with wild anemone. A kind of saffron-coloured exudate is found in this flower but the colour of exudate out of its flower-tips is white. The difference between anemone and *arghāmūni* is that the former has no exudate. Further it has no resemblance with poppy or pomegranate. It has, however, some similarity with the branches of common asparagus.

Temperament: Red anemone is hot in the second degree. It is also moist.

Properties: It is detergent and dissolvent. According to Galen it is detergent, abluent, absorbent, deobstruent and dissolvent.

Cosmetics: Red anemone blackens the hair when it is used in combination with the shell of walnut. Its leaves and branches, as such or as a decoction, beautify the hair.

Swellings: It is decocted and painted over not-so-hard swellings. It is used as an evacuative drug in cases of carbuncles and pimples with hot inflammations.

Ulcers: The dry red anemone is used for treating filthy ulcers and exfoliation. It cleanses the ulcers and is the most effective drug for exfoliation and ulcerative scabies.

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Head: Its extract is used as a snuff to remove congestion from the head and brain. Its roots are chewed to absorb the moist humours from the head. The roots remove ringworms also.

Eye: The extract of red anemone is useful in cases of day-blindness, corneal-opacity and the scars of ophthalmic ulcers. It is plastered in the form of a decoction prepared with *filā* (liniment) for treating hard swellings around the eyes.

Chest: The intake of its leaves and branches decocted with origanum shrub acts as a lactagogue.

Excretion: Used in the form of a suppository it regulates the menses.

16. *Shaqāqul* Secacul *Asparagus recemosus* Willd.

Temperament: Secacul is hot with a little moistness.

Properties: It is a mild laxative and its 'preserve' is similar to that of carrots in property.

Excretion: Secacul stimulates the sexual desire.

Substitute: The substitute for secacul is sweet pellitory.

17. *Shukā'ī* Arabian thorn *Onopordon arabicum*

Nature: *Shukā'ī* is a plant with roots similar to that of Indian cypress. It is highly bitter and, sometimes, called *kathīr al-ʿaqd* i.e. "multi-knotted".

Properties: *Shukā'ī* is more astringent than white acanthus. Its barks and roots are stronger (in action) than the other parts of the plant.

Head: A mouthwash with the decoction of arabian thorn is useful in odontalgia. The plant as such or its roots and fruits are also useful in uvulitis.

Food: It is useful for stomach and liver (ailments).

Excretion: The decoction of its roots stops excessive menstruation. This decoction is also used as a suppository and a sitz bath in it in cases of anal swellings is also useful.

Fevers: It is useful in chronic fevers particularly in children.

18. *Shal* Bael tree *Aegla marmetos* Corr.

Nature: *Shal* is an Indian drug resembling the ginger.

Temperament: It is hot and dry in the second degree.

Properties: *Shal* is bitter, pungent, astringent and carminative.

It possesses a potency similar to that of honey. It is a wonderful dissolvent and attenuant drug.

Joints: *Shal* is beneficial for the nerves and is used in nerve-injuries.

19. *Shaljam* Turnip *Brassica rapa* Linn.

Nature: *Shaljam* is also called *lift* which has already been discussed.

20. *Sham'* Bees wax *Cera alba*

Nature: Bees wax has been discussed under *mūm*.

Excretion: It increases the sexual desire and acts as a diuretic drug.

21. *Shanjār* Dyer's bugloss *Onosma echioides* Linn.

Nature: *Shanjār* is the same drug which is called *khas al-ḥimār* It is of various kinds. Its leaves resemble those of lettuce and are sharp-edged, spiky and black tinged. The leaves become red in winter. Its wood is blood-red in colour which stains the hands when caught.

Choice: The leaves of *Shanjār* are weakest (in action) as compared to the other parts of the plant.

Temperament: It is cold in the first and dry in the second degree.

Properties: The variety of *shanjār* called *anūqalyā* is astringent and bitter. *Qalūsī*, variety is very astringent. However, the variety, called *anūlūs*, is more astringent and pungent than the above two varieties. There is another unnamed variety which is close to the last mentioned variety in properties. All these varieties are astringent and desiccant and induce perspiration when they are anointed on body with oil.

Cosmetics: Application in the form of a *ḥilā'* proves to be useful in pityriasis, leukoderma and jaundice.

Swellings: It is plastered with fat on scrofula. It is painted in cases of exfoliation. It is also painted with barley-flour, particularly *qāblūs* variety, for treating erysipelas.

Ulcers: When applied as an ointment *shanjār* heals the ulcers.

Head: It is very useful drug for treating otalgia.

Food: Oral intake is useful in jaundice. The variety called *anūqalyā* is particularly so. It is the best drug to be used in splenalgia. The bark of *shanjār* enhances the process of food digestion in the stomach.

Excretion: The oral intake, particularly of the unnamed variety, in a dose of 4.5 gm with caraway or hyssop or garden cress, expels

the tapeworms and other worms. The variety called *anūqalyā* is useful in nephralgia.

Poisons: The variety, called *afsūs*, is very useful for treating the cases of snake-bite. The nameless variety is also used as a plaster or taken orally for similar effects.

22. *Shūkrān* Hemlock seed *Conium maculatum* Linn.

Nature: According to Dioscorides hemlock-stem resembles that of fennel while its leaves are similar to those of cucumber. Its flowers are white and the seeds are like anise. According to Rhupos its leaves resemble those of *yabrūj* i.e. belladonna but are comparatively smaller and more yellow. Its roots are thin. It has no fruits. Its seeds resemble *ajowain* in colour but have neither taste nor smell. The seeds contain mucilage. According to Masiḥ it is a kind of aconite. I do not consider it to be correct and believe it to be the same drug which is called *qūniūn* in Greek and then translated in Arabic as *shūkrān* and, sometimes, as *bīsh*. The characteristics of *qūniūn* are like those of *bīsh* and so the physicians hold widely different opinions in this respect.

Temperament: It is cold and dry from the third to the fourth degrees.

Choice: The best varieties of hemlock are *iqriḥī*, *aḥiqī* and *qāliqalā*.

Properties: Hemlock seeds are anti-hemorrhagic, coagulant and anaesthetic.

Cosmetics: Its painting on shaved skin prevents regrowth of hair. This is attributed to its cooling properties.

Swellings: The extract of hemlock seeds soothes erysipelas and herpetic swellings.

Joints: It is painted over acute gout.

Head: Its extract is useful for treating accumulation of secretion in the ear.

Eye: Its extract is used in ophthalmalgia.

Chest: Its plaster stops (excessive) enlargement of the breast. It is also an anti-lactogenic drug.

Excretion: It stops excessive flow of menses and is useful in uteralgia. Its plaster prevents testicular enlargement. Local application on (external) seminal organs controls (excessive) nocturnal emissions.

Poisons: Hemlock seeds are fatal but its harmful effects are rectified with pure wine.

23. *al-Shaukah al-baidā'* White acanthus *Fagonia arabica* Linn.

Nature: White acanthus is the same drug which is called *bādhāward*.

Temperament: It is cold and dry in the first degree.

Properties: Hanging the drug is said to drive away the insects.

Swellings: Its roots are plastered on phlegmatic swellings.

Organs of the head: Its roots, if decocted and used as a mouth wash, are good for odontalgia.

Joints: The decoction of white acanthus is useful in gout.

Organs of the chest: The oral intake of a decoction of its roots proves to be a good drug for treating haemoptysis.

Food: It is useful in the atony of the stomach.

Excretory organs: The oral intake of a decoction of its roots, is useful in chronic diarrhoea and acts as a diuretic.

Poisons: It is also useful for alleviating irritations caused by insect bites.

24. *Shaukah miṣriah* Gum arabic tree *Acacia arabica* Willd.

Temperament: Gum arabic tree is cold in the first and dry in the second degree.

Properties: It is a desiccant and an anticephalalgic drug.

Ulcers: The roots and particularly the seeds of gum arabic tree act as a powerful healing drug.

Respiration: It is useful in pharyngitis.

Food: It is also useful in gastritis.

25. *Shaukah al-yahūd* Eryngium *Eryngium planum*

Temperament: *Shaukah al-yahūd* is hot.

Properties: It is attenuant and dissolvent.

Joints: It is useful in tetanus.

Head: It is used as a mouth wash in molar pain.

Chest: It is also useful in cases of haemoptysis attributed to chest affection.

Alimentary organs: Its roots are useful for controlling continuous vomiting.

Excretory organs: Its roots are also suitable for treating chronic leucorrhoea.

26. *Shūnīz* Black cumin *Nigella sativa* Linn.

Temperament: Black cumin is hot and dry in the third degree.

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Properties: It is a pungent, antiphlegmatic, detergent, carminative, anti-flatulent and strongly purifying drug.

Cosmetics: It cleanses and removes inverted warts, freckles, pityriasis and specially the (patches of) leukoderma.

Swellings: It is applied with vinegar on acne and dissolves phlegmatic and hard swellings.

Ulcers: It is also applied on phlegmatic ulcers and ulcerative scabies.

Head: Inhaling of roasted drug kept in a linen cloth is useful in coryza, It is painted on the forehead in cold headache. It is soaked overnight in vinegar and pulverized next day to be used as a snuff for treating all kinds of chronic headache and facial paralysis. It is one of the deobstruent drugs for ethmoid bone. Its decoction with vinegar is beneficial in odontalgia, specially when used in the form of a mouth wash with bark of pine-tree.

Eye: A snuff prepared from its powder mixed with myrtle oil prevents cataract formation.

Respiration: Its oral intake with sodium nitrate is beneficial in orthopnoea.

Excretion: Black cumin kills tapeworms and other worms if painted on the umbilicus. Its prolonged intake for several days with honey promotes menstrual flow. It is taken with hot water in cases of cystoliths and nephroliths.

Fevers: It removes phlegmatic fevers in general and melanotic fevers in particular.

Poisons: The smoke of black cumin drives out the insects but some people think that its excessive use is fatal. It is one of the useful drugs for treating cases of tarantula bites. It is taken in a dose of one *darkhamī* (4.5 gm).

27. *Shahdānaj* Hemp seed *Cannabis sativa* Linn.

Nature: *Shahdānaj* is the seed of Indian hemp-tree which was discussed earlier under the title "*qinnab*". The reader is advised to go through both the chapters for full information on this drug. Hemp is of two kinds: (a) garden hemp which is well known and (b) the wild hemp. According to Ḥunain wild hemp grows in wasteland and equals the size of "forearm". Its leaves are predominantly white; the fruits resemble pepper and the seeds are similar to those of bugle plant (*ḥab al-simmah*). Its oil, extracted from seeds, has already been discussed under the title *ḥab al-simmah*.

Temperanment: It is hot and dry in the second degree.

Properties: It is dissolvent of gases and is also strongly desiccant. The humour, produced by it, is inferior in quality.

Swellings: A decoction of the roots of wild Indian hemp, if plastered on hot swellings of hard organs having inflaming chymes, dissolves hardness and gives relief.

Head: It causes headache due to its hotness. Its extract is instilled in cases of obstructive otalgia and otorrhoea. Oil extracted from hemp-seeds and leaves removes the dandruff.

Eye: It causes dark sightedness.

Food: Hemp seeds are harmful to stomach.

Excretion: It makes the semen viscid. Juice of hemp-seeds, also called *shāhdānaq*, is a mild laxative. Half *raṭl* (225 gm) of its extract removes constipation, expels phlegm and yellow bile. It is similar to carthum seed in properties.

28. *Shahmānaj*

Temperament: *Shahmānaj* is hot and dry in the second degree.

Properties: It is dissolvent and very attenuant and, when placed under the pillow of children, it stops sialosis.

Joints: If taken with wine, as a snuff or applied as a paint, it proves to be useful in paralysis.

Head: It clears the brain (from excessive humours) when sniffed with water. Oral intake with wine proves to be useful in facial paralysis and epilepsy.

Food: It is useful for controlling excessive gastric juices. Some people believe it to be useful in excessive salivation in children when the drug is placed under their heads.

Excretion: *Shahmānaj* is useful for treating cases of gases in the uterus and piles.

29. *Shih*

Wormwood

Artemisia maritima Linn.

Nature: Wormwood is of two varieties: A thorny variety having leaves similar to those of cypress. Its wood is hollow and used for the purpose of fumigation. The second variety has leaves resembling those of tamarisk. A third variety has also been described. It is called yellow arminian *sabarniyūn* or sea-absinth.

Choice: *Armani* variety is the best variety of wormwood.

Temperament: It is hot in the second and dry in the third degree.

Properties: All varieties of wormwood dissolve the gases. It is astringent but this property is of lesser intensity than in absinth. It is more warming and bitter than absinth. It possesses some saltiness also.

Cosmetics: Its ash is useful in alopecia specially when painted with olive oil or almond oil. Its oil facilitates quick growth of the beard.

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Swellings: It reduces the swellings and furuncles.

Ulcers: Its use protects a person from rodent ulcers and harmful effects of black bile.

Head: It causes headache.

Eye: When the eyes are fomented with its water, it relieves conjunctivitis.

Respiration: It is useful in dyspnoea.

Food: Wormwood, particularly its third variety, is harmful for the stomach.

Excretion: It expels and kills tapeworms and other worms. It is an emmenagogue and diuretic. It is stronger than absinth in these properties.

Fevers: The oil of wormwood is useful in shivering cold.

Poisons: It is useful for treating cases of scorpion and tarantula bites and against some other kinds of poisons.

30. *Shir khushk (Khisht)* Manna *Fraxinus ornus* Linn.

Nature: Manna is found as dew drops falling on the tree of *Kkilāf* i.e. willow and on that of gum tragacanth in *Hirāt*.

Properties: It is a detergent drug.

Temperament: It is moderate in temperament.

Excretory organs : It is similar to *turanjibin* in purgative property but is rather stronger in potency.

31. *Shīṭaraj* Lepidium *Lepidium latifolium* Linn.

Nature: The Indian variety of lepidium consists of small and thin pieces of wood with rinds similar to those of cloves. Its broken parts are somewhat red and black in colour. It grows on old walls specially in regions having no snowfall. Its leaves are like those of garden cress. In summer it has plenty of leaves. Later the leaves begin to reduce and gradually vanish. It is odourless and resembles garden cress. It is similar to caraway in taste, odour and potency.

Temperament: It is hot and dry in the last phase of the second degree.

Properties: It is bitter and ulcerative. Its taste and smell as well as potency are like those of caraway.

Cosmetics: Lepidium, if painted with vinegar, is useful in *pityriasis alba* and leukoderma.

Ulcers: When painted with vinegar it removes exfoliation and scabies.

Joints: Its oral intake is useful in arthralgia.

Food: Its paint reduces splenic enlargement.

Excretion: When suspended around the ears, its root is said to cure crystalgia.

Substitute: Madder acts as a substitute for lepidium.

32. *Shailam* Tars darnel *Lolium temulentum* Linn.

Nature: Tars darnel is a herb which grows along with wheat.

Temperament: According to Galen it should probably be classified as hot in the first degree.

Properties: Tars darnel is attenuant, detergent and dissolvent.

Cosmetics: If painted with sulphur, it proves to be useful in pityriasis.

Swellings: If applied with linseed, it dissolves the swellings caused by scrofula and allied diseases. Its applications with pigeon excreta and linseed cuts open the swellings.

Ulcers: Tars darnel, which grows along with wheat, is painted or sprinkled to cure the ulcers. It is also painted to cure ringworm as well as plastered on wounds with the peels of radish.

Joints: It is decocted with water mead and painted on sciatica.

Head: Tars darnel causes intoxication and giddiness.

Excretion: Fumigation with this drug facilitates conception specially when used with barley.

Letter *Ṣād*

1. *Ṣābūn* Soap *Saponis*

Properties: Soap is an ulcerative and "putrefactive" drug.

Excretion: It removes colic pain and purges out immature matters.

2. *Ṣībr* Small aloe *Aloe littoralis* Koenig

Nature: The concentrated extract of aloe is somewhat reddish yellow in colour. It is of three varieties: (a) *Saqṭarī* aloe; (b) Arabian aloe and (c) *sanjābī* aloe. According to some people it is similar to the plant *rāsīn* i.e. elecampane but this is not true.

Choice: Its best variety is *saqṭarī*. Its juice resembles saffron water and its smell is similar to that of bright myrrh. It is brittle and free from pebbles. The Arabian variety is comparatively less yellow, lighter and not so shining. Nevertheless it is more viscous and hard. The *sanjābī* variety is inferior in quality, putrefactive in nature, heavy, light yellow in colour and less bright. When it becomes old, it acquires a blackish colour.

Temperament: *Ṣībr* is hot upto the second degree and is somewhat dry. Sometimes it is said to be hot and dry in the third degree but this is not true.

Properties: Aloe has the astringent, desiccant, fattening and soporific properties. The Indian aloe is very useful. It is desiccant without causing irritation and is mildly astringent. Its use does not cause irritation to the dirty ulcers because of its less irritant nature.

Cosmetics: It is applied with honey on the (ugly) scars. It heals ulcerative whitlow and when used with wine, it prevents the falling of hair.

Swellings: With wine or honey it proves to be useful for treating anal and penile swellings. This effect is particularly evident in muscular swellings located at both the sides of the tongue.

Ulcers: It is suitable to be used in ulcers which are difficult to heal e.g. anal, penile, nasal and oral ulcers. It is also useful in cases of fistula.

Joints: It is useful for treating arthralgia.

Head: Aloe removes superfluous bilious matters from the head. Its painting with rose oil on the forehead and temples alleviates headache. It proves effective in nasal and buccal ulcers. It is one of the useful drugs for treating contusion of ear and muscular swellings at both the sides of the tongue. The effect is particularly seen when it is painted with wine or honey. The classical system of medicine mentions that aloe purges out black bile and is useful in melancholia. Persian aloe increases intelligence and strengthens the heart.

Eye: It is useful in ocular ulcers, pain, swelling and irritation of the canthus. It also dries up the moisture of the canthus.

Food: Aloe cleanses the superfluous bilious and phlegmatic matters of the stomach particularly when it is taken two spoonfuls with lukewarm water. It restores the lost appetite. It cures the feeling of burning and inflammations in uvula caused by "bilious warmth" of the stomach. It becomes purgative and prevents spoiling of food in the stomach. For this purpose a few pills of it are taken with appropriate correctives in the morning and evening. Sometimes it cures colic within a day. It removes hepatic obstructions but it may also be harmful for the liver. It removes jaundice due to its purgative property.

Excretion: One and a half *darkhami* (5.25 gm) of aloe, taken with hot water, proves to be a purgative. A dose of three *darkhami* (10.5 gm) causes complete evacuation. Moderate dose of two *darkhami* (7 gm) with honey water, purges out phlegm and bile. When it is given with any purgative, the probability of harmful effects is reduced. It is a well tolerated purgative for the stomach. The treated aloe is a weaker purgative but it is more useful for the stomach. Combination with honey reduces its potency to such an extent that it does not purge out (the whole matters) by absorption but only expels the portion

Ulcers: Ash of purple murex cleanses, purifies and heals the ulcers. Burnt oyster shell mixed with salt, is used as a dusting powder on burns which stays there for a while till the wounds become dry. Ash from all kinds of oyster shells is useful in scabies. Oyster shells, alongwith their pulp, are useful for treating the wounds particularly those on the nerves. The use of powdered oyster shells with frankincense and myrrh promote adhesiveness in wounds. Similar effects are elicited in combination with the dust of the millstone. Galen also experimented sea shell and found it similar to oyster shell in properties.

Joints: Oyster shell or its plaster gives relief in gout and associated inflammation as also in all kinds of arthralgia.

Head: The burnt purple murex is used as teeth-brightening agent, specially so when it is burnt with salt. The use of oyster shell, rubbed together with vinegar, stops epistaxis.

Eye: Ash from all kinds of oyster shell, with its pulp, is mixed with *koḥl* to dissolve thickening of eye lids, removes corneal opacity and cures day-blindness. When the pulp of old oyster shell, known as *ṭālis*, is burnt and applied in powdered form with cedar tree resin on eye lids, it stops excessive growth of eye-lashes. The glue-like substance, found on the surface of wild oyster shells, sticks the inverted eye-lashes (and thus removes their inversions covering eyelids). Painting with this substance on fore-head stops the matters flowing towards the eye. It also affixes the hair.

Food: The pulp of oyster shell, known as *farūqus*, is good for the stomach. Pulp of undecocted and unroasted oyster shell is a sedative drug to be used in gastralgia. Purple murex when taken orally with vinegar removes splenitis. A plaster is kept on the abdomen of dropsy patients till the disease is cured. This plaster should be left in its position till it falls down by itself. Wild oyster-shell is more effective in this respect due to its desiccant property.

Excretion: Pulp of purple murex does not cause relaxation of the bowels. Fresh pulp from oyster shell, called *ṭālbīs* by Syrians, is taken as a soup to relax the bowels. Fumigation with a soup prepared from small oyster-shell and purple murex, proves to be useful for the patients of hysteria and also expels the placenta. Fumigation with aromatic oyster shells, found on sea coasts of *Bābul* and *Qulzum* (Persia) is also useful in hysteria. These shells help epileptic patients to regain their senses. Its fragrance is similar to that of castoreum. The oyster shell, when used as a suppository, promotes the discharge of menses. According to an expert the use of burnt oyster shell called *fūḥilā*, along with the ashes of gallnut and white pepper, proves to be very beneficial for treating fresh cases of intestinal ulcers before putrefaction develops. The recipe used is as under:

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Temperament: It is cold from the last phase of the second degree to the third degree. It is dry in the second degree.

Properties: Red *sandal* does not attract (absorb) matters.

Swellings: Sandal wood, particularly its red variety, dissolves hot swellings and it is also painted on erysipelas.

Head: *Sandal* is useful in headache.

Chest: Its oral intake or paint is useful in palpitation caused by fevers.

Food: It is beneficial in 'weakness of hot stomach' both with its local application or oral use.

Fever: Sandal wood, specially its white variety is useful in hot fevers.

11. *Şanobar*

Pine

Pinus pinea Linn.

Nature: Pine is a well known tree and its seeds have already been discussed under the letter *Hā*. In this part we propose to discuss all parts of the tree.

Choice: Its big barks are very potent but the variety called *qūfa* is relatively weaker in action.

Properties: Its barks are very astringent and the worms, that are found therein, have the potency similar to that of cantherides.

Ulcers: The barks of *şanobar* are useful in burning ulcers. These barks possess healing and astringent properties and are plastered to cure abrasions. Dusting with its pulverized barks is useful for treating scalds. Its leaves, if powdered and sprinkled, fill up the wounds. Its barks heal and restore normalcy in the injured parts. For this purpose its leaves are very suitable because of their moistness.

Head: Gargling with the decoction of its bark evacuates excessive phlegm. Soup prepared from its barks and vinegar, is considered very beneficial and a mouth wash with it proves to be useful in odontalgia. Gargling with its soup evacuates excessive phlegm.

Eye: Its smoke is beneficial in case of the falling of eyelashes and the corrosion of the canthus.

Chest: The seeds of pine are useful for treating chronic cough.

Food: The oral intake of pine bark and leaves is useful in hepatalgia.

Excretion: The seeds of pine cause constipation. Its fruits along with the seeds of cucumber and *ṭilā* are used orally for diuretic action as also to have beneficial effects in renal and cystic ulcers. Its barks also cause constipation.

Poisons: The green worms, found on the pine tree, possess properties similar to that of cantherides.

12. *Şūf*

Wool

Linen

Ulcers: The burnt wool is useful for treating ulcers and removing excessive flesh from the lesions.

*Letter Ḍād*1. *Ḍān*

Domestic sheep

Ovis vignei (female)

Properties: The potency of the gall-bladders of domestic sheep is similar to that of cow.

2. *Ḍab*

A kind of monitor lizard

Varanus bengalensis

Nature: It differs from *varal* which is found in our country (Avicenna's) but it has some resemblance with the latter in appearance and potency. It is rarely found elsewhere except in Arab lands.

Cosmetics: Its excrement is painted on freckles, particularly the red freckles.

Eye: Its excrement is also useful for treating corneal opacity and cataract.

3. *Ḍab^Ḍ*

Hyena

Hyaena hayana hyaena

Properties: We have already discussed their usefulness in gout and arthralgia in Book III.

4. *Ḍar^Ḍ**Uddar**Mammary glands*

Temperament: Udder is cold and dry due to its "polyneuric" structure.

Choice: The nutrient quality of udder, which is full of milk, if digested, is similar to that of meat. The udder which is full of milk is considered best and it is used with condiments to enable it to reach the stomach quickly. Udders obtained from animals of good quality meat are preferred because they produce better, thick and strong humours.

5. *Ḍirw*

Terebinth

Pistacia terebinthus Linn.

Nature: *Ḍirw* is a well known drug. The rob of *Ḍirw* tree is used as gum. It is procured from Mecca and called there by the same name.

Temperament: It is hot in the third and moist in the first degree.

Properties: Terebinth is detergent, dissolvent and desiccant. It absorbs matters from deeper parts of the body. The property of

its gum is similar to that gum which is extracted from *kamkām* and resembles *ladanum (lādhan)* in potency. It is incorporated in the perfumes used by women.

Head: The rob of terebinth is very useful for treating sialorrhoea and oral ulcers.

Excretion: It causes constipation.

6. *Ḍifda*^c

Frog

Rana tigrina

Properties: Application of frog ash stops bleeding in organs.

Cosmetics: Oral intake of a decoction with salt and olive oil is said to become an antidote in cases of leprosy and insect bite.

Swellings: Its soup is poured on tendons to remove their swellings.

Head: A mouth-wash with a decoction of river frogs is said to relieve the patient of odontalgia. Besides the frog as such and particularly its fat facilitates removal of teeth easily. I think that the garden frogs have this property. Some physicians and other experienced persons maintain that this type of frog removes the teeth of the animals when they come into contact with it during grazing on pastures.

Poisons: Oral intake of blood or any part of the body of frog, causes swellings in the body, darkening of the complexion and frequent emission of semen which might result in death. It is said that oral intake of its decoction with olive oil acts as an antidote for cases of leprosy and insect bite.

7. *Ḍaimarān*

Sweet basil

Ocimum basilicum Linn.

Nature: *Ḍaimarān* is believed to be similar to sweet basil or *Amaranthus paniculatus* Linn (*Ḥamāḥim*) in nature.

Temperament: According to Ibne Māswaih it is mildly hot but dry in the second degree. Mostly people consider it to be cold because it does not harm any hot tempered person and *ḥamaḥim* is also cold in the first degree. It would be more appropriate to state that it combines hot and cold temperaments but coldness is dominant over hotness.

Properties: It is beneficial for hot tempered persons, specially when used after it is rinsed with rose-water.

Ulcers: Its plaster is useful for treating burning ulcers.

Head: It is very useful in headache and the variety which is called *ḥamāḥim*, is a deobstruent drug for cerebral obstructions.

Excretion: Its fried seeds are taken orally in chronic diarrhoea particularly with rose oil and rose water.

Letter Ṭā'

1. Ṭāṭīqas A locust-like insects found on olive tree.

Nature: According to Stephas ṭāṭīqas is an insect found on the olive tree having resemblance with locust. Frequently it makes buzzing sound like the hissing of cricket which is called by Syrians as *al-dhīr*. The natives of Ṭabristān call it *angūrpāsh* i.e. sprinkler of grapes and in Khurāsān it is called *jathrad*.

Excretion: Insects roasted in a fry-pan prove to be useful in cystalgia.

2. Ṭālāiyūn Purslane *Portulaca oleracea* Linn.

Nature: Some people call it wild purslane and also *rijla barriya* because of resemblance in stalks and leaves. At the base of every leaf there grows a branch which is divided further into six or seven small and leafy branches containing a volatile viscous fluid. It has white flowers and grows around the grape vines.

Temperament: It is cold and moist.

Cosmetics: It is a good drug to be used in leukoderma. For this purpose its leaves are plastered and left for six hours. Barley flour should be used after applying the plaster. Application of pounded drug on pityriasis and exposure to sun light till it dries up and then rubbed off, cures the disease.

3. Ṭālīsfar Macer *Abies webbiana* Lindle

Nature: Macer is an Indian bark having astringency, pungency and some fragrance. It is rich in earthy substance but has little tenuity.

Temperament: According to Galen there is hotness and coldness in macer but some others consider it to be hot and dry in the second degree.

Properties: It is highly astringent, desiccant and dissolvent. It is composed of several substances dominant in earthy matters.

Excretion: It is useful for treating gastric diarrhoea, intestinal ulcer, excessive uterine and anal bleeding as well as piles.

4. Ṭabāshīr Bamboo secretion *Bambosa arundinacea* Willd

Nature: Ṭabāshīr is the "burnt" root of bamboos. According to some people the burning is caused by friction of its parts (leaves and branches) against bamboos due to strong winds. Ṭabāshīr is found in India.

Temperament: It is cold in the second and dry in the third degree.

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Properties: It is astringent, ripening and somewhat dissolvent. Its cooling property is more than its dissolving property. It possesses some bitterness also. The desiccant action is attributed to its astringent and dissolving properties. It has compound properties like that of rose.

Head: It is useful in stomatitis and gloom.

Eye: Bamboo secretion is useful in hot inflammation of the eye.

Chest: *Ṭabāshīr* strengthens the heart. It is useful in hot palpitation and syncope caused by infiltration of yellow bile towards stomach both when taken orally or applied as a paint. It is also useful in depression and grief.

Food: It is useful in thirst, vomiting, burning and weakness of the stomach. It stops infiltration of yellow bile towards stomach and relieves pain.

Excretion: It stops bilious diarrhoea.

Fevers: It is useful in acute fevers.

5. *Ṭihāl*

Spleen

Choice: Spleen of pigs is considered to be the best but it produces bad chyme.

Properties: It is somewhat astringent and produces melanotic blood.

Food: It is slow to digest due to its acidity.

6. *Ṭuḥlub*

Duck weed

Lemna minor Linn.

Nature: Duck weed is of three kinds (a) river-water variety is earthy, (b) marine variety is very astringent and (c) the rock-moss variety which is also called *ḥazāz al-ṣukhūr*. The latter has already been discussed.

Temperament: It is cold.

Properties: As a paint it proves to be a styptic drug for bleeding in any part of the body. The variety, which is found in the sea, is most potent in this respect.

Swellings: It is applied in cases of acute swellings, erysipelas and herpes. Lenticular duck weed, if used with barley or wheat flour, is said to be similar in action.

Joints: It is also applied on acute gout and painful arthralgia. Duck weed when used with old olive oil, softens and soothes the nerves.

Excretion: Its plaster reduces the size of hernia.

7. *Ṭarāthīth* Maltesa mushroom *Cynomovium coccineum* Linn.

Nature: *Ṭarāthīth* consists of pieces of twisted wood which are as thick as a finger but are smaller in length. It is somewhat astringent in taste and dusty in colour. Its potency is similar to that of pomegranate flowers. It is mostly found in rural areas.

Properties: These mushrooms are astringent and prevent the circulation of blood towards the organs.

Joints: Maltesa mushroom tones up loose and flabby organs.

Food: It is useful in the atony of the stomach and liver.

Excretion: Its oral intake with hot goat milk is constipatory, styptic and stops haemorrhagic diarrhoea and post parturition mucous discharge from the womb.

Substitutes: The substitutes for *ṭarāthīth* are: (a) *Burnt eggshells* in half of its quantity treated with water, (b) Gall nut in one sixth part of its weight, (c) gum in 1/10 of its quantity.

8. *Ṭarāghiūn* Tragos *Pimpinella tragium* Vill.

Nature: Tragos is a plant which grows in *Qarīṭush*. Its leaves, branches and fruits are similar to those of ekinos but are smaller in size. Its gum is similar to gum arabic. The leaves, fruit and gum are absorbent. There is another kind of tragos with leaves resembling those of spleen wort. Its roots are similar to those of wild radish.

Properties: According to Dioscorides, if a wild she-goat is inflicted with an arrow while grazing on this grass it facilitates the removal of the arrow-tip from the wound. Its alcoholic plaster is applied to extract thorns and spines and other such things from deep fleshy parts of the body.

Excretion: When taken orally in a dose of one *darkhamī* (4.5 gm) it cures strangury, removes bladder stones and promotes menstrual discharge. Oral intake of the other variety in fresh and decocted form is said to be beneficial in intestinal ulcers.

9. *Ṭarāghiūn ākhar* Another kind of tragos

Nature: Some people call the *ṭarāghiūn ākhar* as *saqūlūqandariūn* (spleen wort). It is a small plant measuring a hand-span in length and found spreading on the ground. Generally it grows at sea-shores and has no leaves. Its branches bear small grape like red structures of the size of a wheat grain with sharp ends. These are numerous in number and astringent in taste. Some people make tablets from its powder and keep the same to be used in future.

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Excretion: According to Dioscorides when ten grains of this kind of tragos are taken orally with wine, they prove to be useful in chronic diarrhoea and chronic leucorrhoea.

10. *Ṭarakhshaqūq* Wild endive *Cichorium intybus* Linn.

Nature: Wild endive is a well-known drug. It is a kind of endive.

Temperament: It is somewhat moist but its coldness is higher than its moistness.

Properties: It is cooling and deobstruent.

Eye: The latex of wild endive removes the corneal opacity.

Food: Its extract is very useful in dropsy and removes hepatic obstructions.

Poisons: It neutralizes all kinds of poisons and it is plastered in cases of bites specially the scorpion's bite.

11. *Ṭarkhūn* Tarragon *Artemisia dracunculus* Linn.

Nature: Tarragon is a well-known drug. Some believe peltitory to be the name given to the roots of the mountain tarragon.

Temperament: Apparently it is hot and dry in the second degree though it contains some narcotic property also. According to some sources, not quite reliable, it is cold and dry.

Properties: It is desiccant, absorbent of fluids and somewhat cold.

Head: Chewing or keeping in mouth proves to be useful in stomatitis.

Chest: It produces pharyngalgia.

Food: It is difficult to digest.

Excretion: It reduces libido.

12. *Ṭaraghāqanthā* Tragacanth *Astragalus gummifer* Lab.

Nature: According to Dioscordies its root is wide and rough Spikes of tragacanth tree grow at higher level from the ground. Its branches are strong and small and have many thin leaves. In the midst of the leaves there are some hidden hard and straight thorns. Gum-tragacanth is the secretion of the root of this plant when some cuts and scratches are made on it, the fluid thus exuding out is called gum.

Chest: It is useful in cough and roughness of the chest. For this purpose it is kneaded with honey and placed under the tongue. One *darkhamī* (4.5 gm), which is equivalent to eighteen *qirāt*, of liquefied drug is taken orally with sweet wine.

Excretion: Oral intake of the gum, together with stag horns in burnt form and treated with water or with some yamanite alum, proves to be useful in cases of nephralgia and cystic burning.

13. *Ṭarfā*

Tamarisk

Tamarix gallica Linn.

Nature: According to Dioscorides it is a well known plant growing near stagnant waters. Its fruits are similar to the flowers which structurally resemble to flowers of rock moss. It is found in Egypt and Syria. Garden tamarisk resembles the wild variety in every respect except the fruit. The latter is similar to gallnut and causes molar pain and tongue constriction. Hence it is used as a substitute for gallnut in the preparation of medicine for the mouth and eye. Its oral intake proves to be suitable for treating haemoptysis and diarrhoea.

Properties: It is an astringent and detergent drug. It is purifying without causing any strong desiccation. Its water is also attributed to detergent and desiccant properties but its deterging power is relatively higher and associated with some astringence. Its fruit is highly constipative. Unlike the green gallnut, tamarisk contains mild tenuity. Except for this property, it is used as a substitute for all other actions of green gallnut.

Cosmetics: Its decoction is used as a douche or epithem for destroying lice.

Swellings: Its leaves are used as plaster for treating soft swellings.

Ulcers: Its smoke dries weeping ulcers while its fruits and ashes facilitate drying of difficult ulcers and for removing excessive growth of flesh.

Head: Mouth wash with a decoction of its leaves is useful in odontalgia. Its fruits stop tooth decay.

Eye: The fruits of tamarisk are used as a substitute for gallnut and the extract of berberry in ophthalmic diseases.

Chest: Tamarisk, specially its fruits, are useful in chronic haemoptysis.

Food: Its branches if boiled and plastered with vinegar, are useful for treating splenic diseases. Its leaves and branches are decocted in wine. This decoction is taken orally in cases of splenic diseases.

Excretion: It is useful in chronic diarrhoea. The patient is given a sitz-bath in its decoction in cases of leukorrhoea. A suppository made from its seeds and a syrup prepared from its fruits, are also taken in this disease.

Poisons: The fruits of tamarisk are useful for treating cases of tarantula bites.

14. *Ṭarījūmānus* Trichomanes *Asplenium trichomanes* Linn.

Nature: According to Dioscorides some people call it as *adbār*. It grows at a place where the drug maiden hair grows. It resembles *farṭīs* plant. Its leaves are very long and lentillike in appearance growing parallel to each other, on both sides of a thin, hard, smooth and blackish stem. Its actions are said to be identical with those of the maiden hair.

15. *Ṭarfūlis* Teukrion *Teucrium flavum* Linn.

Nature: The pieces of teukrion are attenuant in nature and are taken orally in case of induration (hardness) of the spleen.

16. *Ṭarīghān* Wild carthum *Carthamus oxyacantha* Bieb

Nature: Wild carthum is a plant that grows in spring and its seeds are similar to that of safflower.

Poisons: Its decoction, when poured or sprinkled, alleviates the pain in cases of snake bite but such a use, on unaffected parts of the body, induces pain similar to that produced by the snake bite.

17. *Ṭarīfulūn* Trifolium *Psoralea bituminosa* Linn.

Nature: According to Dioscorides it is a plant which grows at sea-shores. When the sea-water recedes, growth of trifolium spreads over this place. It is found neither in the midst nor far away from the water. Its leaves are similar to those of *aṭāṭīs* (*Isatis tinctoria* Linn.) but they are thicker than the latter. Its stem measures a hand-span in length and is split on the upper side. It is said that the flowers of this plant change their colour three times a day; it becomes white in the morning, purple at noon and dark red at night. Its roots are white, odorous and, when tasted, produce a feeling of warmth on the tongue.

Temperament: It is somewhat hot.

Excretion: When taken with wine in a dose of two *darkhamī* (9 gm), it removes the ascitic fluid and causes diuresis.

Poisons: It is supposed to be a good antidote to counteract the harmfulness of poisons.

18. *Ṭalaq* Talc *Mica*

Nature: According to some people the oral intake of talc may be dangerous because it adheres to the fibres and shaggy hair (villi) of the stomach, throat and gullet. If one desires to render it soluble

(in a liquid), it should be put into a piece of cloth with some pebbles and stones and then pounded till it becomes so. For pounding it with stone, it is necessary to immerse it in water. If one desires to obtain its powder he should put it into a piece of cloth and pulverize it. The powder so collected in a clay pot by shaking this cloth is used with gum water and allied substances to serve one's purpose.

Choice: The calcinated talc is comparatively more potent and attenuant.

Temperament: It is cold in the first and dry in the second degree.

Properties: It is an astringent and styptic drug. It is used with lime. According to Paulos and some others, it is highly desiccant and cannot be burnt by fire without using some other (inflammatory devices).

Swellings: It is useful in mastitis, penitis, parotitis and all other conditions associated with flabbiness of flesh in initial stages of the disease.

Chest: When taken with water of great plantain, it stops haemoptysis.

Excretion: Talc treated with water stops bleeding from uterus and anus both when taken orally or used as a paint. It is also useful for treating dysentery.

19. *Tūqriūs*

Teukrion

Teucrium flavum Linn.

Nature: According to Dioscorides it is a plant having many branches on its stick-like stem. It resembles the plant called germander. Its thin leaves resemble those of chickpea. It grows abundantly in Faliqia region. The intake of fresh teukrion with vinegar and water elicits its potent action. The dry teukrion should be taken in the form of decoction.

Excretions When the decoction of teukrion is taken orally, it completely dissolves the splenic swellings. Similarly when plastered with fig and vinegar on the swollen spleen, it proves to be very useful.

Poisons: Its plaster with vinegar is useful in cases of insect bite.

20. *Ṭiqāqawāūn*

Nature: According to Dioscorides the leaves of this plant resemble those of garden night shade. It has many branches with numerous tiny flowers which are blackish in colour. Its seeds resemble common millet. These are encased in pods similar to those of Syrian carob.

Its thin branches, three or four in number, measure a hand-span in length. They grow abundantly and are white, fragrant and warming. Infusion of 900 gm of the plant, soaked into six *qūṭūli* (2.1kg) of sweet wine for a day and night, is taken orally for cleansing the uterus. When taken together with a soup, it elicits lactogenic effects.

21. *Ṭīn al-arḍ al mazrū'a* Earth of cultivated lands *Terra eretria*

According to Dioscorides all kinds of earth, that are used as drugs, are generally astringent, softening, cooling and agglutinant. Nevertheless each variety has exclusive utility for a particular disease. The earth of cultivated land is of two kinds: (a) one that is extremely white and (b) that is dusty in colour. The latter is considered better and softer. When rubbed with it, copper articles acquire the colour of sweet basil. It is washed using a procedure similar to that for white lead. Some water is poured over it repeatedly and left overnight to be cleaned. Thereafter it is warmed in sun-light. The process is repeated for ten consecutive days. The material is then pounded in sun light and the powder so obtained is made into requisite tablets.

Properties: It is said to be astringent, cooling and mildly laxative.

Ulcers: It heals the ulcers by filling them with flesh and patches up the wounds in initial stages.

22. *Ṭīn armani* Red armenian bole *Bolus armenia rubra*

Nature: It is a well known bole which is somewhat dusty red in colour. It is used by the jewellers to impart colour to gold. The earth of linos also resembles the armenian bole in actions.

Temperament: It is cold in the first and dry in the second degree.

Properties: It is a styptic drug and by this property it is highly desiccant.

Swellings: The oral intake or painting with it on the affected part is useful in plague. Besides it prevents spreading of organic putrefaction.

Ulcers: Red armenian bole has a wonderful (healing) effect on wounds.

Head: It removes catarrh and is useful in stomatitis.

Chest: It is very suitable to be used in haemoptysis and also in consumption because it dries up the pulmonary ulcers. It is also a remedy for dyspnoea caused by catarrh.

Excretion: It is good for treating intestinal ulcers, diarrhoea and uterine bleeding.

Fevers: It is specially useful in consumptive and epidemic fevers. It is reported that a group of people saved themselves from a great epidemic disaster due to their habit of taking it with soft wine. For favourable cardiac action in epidemic fevers, it should be taken with wine together with rose-water.

23. *Ṭīn aqrīṭush* Earth creta

Properties: Earth creta is rich in "gaseousness" and resembles all the above mentioned clays but it is comparatively weaker in action. It is detergent without causing any irritation. It weakens the senses.

Eye: It is useful in cases of ophthalmic ulcers and amblyopia.

Excretion: It facilitates child birth as is said to protect pregnant women when it is hung around their bodies.

24. *Ṭīn balad al maṣṭakī* Chian earth *Terra chia*

Properties: Chian earth is detergent, abluent and a flesh growing drug.

25. *Ṭīn sāmā'ī* Samian earth *Terra samia*

Nature: According to Dioscorides this earth is stone like in nature and it is used for smoothening and polishing purposes. It is of different kinds: (a) a whitish grey variety which is thin, found in layers and its particles are of various shapes and (b) an extremely white variety which is bright, brittle and readily soluble in liquids. People use this earth for massaging their bodies and thus it serves as a substitute for plant ash and sodium nitrate.

Properties: It possesses astringent, cooling and desiccant properties.

Choice: It is better to choose white and hard earth from the second variety and greyish white samples from the first variety.

Cosmetics: It cleanses and beautifies the body as well as brightens the face.

Head: It dulls senses.

Eye: If used with milk it is beneficial in cases of corneal opacity and ophthalmic ulcers.

Food: When taken orally it proves to be useful for the stomach.

Excretion: It is thought to be helpful in easy childbirth specially when it is suspended around the body of a woman who is suffering from labour pain. Similar use prevents abortion in pregnant women.

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26. *Ṭīn shāmūs* Earth of samos *Terra samios*

Nature: Galen described the use of earth called *kaukab shāmūs*, but I believe that it is nothing but talc as claimed by people who bring it from the islands of Cyprus in Greek territory.

Properties: Earth of samos, according to Galen, resembles the sealing clay in respect of its hemostatic property but it is comparatively richer in gaseousness. It is useful in mastitis. It is lighter, more adhesive and viscid than sealing clay but the latter is stonger in action.

Temperament: It is adhesive, viscid, agglutinant and it need not be treated with water before use. Its cooling property is weak but its soothing property is appreciable.

Swellings: It prevents hot swellings at their initial stage and is more effective in this respect than all other clays. If it is soaked in water unlike the sealing clay, its unpleasant roughness is not felt.

Ulcers: On account of being very adhesive like the sealing clay, it does not prove so useful for treating ulcers specially those which are caused by burns.

Joints: Its paint is useful in the initial stages of gout.

Eye: It is beneficial in cases of blisters developed during cornea.

Head: It is also useful in mastitis and parotitis.

Excretion: It is useful for treating cases of excessive bleeding from the uterus and haemorrhagic diarrhoea.

27. *Ṭīn qaimūliā* Camolian earth *Terra cimolia*

Nature: According to Hunain it is called *al-ṭīn al-dairī* and is of two kinds: (a) white and (b) purple. Camolian earth is immoderate in nature and is cold to touch. It is procured from the seashores specially the place called al-sīrāf.

Temperament: Camolian earth is cold in the second and hot in the first degree.

Properties: Pure camolian earth possesses cooling and dissolvent properties and has various uses; when it is washed, its dissolving property is reduced.

Swellings: It is applied with vinegar for treating the swellings in infra-abdominal region.

Ulcers: Application of both kinds of camolian earth kneaded with vinegar, are useful in burns and other wounds immediately before blistering and swellings. Besides it prevents ulceration caused by burns.

Head: When kneaded with vinegar and applied, it proves to be useful in parotitis and tonsilitis.

Joints: It is useful for all kinds of swellings in the body.

Excretion: Both kinds of camolian earth soften testicular hardness.

28. *Ṭīn al-kara* A bituminous earth *Amphititis*

Nature: According to Dioscorides this kind of earth is found in Syria. It is black in colour and similar to a rectangular piece of coal of cedar wood. It also resembles small broken pieces of wood having equal brightness. The powdered earth is not difficult to be dissolved in water or oil. However the white and dusty coloured variety is not easily soluble in water and so it is considered inferior in quality.

Choice: Black coloured samples should be selected.

Properties: It is desiccant but may cause irritation. Nevertheless it is somewhat dissolvent and it is said to have some cooling property.

Cosmetics: It is mixed with some collyrium which promotes growth of hair (on eye lashes) and also is used as a hair dye including that for eyebrows.

Excretion: Application of this earth on grapevine enables the growth of leaves and branches thereon. It is lethal for the worms and when taken orally it kills the worms including snake like intestinal worms.

29 *Ṭīn mā'kūl* Edible earth _____

Food: Edible earth is obstruent and it adversely affects the temperament. Though it strengthens cardiac orifice and removes the indigestibility of food, I do not recommend its use. It has wonderful property of preventing vomiting. According to some people, this earth is an exhilarant. This view can, however, be attributed to the people who are very fond of its use. They may be compared with persons who feel pleasure in causing a nail scratching during sexual activities.

30. *Ṭīn makhtūm* Sealing clay *Terra sigillata*

Nature: Sealing clay is brought from *ṭall-aḥmar* (red hill). The latter is called *buḥaira* because it has a smooth surface and is devoid of grass and rocks. This was narrated to me by a person who had seen it personally. This earth is also called *ṭīn kāhīnī* because in ancient days it was discovered by a lady sooth-sayer. It is also called *al-maghra al-Kahānia* (red ochre) because it is a red clay which was used by *Armiṭum*—a lady sooth-sayer. She used to come to the town with this clay and put it in water to form a solution by shaking it well and leaving the preparation for sometime to settle down. The supernatant water was discarded and the residual thick, fatty and viscid substance yielded a wax like clay to be used for sealing purposes. According to Dioscorides this clay is collected from a cave. It is kneaded with blood procured from a male goat. It is not always possible to identify the adulterated clay from the genuine clay.

Choice: The best sealing clay should have an odour like that of dill. It stops bleeding from the mouth and clings to the tongue.

Properties: According to Paulos it is a very effective hemostatic agent. In this respect it is stronger than the earth of samos. It is so potent that the organs, particularly the soft organs affected with hot swellings cannot withstand the severity of its action. Mild roughness is seen in organs after its use. In fact it possesses cooling and agglutinant properties.

Swellings: It is useful in the initial stages of acute swellings.

Ulcers: It heals up fresh wounds and specially those ulcers which otherwise resist therapy. It prevents burning caused by ulceration and heals such ulcers.

Joints: It protects the organs from an injury due to fall. It sets the broken bones, stops the matters which adversely affect the hands and feet and protects against degenerative changes.

Head: It stops catarrh and (excessive) secretions from mouth and gums.

Chest: It protects the viscera from damage due to falling from a height. It is useful in consumption and bleeding from lung ulcers due to its desiccant property.

Excretion: If taken orally or as an enema, it proves to be useful in malignant intestinal abrasions. In such cases drug administration should be preceded by an enema with honey water and then an enema with salt water.

Poisons: Sealing clay counteracts all kinds of poisons and animal bites specially when taken with wine or used as a paint with vinegar. Pure sealing clay, when taken orally, causes nausea and vomiting and expels poison from the body. Galen described his personal experiences of the use of a medicine prepared from a combination of juniper berry and sealing clay in cases of bites by sea rabbit and stings of spanish flies. Such treatment expels the poisons instantly. Galen also experimented it in rabid dog bite cases by its application with wine. In patients of snake bite he used it as a paint followed by an application of the leaves of water-germander and common century.

31. *Ṭīn muṭlaq*

Common earth

Nature: Common earth is found every where.

Temperament: All kinds of earth are cooling.

Properties: Common earth is desiccant and detergent but the potter's clay of sunny land is desiccant for flabby bodies. It does not cause any irritation because of its agglutinant nature. This property is exhibited only when the earth is free from burnt substances such as

pieces of earthenware and chips of hot walls exposed to the sun. It also possesses some dissolving power and, if washed twice, it becomes desiccant, and moderate in heat, cold and tenuity.

Cosmetics: It makes the flabby flesh firm.

Swellings: In the form of a *qairūṭī* (a kind of ointment) it is applied on scrofula and other hard swellings.

Food: Common earth is painted along with the earth procured from a sunny land on the bodies of patients of dropsy and splenitis. The patients get relief from this treatment; the effect is more evident in cases of anasarca.

32. *Ṭīn al-maghra* Red ochre *Bolus armenia rubra*

Nature: Red ochre is a well known earth.

Choice: The best variety comes from Baghdad. It should be free from adulteration and being prominently red.

Properties: According to Paulos it has more astringent and desiccant properties than those in the sealing clay.

Ulcers: It heals wounds.

Excretion: It kills the worms and sipping it after taking a half boiled egg, causes constipation.

Letter *Zā'*

1. *Zūlf* Hoof _____

Nature: Hoof is a thing commonly known to all.

Cosmetics: Use of a paint prepared from goat hoof and vinegar cures alopecia.

2. *Zalīm* Male ostrich *Struthio camelus*

Nature: This has already been dealt with under the chapter on *ni'ām* (Ostrich.)

Letter *'Ain*

1. *Āqarqarhā* Pellitory *Anacyclus pyrethrum* D.C.

Nature: Mostly the root of pellitory plant is used.

Choice: The best pellitory is that which is bitter in taste, irritant to tongue and thick as a finger.

Temperament: Laymen generally consider it to be cold and attenuant but in fact, it is hot and dry in the third degree.

Properties: On chewing, it expels the phlegm. When mixed with some oil and massaged, it causes excessive perspiration which is attributed to its burning property.

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Cosmetics: Massage with it in combination with olive oil causes excessive perspiration.

Joints: Rubbing and massaging with its decoction or oil is useful in chronic atony and sensory loss in nerves. It prevents the occurrence of tetanus specially in the patients prone to it.

Head: It is highly deobstruent for nasal obstructions pertaining to the ethmoid bone. Its decoction is useful in odontalgia particularly that caused by cold. Its root is decocted with vinegar and retained in mouth for sometime to strengthen the shaking teeth.

Fevers: Massaging the body with pellitory and olive prevents shivering which may occur with or without fever.

2. *Ālūsīs*

Galiopris

Scrophularia peregrina

Nature: It is believed that the people of Ṭabaristān have named it after their god. This plant resembles Roman nettle in all respects except that its leaves are comparatively smoother. On rubbing a very bad smell comes from the leaves. Its flowers are thin and fruits are small and purple. The plant grows in marshy lands, ruins and waysides.

Properties: It possesses the potency of dissolving induration (hardness).

Ulcers: It is useful in rodent and malignant ulcers.

Swellings: Application of its lukewarm plaster twice a day is useful in cancerous swellings, scrofula and other kinds of swellings.

Head: The leaves and branches are useful in parotitis and tonsillitis.

3. *Āliyūn*

Nature: Some people call it *Āliyūn* while others call *Ālāriyūn*. The etymology of these two names indicate milk coagulating property in this drug similar to that in rennet. The plant *Āliyūn* has leaves and branches resembling those of *al-ḥarniān*. It bears numerous, yellowish white, thin, dense, and fragrant flowers. It grows in marshy lands.

Properties: Its flowers are used as a plaster for treating excessive bleeding.

Ulcers: The flowers and leaves of this plant are also useful in burns.

Organs of the joints: Application of the *qairūḡī* prepared in combination with rose oil and salt is useful in fatigue and associated pain. The salt used in the preparation be powdered to such an extent that it becomes white.

Excretory organs: The use of its roots induces excessive sexual desire.

4. ^۴*Ubaithrān* Southern wood *Artimisia abrotanum* Linn.

Properties: This is a dissolvent drug.

Head: It is useful in cold diseases of the brain and stops cold coryza.

Eye: Its water improves the power of vision.

5. ^۵*Adas* Lentil *Lens esculenta* Moench.

Nature: It is the well known edible variety of lentil. Its another kind is wild and is not suitable for use. The bitter lentil is apparently hot, desiccant and somewhat astringent in nature. According to Dioscorides it is a tall quince-coloured herb which has many branches and lofty stalks. Its leaves are long, narrow, slightly rough and somewhat white in colour. It is abundantly cultivated on the mountains of Ṭabaristān, where the people call it by the name of ^۵*adas* (lentil). They ascribe its origin to a village called *mārmārju* in their language. Its grains are small and encased in long burs (covers).

Choice: The best lentil ripens swiftly and is characterized by its width and white colour. When soaked in water, it does not blacken it. It should be boiled thoroughly before its oral intake.

Temperament: According to Galen it is either moderate in hotness and dryness or inclines towards hotness. Therefore it does not produce coldness at any of the stages after its oral use i.e. neither at the time of intake, nor in stomach, nor during digestion.

Properties: Lentil is flatulent and possesses compound astringent and detergent potencies. It induces bad dreams. Its husk is very astringent. As a whole, it is very flatulent, and makes the blood viscid which as a result cannot flow through the vessels easily. It reduces urine and menses therefore produces melanotic humour and diseases. Sometimes barley-water is considered contrary to the lentil in properties but in their combination produces one of the best diet. It is necessary, however, that barley-water should be comparatively lesser in quantity. The combination of lentil with beet also makes a fine dish because both of them are opposite to each other in properties and, thus the combination makes them moderate. Origanum and mint can also be mixed with lentil. The worst dish is that which contains lentil and dried salty meat. For proper cooking one *mann* (900 gm) of lentil should be used with seven *mann* of water.

Swellings: Application of a plaster prepared by cooking it with vinegar dissolves scrofula and hard swellings. It contains the potency

of collecting and depleting the pus. The excessive use of lentil causes cancer and hard scirrhus swellings.

Ulcers: Use of its decoction with vinegar heals deep ulcers, reduces or stops their discharge. If these ulcers are large, the lentil should be applied with other astringent substances like the peels of pomegranate etc. It is also applied with sea-water in cases of rodent ulcers, herpes erysipelas and skin ruptures caused by cold.

Joints: It is not suitable for nerves. It is beneficial in gout when used as a plaster with fine flour but its excessive use may cause leprosy.

Eye: One who takes it excessively suffers from dark-sightedness because of its desiccant property. When plastered with sweet melilote, quince and rose-oil, it cures hot swellings of the eye.

Chest: It is decocted with sea-water and plastered on the breasts swollen due to congestion with blood and milk.

Food: Lentil is difficult to digest. It is not suitable for the stomach and produces flatulence and heaviness. Oral intake of thirty grains of peeled lentil proves to be very useful for relaxing the stomach. It should not be mixed with any kind of sweet because this might produce calculi in liver. Lentil is erroneously thought to be useful in dropsy but this view is probably based on its desiccant nature.

Excretion: When cooked without husk, it causes constipation. When cooked with husk, the first portion of boiling water is discarded as it causes relaxation of the bowel. The lentil cooked with husk causes more constipation in relation to the peeled lentil because its husks are markedly constipative in nature. It proves to be highly constipative but when decocted thoroughly with endive, great plantain, purslane, black beet (called so because of its dark-green colour), rose and some other astringent substances it causes the relaxation of the bowels. It is plastered with sweet melilote, quince and rose oil for treating anal swellings. If the swelling is of greater size, the lentil should be blended with some astringent additives. The wild lentil, which is also called bitter lentil, causes purgation of the blood. Lentil reduces the quantity of urine and menstrual flow because it produces viscid blood. Therefore one, who is suffering from strangury, should never use it. Bitter lentil is diuretic and emmenagogue. Its use with vinegar, proves to be beneficial for treating dysuria, dysentery and gripes.

6. *Arţanīthā* Greek cyclamen *Cyclamen europaeum* Linn.

Nature: Only the root of cyclamen is used. It is said that it is the same drug which is called *bukhūr maryam* and we have already dealt with it. According to Dioscorides it has several burs as in chick-

pea and its leaves are like those of cabbage. Its roots are black in colour and resemble the roots of turnip. We are not familiar with this variety because cyclamen, which is found these days, has small thick thorns and white roots. It is used for washing woollen clothes. According to Dioscorides this plant grows in wheat fields and the properties, which we intend to discuss here, relate to this very type of cyclamen. Probably some confusion exists due to an error on the part of the translators (from Greek to Arabic).

Properties: It is an erosive and dissolvent drug.

Joints: It is good for coxalgia.

Head: It is dipsetic and a strong nasal deobstruent of ethmoid bone.

Food: It stops hiccough.

Excretion: It causes abortion.

Poisons: Its decoction is used both as a local applicant or orally in stings and bites.

Substitutes: Equal weight of long aristolaceum, citron seeds and mint act as its substitutes for abortifacient and anti-poisonous effects.

7. ^eAr^ear

Juniper berry

Juniperus communis Linn.

Nature: It is mountain cypress and is of two kinds: (a) small and (b) large.

Temperament: It is somewhat hot and dry and its seeds are hot in the first and dry in the second degree.

Properties: It is a sedative, attenuant and carminative drug. In addition to these properties, it is somewhat astringent but this property is not found in all parts of the plant.

Joints: It is very useful to be used in cracking of muscles.

Chest: It is very effective in cases of chest pain and cough.

Food: It is cleansing and deobstruent for calculi (in kidney and bladder). It is very good for the stomach and its oral use relieves flatulence.

Excretion: It is diuretic and emmenagogue and is good to be used in hysteria and uteralgia.

Poisons: It counteracts the adverse effects of insect bites and smoking. All parts of the plant are insect repellent.

8. ^eArq

Sweat

Nature: Sweat, as a matter of fact, is the "blood-water" accompanied by bilious pus. It should not be used when dry and should only be taken when it is still moist. It is more concentrated than urine. This is because it is composed of the superfluous matter and

moistures obtained after the last stage of digestion (organic digestion) while the urine is formed by the superfluous matters resulting from the second stage of digestion ("hepatic digestion").

Properties: It is more concentrated than urine. It differs in properties in different animals and is considerably dissolving in action

Swellings: The sweat from bodies of wrestlers, when used mixed with the oil of henna, is beneficial and dissolvent for swellings in groin.

Chest: The 'dried' sweat of wrestlers, together with the oil of henna, is massaged over the breast to dissolve the swellings. Its use with rose oil, removes congealation of the milk in breasts.

9. ^۶Arqūn Tuberos crane's bill *Geranium tuberosum* Linn.

Nature: According to Dioscorides ^۶arqūn is a plant which bears long and serrated leaves resembling those of red anemone. Its root is round and causes irritation when taken orally. Its oral intake in a dose of one drachm (3.5 gm) with wine, dissolves gases. Another kind of the plant bears thin branches with leaves like those of country mallow. The tip of these branches carry a protrusion resembling the head and beak of a crane. It is not of much relevance to medicine and should be discussed elsewhere. Therefore, I leave it here.

Excretory organs: When taken one drachm (3.5 gm) with wine, it dissolves gases causing uterine flatulence.

10. ^۶Arn Calamint *Calamintha incana* Benth

Nature: According to Dioscorides calamint is a plant having the leaves like those of small lentil but the former are longer. Its stalk is about one hand-span long and flowers are red in colour. Its small roots grow in isolated and deserted places. This plant is found in different countries.

Properties: Application of a plaster of its leaves with olive oil causes perspiration.

Swellings: When pounded and used as a plaster, it dissolves abscesses and burning pimples.

Excretory organs: When taken with wine it cures strangury.

11. 'Urūq al-ṣabbāghīn Turmeric *Curcuma longa* Linn.

Nature: Turmeric is a well known drug.

Temperament: It is hot and dry in the second degree.

Properties: It is highly detergent.

Head: Its chewing is useful in odontalgia.

Eye: Its extract is very useful for improving the eye sight and for clearing water covering pupil of the eye and corneal opacity.

Food: It is also useful in obstructive jaundice particularly when taken with anise and white wine.

12. *°Azir* Common centaury *Erythracea officinalis*

The roots of great and lesser varieties of centaury are nothing but similar varieties of *qanṭūriūn*. This will be discussed under the letter 'Qāf'.

13. *°Asl* Honey *Mel*

Nature: Honey is a kind of latent dew which is found in flowers and other parts (of the tree) from which it is gathered by bees. It originates as a kind of volatile vapour which matures and becomes viscid over night and is transformed into honey. Honey, formed in this manner, is found as such on the mountains of Qaşrān. It differs (in properties) according to the different trees and stones on which it is found. The visible portion of this honey is collected by men and its invisible portion is picked up by honey bees. I think that the honey collected by bees is more efficaceous because they feed on it and preserve it for future use. There is another kind of honey which is pungent and poisonous in nature.

Choice: The best kind of honey is identified by a truly sweet taste with a tendency towards pungency, fragrant odour and red colour. It should not be very fluid but should be adequately viscous to form strands. The honey obtained in spring season is of better quality than that collected in summer season. According to some people the honey acquired in winter season is of inferior quality.

Temperament: Honey is hot and dry in the second degree. The honey of *ṭabarzad* and sugar-cane is hot in the first degree and not dry. It is rather believed to be moist in the first degree.

Properties: It is a detergent drug. It clears obstructions from lumen of veines, removes moistures and absorbs fluids of the deep parts of the body. It stops putrefaction and decay of the flesh.

Cosmetics: It prevents lice infestation and kills their eggs. Good quality honey together with *Costus arabicus* forms a useful application for freckles and in combination with salt, for removing the blue discolouration caused by a blow or fall.

Ulcers: It cleanses deep and dirty ulcers. It is decocted till it becomes adhesive and applied to wounds to promote granulation (healing). When smeared with dill, it cures ringworm.

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Head: It cleanses the ear. When instilled lukewarm with anderani salt, it dries up the ulcers of the ear. It strengthens the hearing power. Inhalation of pungent and poisonous variety of honey is harmful for the reasoning power. A similar effect is elicited on oral intake.

Eye: Honey cures dim vision.

Respiration: Rubbing the palate and gargling with honey cures suffocation and tonsillitis.

Food: Honey water strengthens the stomach and increases appetite.

Excretion: Cane honey relaxes the bowels but the honey from sugar-candy does not exhibit this effect. Frothy honey causes flatulence and relaxation of the bowels but this quality is reduced on removal of the froth. The decocted honey does not relax the bowels but may, sometimes, cause constipation in patients of phlegmatic temperament. However, it provides abundant nutrition. The honey, decocted in water, causes diuresis. We believe that honey and its water, if digested with food, causes constipation but its quality of assimilation corresponds to that of food, it causes relaxation of the bowels.

Poisons: Oral intake of warm honey with rose-oil proves to be useful in cases of insect bite and opium addiction. It is licked by patients affected by rabid dogs' bite and virulent fungus. The decocted honey is useful against poisons and, when taken as an emetic drug, it protects against the effects (poisonous) of hellebore. Pungent and errhine honey adversely affects intellect and wisdom. It is advised to take honey with salted fish and hydromel or use it as an emetic drug to cure cold perspiration.

14. ^e*Ushr*

Madar

Calotropis gigantea Linn.

Nature: Madar is an Arabic and Yamanite plant. It is one of the latex bearing species. It is said that there exists a variety of madar that sitting under its shadow proves fatal.

Temperament: Madar is hot in the second degree and its dryness is upto the fourth degree.

Properties: It is moderately astringent.

Cosmetics: Its paint is useful in porrigo and ringworm.

Head: When applied on the head, it brings down the body temperature. Its paint is also useful in cases of stomatitis in children.

Excretion: It relaxes the bowels and weakens intestines.

Poisons: There is a variety of madar which causes adverse and eventually fatal effects when someone sits under its shade. Therefore its use should be avoided. A dose of 10.5 gm of the latex of madar

proves fatal with severe damage to the lungs and liver of the patient within two days.

15. *ʿAṣa al-rāʿī* Knot weed *Polygonum aviculare* Linn.

Nature: Knot weed is the same drug which is also called *baḡbāḡ*. It is of two kinds: one is male and the other is female; the former is stronger in action.

Properties: It is an astringent and rich in moisture content but since it is a 'deterrent for descending matters', it is thought to be a desiccant. This property enables it to stop haemorrhage.

Swellings: Its plaster is useful for treating cases of phlegmon, erysipelas, herpes and ulcerous swellings.

Ulcers: It heals weeping wounds.

Head: The extract of knot weed kills the ear-worms and heals auricular ulcers.

Chest: Its water is useful in haemoptysis.

Food: Being a cooling drug, its plaster relieves one of the feeling of burning in the stomach.

Excretion: Knot weed stops bleeding from the uterus and cures intestinal ulcers. According to Dioscorides it is a diuretic medicine and an emmenagogue.

16. *ʿAṣfar* Safflower *Carthamus tinctoris* Linn.

Nature: According to Dioscorides safflower is a plant having long, projecting, rough and thorny leaves. Its stem is thornless and measures about two arms in length. It has round tops which resemble a big seed of olive. Its flower is similar to that of saffron while the bud is white. One of its varieties is somewhat red in colour and it is edible.

Temperament: It is hot in the first and dry in the second degree.

Properties: It is moderately astringent with some maturative property.

Cosmetics: It clears freckles and pityriasis.

Ulcers: Safflower is applied on ringworm.

Head: The wild safflower, when taken as an epithem with honey, is useful in cases of stomatitis in children.

17. *ʿazāʿat* Lacerta lizard

Nature: According to Dioscorides lacerta lizard is also called, by some people, as '*saura*' which is an animal resembling the newt. It is normally green in colour and slow in movement. It may also be of various other colours. Some people believe that it does not burn

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even when it enters the fire. It is weak in potency. It is preserved in a manner similar to that used for cantharides. The process involves removing its intestines and amputating the extremities and preserving thereafter in honey.

Wounds and ulcers: It is as useful as cantharides in scabies. It is incorporated in corrosive and softening ointments.

Cosmetics: Its tail is burnt in olive oil and applied for depilatory purposes.

18. °*Izām* Bones *Os*

Nature: Bones are well known.

Properties: The calcined bones are dissolving and desiccating.

Cosmetics: It is said that a paint prepared from ankle bone of a pig proves effective in leukoderma.

Joints: Oral intake of human bones is said to be useful in arthralgia

Head: Human bones are also said to be useful in epilepsy. Galen narrates the case of a man who used to take human bones secretly and thus his epilepsy was cured. He actually met this person.

Food: Oral intake of ankle bone of a he-goat with oxymel is said to reduce the splenic swelling.

Excretions: It is also said that the ankle bone of a he-goat is an aphrodisiac. The use of burnt shank bones from a cow stops haemorrhage and diarrhoea.

19. °*Aḡṣ* Gall nut *Quercus infectoria* Oliv.

Nature: Gall nut is procured from the fruit of a large plant found in some countries. The kind of gall nut plucked fresh from the plant and that which is succulent, small, compact and not moth-eaten, is considered good. It imparts a feeling of dullness in teeth and is called *amghāfanṭus* because of its freshness. Another kind of gall nut is smooth, light and perforated.

Choice: Its best variety is unripe heavy and hard. The reddish and soft variety has lesser potency. The nuts are burnt on live coal (before use).

Temperament: It is cold in the first and dry in the second degree.

Properties: Its astringency is severe. It stops the flow of fluids but its earthy substance is cold.

Ulcers: Its painting with vinegar removes the ringworm while sprinkling with powdered drug dissolves the excessive flesh.

Head: It stops the flow of harmful fluids towards the tongue and gums. It is particularly useful in cases of stomatitis in children.

fruits. The latter contains a wool-like substance. Its fruits are highly astringent but the leaves possess less astringency. The wool like substance found in fruit is very harmful for the throat.

Choice: The sun-dried extract of bramble is considered stronger in action.

Temperaments: Bramble in general is cold and dry but its ripened fruit is somewhat hot.

Properties: All the parts of bramble are astringent and desiccant but the leaves are less potent in this respect because of their moist nature. It produces thick humour. The astringent properties of leaves and fruits become more evident on drying. The flowers also possess similar properties. The roots of bramble have some rarefaction alongwith astringency and because of this property it is said to act as a lithotriptic drug.

Cosmetic: A decoction of its leaves and branches is used as a hairdye.

Swellings: Plastering with its leaves stops herpes and it is more suitable for treating carbuncles.

Ulcers: It is useful in ulcers and wounds of the head.

Head: Chewing its leaves strengthens the gums and brings relief in stomatitis. Its ripe fruit elicits similar actions. The extract of its fruit and leaf cures acute pain in the mouth. Its leaves cure the ulcer of the head but an excessive use of the fruit of desert-thorn may cause headache.

Eye: It is useful in projection of the eye.

Chest: Various parts of this plant are beneficial for treating haemoptysis.

Food: The weak stomach, afflicted with unwanted matters, becomes strong when plastered with the leaves of bramble.

Excretion: It causes constipation. A decoction of the wool-like substance contained in fruits of dog rose causes constipation and stops excessive and chronic flow of fluids from the uterus. It proves to be useful in bleeding piles, specially when applied as a plaster. Bramble itself and its leaves also are useful in intestinal ulcers and diarrhoea. Besides it dissolves calculus due to its tenuous nature.

Poisons: It is suitable to be used in cases of the bite by an animal called 'qarṭas'.

24. *Unnāb*

Jujub berry

Zizyphus vulgaris

Nature: *Unnāb* is a fruit of a well known plant mostly found in Jurjān. The variety which is brought from other places is smaller in size.

Choice: The larger red coloured variety is considered better.

Temperament: Jujub berries are cold in first degree, moderately dry and slightly moist in temperament.

Properties: Galen did not find any usefulness in it in respect of maintaining and restoring lost health but according to some other physicians, it is useful in cases having intensely hot blood. I consider the latter view to be true. It is so due to its thickening and agglutinating property of blood. However I am not inclined to accept it as a blood purifying agent. It is less nutritive and difficult to digest. In this context the following statement of Galen is (partly) valid: "I have not found it effective in health or disease. I have rather found it difficult to digest and less nutritive.

Chest: Jujub berries are useful for the chest and lungs.

Food: It is not only unsuitable for the stomach but is also difficult to digest.

Excretion: Some physicians consider it to be useful for nephralgia and cystalgia.

Chest: Jujub berries are useful for the chest and lungs.

Food: It is not only unsuitable to the stomach but is also difficult to digest.

Excretions: Some physicians consider it to be useful for nephralgia and cystalgia.

25. *inab*

Grape

Vitis vinifera Linn.

Choice: White grapes are better than the black ones though both varieties may be equally hard, thin and sweet etc. Grapes, which have been kept for two or three days after plucking, are better than those which have been freshly collected.

Temperaments: Grape peels are cold, dry and slow to digest; the pulp is hot and moist while the seeds are cold and dry.

Properties: Freshly plucked grapes are flatulent. The fruits which shrunk in size and are shrivelled after suspending in air are excellent in nutrition and strengthening for the body. Grape fruits are similar to those of the fig in nutritive value by being minimum in deficiency and maximum in nutriment. Their nutritive quality is rather better. The ripe grapes are less harmful than unripe ones. If grapes are not digested, they provide immature and raw nutrition. Grapes, if taken as such, are better than their extract and are also more assimilative and digestible. The astringent grapes may turn to be sweet by suspending them in the air but the sour ones may not exhibit such change. The resin of grapes is helpful to the liver and stomach.

Excretion: The use of resin and grapes along with their skins and seeds is suitable in intestinal colic. The resin is also useful for kidney and bladder (ailments). Immediately plucked grapes cause

relaxation of the bowels and are also flalutent. However all varieties of grapes are somewhat harmful to the bladder.

26. *‘inab al-tha’lab* Garden night shade *Solanum nigrum* Linn.

Nature: According to Dioscorides garden night shade is of various kinds:

(i) A cultivated variety which is edible is not very large in size. It has plenty of branches and blackish leaves which are bigger and larger than those of sweet basil. Its fruits are initially round and green in colour. Later on they get darkened and turn to be red when ripe. Such fruits, when taken orally, are not harmful.

(ii) The second variety is called *ta’fīn*. Its leaves are similar to those of the first variety except that they are wider. The branches, when become tall, bend down. The fruits are found on the apical parts of the plant. These are round and bladder-like in shape, red in colour, smooth to touch, and resemble a bunch of grapes. Their potency is similar to those of the first variety but they are not edible. Sometimes both the varieties are used in the form of extracts prepared while drying it in shade and preserving thereafter. The actions of both varieties are identical.

(iii) The third variety is soporific. It is a plant that has plenty of thick, diverging and not easily breakable branches. They bear numerous smooth leaves resembling the leaves of a variety of apple plant the fruits of which are taken with quince. The flowers are large and red while the fruits are encased and have a saffron like colour. The skin of its root is red. The plant is fairly big in size and grows in rocky places.

(iv) The fourth variety, known as *mujannin*, was called by the people of Ṭabaristān as *kūbrīl*. It has been given several names in Greek language. The leaves of this plant are similar to those of rocket but are bigger in size. Its big branches shoot-out from the root in groups of ten or twelve measuring about one yard in length. On the extremities of branches there are some apical formations resembling olive. These apical formations are downy in appearance similar to the nut of oriental plane tree which is bigger and wider than olive. The fruit is black. After flowering there appears a villus resembling a bunch of ten or twelve grapes. The latter are round, soft and blackish like the fruit of lablab. Its root is fragrant and thick. Its stem is about one yard long. It grows either in hilly places or the places where hot scorching air blows or in the midst of plane trees.

(v) The fifth variety is called *warīṡmūs* by some people. It resembles the olive plant at initial stages of its growth. Its branches are rough and measure less than one yard in length. Its flowers are

white and curly like the flowers of chickpea. These flowers contain five or six seeds resembling the grain of both hard and smooth varieties of chickpea. It is multi-coloured. The stem resembles a finger in thickness and is about one yard long. It grows in rocky places not far from sea or river. It is also soporific and its excessive intake proves to be fatal. Some people believe that its root may be used for increasing affection and love.

Choice: The kind, which is generally used as drug, bears green leaves and yellow fruits.

Temperament: It is cold in the first and dry in the second degree. A variety, possessing local sedative property, is cold and dry in the second degree.

Properties: The cultivated variety is cooling and astringent. There is another variety which is sedative and soporific like opium except that it is comparatively weaker in action. Another variety is lethal.

Swellings: Night shade serves as a good plaster to be used in hot internal or external swellings. Its water is taken in cases of hot internal inflammation. A plaster prepared from this drug together with white lead and rose oil, is useful in erysipelas and herpes. The barks of its root are highly desiccant.

Head: The intake of its sedative variety, in a dose exceeding twelve grains, might produce mania. Gargling with its water proves to be useful in glossitis. If the barks of its root taken orally in a dose of one *mithqāl* (4.5 gm) with wine, it would serve as a somniferous drug. Night shade relieves the headache specially when powdered thoroughly and plastered on head. It removes parotitis and meningitis. Its instillation in the ear is useful in otitis.

Eye: It cures ruptured *fistula lachrymalis*. Extract of all varieties including the soporific variety, when applied as a *kohl*, improves the eye-sight. Sometimes it replaces water or the white of an egg in preparation of suppositories to be used in ophthalmalgia.

Alimentary organs: Plastering with night shade as a single drug is useful in cases of gastric and renal burning.

Excretion: The seeds of somniferous varieties of night shade are diuretic and cleansing for the kidneys and bladder. All varieties of night shade, when used as suppository stop excessive menses. It is one of the cooling drugs which prevents nocturnal emission.

Poisons: A variety of night shade, other than *al-kākenje*, wild and somniferous varieties mentioned above, which if taken orally in a dose of four *mithqāl* (18 gm), proves fatal. Intake in lesser doses causes mania. Generally night shade is of no use except in the form of a plaster.

27. ^۶Anbar Ambergris *Ambra grasea*

Nature: It is generally assumed that the source of ambergris is a "spring" in the sea. According to some experts it is the sea-foam or excretion of an animal but these views are far from truth. A reliable person told me that during a voyage in his early age he reached a town called *khākh* at forenoon. While standing in the company of some people at the sea shore, he saw stormy waves of the sea dashing against the bank and bringing with them some ambergris every time. It was of different colours. People picked up this material and kept it in their custody. On inquiring from people of the area he learnt that it was a normal phenomenon happening frequently at that sea.

Choice: Grey coloured variety is considered best. Next in order of quality are the blue and yellow varieties. Black coloured variety is of inferior quality. It is adulterated with gypsum, wax, ladanum and *al-mand*. The latter is a kind of black and inferior type of ^۶*ambar* which is generally obtained from the stomach of fishes thought to be killed due to its oral intake.

Temperament: It is hot and dry. In all likelihood its hotness is in the second degree and dryness in the first degree.

Properties: It is useful for the old people because of its mild warming property.

Cosmetics: There is a kind of *al-mand* which is used for dying hand and thus it is worth mentioning in the sections dealing with dyes and colour.

Head: It is beneficial for the brain and senses.

Chest: Ambergris is very useful for the heart.

28. ^۶Unsul Squill *Scilla indica* Baker.

Nature: It is the same drug which is called *baṣl al-fār* (*urginea-indica* Kunth). Its leaves resemble the leaves of lily and its flowers are black in colour.

Temperament: It is hot and dry in the second degree.

Properties: Squill is erosive and has some viscosity in it.

Cosmetics: It is caustic and, after kneading with honey, forms a useful application for cases of alopecia including alopecia furfuracea.

Chest: The vinegar prepared from squill roughens the throat and stiffens the flesh. It is very suitable to be used in asthma, rattling breathing and chronic cough.

29. ^۶An'ili Wild turnip *Brassica rapa* Linn.

Nature: According to Dioscorides '*an'ili* is the wild turnip. We shall deal with it later on under the letter "*Shin*".

30. *ʿankabūt*

Spider

Aranca diodema

Ulcers: The cobweb, when applied to the wounds, stops bleeding. Similarly its application on the ulcers and wounds, prevents swellings.

Head: Thick and white cobweb of a spider is decocted with rose oil and instilled in the ear for having a soothing effect in earache.

Fevers: Some physicians state that the cobweb, when mixed with some ointments and applied on the forehead and temples, cures tertian fever. According to some other people the white and thick cobweb cures tertian fever when it is tied to patients' body or suspended around his neck or forearm.

31. *ʿūd*

Aloe wood

Alocxylen agallochon

Nature: This is the name of a kind of wood or its roots procured from China, India and Arabia. It is similar to stone bar in hardness and firmness. Some specimens have blackish dots and possess some fragrance, astringency and bitterness. Its bark is similar to the skin in appearance.

Choice: Best variety of aloe wood is called *al-mindalī*. According to some people it is procured from central India. Indian variety of aloe wood comes next in order of quality which is actually a hilly variety. It is considered superior to *al-mindalī* because it prevents lice infestation and makes the clothes fragrant. Some people however, can not distinguish between *al-mindalī* and Indian aloe wood of good quality. Another good variety of aloe wood is called *al-samandūrī*. It is brought from interior parts of India, Next is the *al-qamārī* variety which is also procured from interior parts of India. A subvariety of interior Indian aloe wood is called *šinfī*. Next in order are *al-qāqlī*, the wild aloe wood, *al-qaṭfī*, the Chinese aloe wood and a variety called *al-qushmūrī*. The latter is moist and sweet. There are some other inferior varieties of aloe wood such as *al-jilāī*, *al-mānṭāqī*, *al-liwālī* and *al-rabṭānī*. The variety called *al-mindalī* is generally considered to be good. Another variety called *al-samandūrī* is thick damp, hard, compact and blue in colour with no tinge of whiteness. It is fire resistant in nature. Some people prefer black variety of aloe wood to the blue one. The best kind of *al-qamārī* should be black, pure, free from whiteness, solid, fire resistant, thick and damp. The best aloe wood sinks into water. The other variety, which is called *al-ṭafī*, is "lifeless" and "spiritless" and so it is considered to be of inferior quality. The aloe wood is obtained from the branches and roots of trees. After cutting off from the trees, the material is buried in the earth till its wood and pitch is putrefied. The remaining substance so obtained is believed to be the pure aloe wood.

Temperament: As far as I think it is hot and dry in the second degree.

Properties: It is attenuant, carminative and deobstruent. It removes superfluous moisture, strengthens the viscera and protects the organs from the flow of infiltrating matter towards them.

Cosmetics: Chewing of aloe wood imparts a pleasant odour to the body.

Joints: It strengthens the nerves and is useful for them by its oiliness and tenuous viscosity.

Head: Aloe wood is very useful and also strengthens the senses.

Chest: It strengthens the heart and makes it cheerful.

Food: Oral intake of aloe wood in a dose of 5.25 gm removes the 'putrid moistures' from the stomach and strengthens both the stomach and the liver.

Excretion: It is constipatory in nature and proves beneficial in dysentery particularly the melanotic dysentery.

32. **Ūd al-ṣalīb*

Peony

Paeonia officinalis Linn.

Nature: According to Dioscorides peony is called by some people as *dhā al-aṣābi* i.e. that which has several fingers. Some other people name it as *'al'isi* which means 'sweet smell' in Arabic. It is a plant having a stem measuring about two hand-span in length. Several branches shoot out from it. The leaves of its male kind resemble the leaves of chestnut tree. The leaves of the female variety resemble the lofty leaves of wild celery. At the end of the stem there are some almond like shells. When these shells are opened, there emerge grains which are blood-red in colour. Most of them are small and similar to the seeds of pomegranate but there are in it almost five or six grains of black colour with some redness. The root of male peony is as thick as a finger, one hand-span in length, white in colour and astringent in taste. The root of female peony has seven or eight branches like those of chestnut tree and the roots of asphodel.

Organs of the head: The oral intake of fifteen grains of peony with water mead proves to be useful in nightmares (incubus).

Alimentary organs: It is beneficial to be used in gastric irritation.

Excretory organs: Ingestion of roots, in a dose equivalent to the weight of an almond nut, proves to be useful for treating such women who do not become clean after child-birth and thus it regulates the discharge of menses. When taken orally with wine, it is useful in uteralgia, colic, nephralgia, cystalgia and jaundice. When decocted with wine and taken orally, it causes constipation. Oral intake of ten or twelve red grains of peony with black wine, proves to be astringent

and antihemorrhagic for uteral bleeding. When it is taken by children in dry or liquid form, it removes stones in initial stages. A dose of ten grains with honey wine, proves to be useful in cases of hysteria due to uteralgia.

33. ^c*Ausaj* Desert-thorn *Lycium arabicum* Schw

Nature: A section of the people believe desert-thorn to be nothing but bramble or very similar to the latter. According to Dioscorides this plant grows in briny soil. It has straight and thorny branches like those of the plant called *dāūkaswāfibus*. Its leaves are somewhat long and bear a viscous and adhesive substance which sticks to the hand. Another kind of desert-thorn is comparatively whiter in appearance. The leaves of yet another variety are wider in shape and darker in colour with a tinge of redness and thus it differs from the two above mentioned kinds. Its branches are about five yards long having numerous weak thorns. The latter are not very sharp. Its fruits are wide and thin as though they were in their covers. Desert-thorn bears a fruit resembling edible mulberry. It grows mostly in cold places.

Properties: Some people believe that it counters the ill effects of sorcery when it is suspended over doors and windows.

Swellings and pimples: The plaster of leaves of all kinds of desert-thorn is useful in erysipelas and herpes.

Letter 'Ghain'

1. *Ghār* Bay tree *Laurus nobilis* Linn.

Nature: The seed of bay tree is similar to that of small hazel nut bearing black and thin peel which splits into two parts when pressed. Inner pulp of the black seed is yellowish in colour, and it is pleasant in taste and fragrance. Its leaves are like those of myrtle except that they are bigger in size. Its fruits are red and grow in hilly places. Its potency lies in its fruits and leaves only.

Temperament: The seed is hot while the peel is less in hotness. As a whole it is hot and dry in the second degree.

Properties: The seed is relaxant but all the parts are warming. The seed is hotter than the leaves. The hotness and dryness of all its parts is strong. The seed has the maximum potency but while the bark is considered weaker in potency and less in hotness. Its oil is hotter than the oil of walnut.

Cosmetics: It is painted with wine to be used in pityriasis.

Swellings: It is applied together with the pieces of bread and flour to be effective in hot swellings.

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Joints: Bay tree is useful in all kinds of neuralgia and its oil removes fatigue.

Head: It alleviates headache. Its oil also acts similarly. Both the seeds and oil are useful in cold otalgia, 'tinnitus aurium' and catarrh. It restores hearing power.

Chest: If licked with honey or painted on the chest, it proves to be useful in dyspnea, orthopnoea and stops flow of superfluous matters towards the lungs. A lincture is also made from it, or its seeds and honey to be used in lung-ulcers and orthopnoea.

Food: Its oil is useful in hepatalgia specially when taken with fragrant wine. Its peel elicits a similar action. The seed itself, however, relaxes the stomach and acts as an emetic drug.

Excretion: Its oil causes nausea and vomiting. It is also an emmenagogue and diuretic. The decoction of its leaves is useful in uterine and cystic diseases. A sitz bath in its decoction is also useful. In cases of diarrhoea its dose is two *dirham* (7 gm) with honey-water and oxymel. An oral dose of 3.5 gm of its skin dissolves (renal) stones and kills the foetus. This is attributed to its excessive bitterness when compared to the other substances. Oral use of its seed in a dose of 2.25 gm dissolves the stones.

Fevers: When the body of the patient is smeared with its oil, it proves to be useful in horripilation.

Poisons: It is taken orally with wine in cases of scorpion bite. A plaster prepared from fresh bay tree is applied in cases of wasp and bee stings. In short, it is an antidote for all kinds of poisons,

Substitutes: The leaves of sweet basil act as a substitute for the bay tree.

2. *Ghāriqūn*

White agaric

Polyporus officinalis Fries

Nature: According to Ibne Māsawaih it may be of two types: male or female. A variety resembles the roots of asafoetida but unlike the latter its outer surface is not rough. A section of the people think that it grows in the midst of old and decaying trees as a result of their putrefaction. It is hot, pungent and astringent in taste and contains watery, airy, earthy and tenuous substances. The difference between male and female white agaric is that the inside portion of the female kind contains straight layers while that of the male kind is round, has no layers and is apparently solid. Both varieties are identical in initial stages of development. At early stages some sweetness in taste is also found. This, after sometime, changes to bitterness. Before taking it, one should carefully determine the dose strictly in accordance with the severity of disease, power of resistance, age, habit

and climate. These factors should be kept in view for treatment of diseases.

Choice: The best kind of white agaric is that which is soft, white, light and brittle having firm and smooth extremities. It should also have some sweetness alongwith bitterness. It has a "abraded" and splintered appearance. These qualities are found in male white agaric the female one is not so good. The hard and black varieties are considered inferior in quality.

Temperament: It is hot in the first and dry in the second degree.

Properties: White agaric is dissolvent, diluent of thick humours, deobstruent for all types of obstructions and attenuant. According to some people, it has some astringent potency also. Immediately after ingestion, it appears to be somewhat sweet but later gives bitter taste.

Swellings: It is useful for treating all kinds of swellings.

Joints: It is taken with oxymel in cases of sciatica. Its chief characteristic is to remove the 'superfluous matters' from nerves. It is also beneficial in neural fatigue and the fall from high places. Its oral dose is three *qīrāṭ* (750 mg). In fevers, it should be taken with water-mead or rose-water.

Head: It is also useful in epileptic persons and characteristically it clears off the 'superfluous matters' from the brain.

Chest: Oral intake with *ṭilā* is useful in cases of asthma and ulcers of the lungs. Its oral dose is upto one *darkhamī* (3.5 gm); but when three *obūlūsāt* (2.25 gm) of it is taken with water, it proves to be useful in chest haemoptysis.

Food: White agaric is useful in jaundice. It is taken with oxymel in cases of splenitis. When chewed as such or swallowed, it proves to be beneficial in gastralgia and sour eructation. One *darkhamī* (3.5 gm) is taken in cases of hepatalgia.

Excretion: It purges out different thick humours of black bile and phlegm. Its dose is one to two *darkhamī* (3.5 to 7 gm), administered with water-mead. It is helpful to use purgative medicine with it which facilitates its transfusion to remote parts of the body. It possesses diuretic and emmenagogue properties and gives relief in nephralgia. Dosage for this purpose is one *darkhamī* (3.5 gm). It is also beneficial in cases of hysteria.

Fevers: If taken one *mithqāl* orally, it proves to be beneficial in shivering and chronic fevers of severe nature. The effects are particularly seen when it is taken with wine before the attack.

Poisons: It is used as plaster in cases of insect bites. When taken 3.5 to 4.5 gm with wine, it proves to be very useful in such cases. Its

plaster is also used on the bites of those insects which contain cold poisons.

3. *Ghāghāti* Fossil bitumen *Gagates lithos*

Nature: Fossil bitumen is a light stone which emits a pitch-like odour.

Joints: It is useful in gout.

Head: Fumigation with it, brings relief to the patients of epilepsy.

Excretion: It is also useful in hysteria.

Poisons: Its smoke repels the insects.

4. *Ghāfith* Agrimony *Gentiana dalurica* Fisch.

Nature: Agrimony is one of the thorny herbs having leaves similar to those of the hemp plant and *qanṭāfulan*. Its flower resembles the water lily. Only the flowers or the leaf extract are used as drug.

Temperament: It is hot in the first and dry in the second degree.

Properties: It is attenuant, diluting, detergent, and non-absorbant in properties and apparently possesses no warmth. It is also somewhat astringent and pungent and equals to aloe in bitterness.

Cosmetics: It gives good response in treating initial stages of alopecia including *alopecia furfuracia*.

Ulcers: It is painted in combination with old fats on intractable ulcers. Oral intake of its extract with the water of fumitory and oxymel is useful in cases of scabies and itching. Similar effect is observed with its flowers. The extract, however, is comparatively stronger in action than all other forms.

Food: It is useful in hepatic pain and obstructions. The herb strengthens the liver and dissolves the hardness associated with hepatitis and gastritis. Its extract is also useful in anemia and dropsy.

Excretion: When taken orally with wine, it proves to be useful in intestinal ulcers.

Fevers: It is useful in chronic ulcers specially when its extract is taken along with the extract of absinth.

Substitute: The similar weight of Indian valerian and *absinth* of its half quantity are the substitutes for agrimony.

5. *Ghāliyūn* Ghailion *Galium verum* Linn.

Nature: Ghailion is a fragrant drug.

Properties: It is desiccant in nature and coagulates the milk. It is slightly hot and prevents excessive bleeding.

Ulcers: It is useful for treating burns.

6. *Ghāliah* An aromatic drug prepared from *Galia moschata*
musk and ambergris

Nature: *Ghāliah* is a well known drug.

Swellings: It softens the hard swellings.

Head: *Ghāliah* is dissolved in the oil of Persian lilac or yellow gilli flower for instillation into the aching ear. Its aroma elicits a useful effect in the patients of epilepsy and makes them cheerful. Similarly it is useful for treating cases of coma. It cures cold headache and when blended with wine enhances its intoxication.

Chest: Its inhalation is exhilarating for the heart.

Excretion: Its pessary proves to be useful in cold uteralgia and hard phlegmatic swellings of the uterus. It is an emmenagogue. It dilates the opening of the constricted and awry uterus, facilitates its cleansing and prepares it for pregnancy.

7. *Ghubairā* Service tree *Sorbus domestica*

Temperament: Service tree is cold in initial phase of the first degree and dry in the last phase of the second degree.

Properties: It stops all kinds of flux. It is comparatively less astringent and constipatory than azarole. It fully prevents the infiltration of yellow bile towards viscera and, when taken as a dessert, delays intoxication.

Chest: It is useful in cases of cough attributed to heat.

Food: It stops vomiting.

Excretion: It causes constipation and is beneficial in cases of bilious abrasions and vomiting. Azarole has also the similar actions. It is useful in case of excessive urination. Its flour is less constipatory than azarole. Both azarole and service tree are constipatory in action but do not cause retention of urine.

8. *Gharāḥ* Gelatin *Taurocolla gelatinum*

Temperament: Gelatin obtained from animal skins is hot and dry in the first degree while that from isinglass is less hot but dry.

Properties: All kinds of gelatin possess agglutinant and desiccant properties.

Cosmetics: Isinglass is used in cosmetics and also incorporated in the drugs to be used in leukoderma. The gelatin from animal skins, specially from cow-hide is burnt to be used as a (deodorant) wash for foul smelling of arm pits and thus acts as a substitute for blue vitriol.

Ulcers: Skin gelatin is painted on favus. It protects against prickly heat. Similar is the action of isinglass. Gelatin from the

cow skin is painted with vinegar for beneficial effect in cases of ring worm and exfoliated scabies particularly when the affection is not much deep. Its painting with honey and vinegar proves effective for healing of wounds. Isinglass forms an ingredient of the ointment prepared for ulcerative scabies.

Head: Isinglass is also incorporated in the ointments prepared for ulcers of the head.

Chest: Isinglass is taken orally with vinegar in cases of haemoptysis and it is also put in soups for similar use.

9. *Gharab*

White poplar

Populus alba Linn.

Choice: The bark and gum from white poplar are used as a drug. Gum oozes out when a slash is made on its wood and then a borax like substance appears over it which is supposed to be the best for oral use.

Properties: The flowers, leaves and their extract are pungent and desiccant without causing irritation. The barks are drier than the leaves and flowers. The extract, prepared from its leaves, is preserved by the people to be used as a desiccant without causing irritation.

Cosmetics: The ash of white poplar, mixed with vinegar, dries up the warts and removes them. This effect is elicited irrespective of the nature of warts inverted or otherwise. The root bark is used in hair dye.

Ulcers: Powdered peels and leaves are applied on cuts and fresh wounds.

Joints: A douche of its decoction is good for gout.

Head: An extract of its leaves together with rose oil and boiled with the peels of pomegranate is used as ear-drops in cases of otalgia. Its fresh peels have similar effects when processed and used as above. A decoction of white poplar is used as an anti dandruff lotion.

Eye: The gum and flowers of white poplar cleanse the eye in cases of "dark sightedness".

Respiration: Its fruits and peels are useful in haemoptysis.

Food: Its extract removes leeches.

10. *Ghaushna*

Truffle

Nature: It belongs to the family of mushrooms and fungi. On drying pieces of this drug unite with each other and acquire the shape resembling a cartilage. It looks like a small, crooked and wrinkled bowl used for washing clothes. It is taken as pickle and resembles a cartilage or is rather better than it in taste.

Temperament: Unlike the other kinds of mushrooms, it is not cold.

Properties: Its humour is not inferior unlike that of mushroom. It is fleshy and saltish in nature.

Letter Fā

1. Fār

Mouse

Mus rattus

Cosmetics: The blood of the mouse removes warts. Its excreta is applied to alopecia and proves to be useful particularly when used in burnt form and smeared along with honey.

Head: If it is roasted and dried and administered to children, cures sialorrhoea.

Excretion: If the excrement of the mouse is taken orally with frankincense and honey wine, it dissolves the stones. It causes relaxation of the bowels in children when used as a suppository. If a patient is given a sitz bath in its decoction, it cures dysuria.

Poisons: It is unanimously accepted that application of the split mouse proves to be useful in cases of scorpion bite.

2. Fāshrā

White bryoni

Bryonia alba Tamus

Nature: According to some people *fāshrā* is the same drug which is also called *hazārjashān* and *karma baiḍā*.

Temperament: It is hot and dry upto the third degree.

Properties: It is hot and pungent as well as it cleanses, desiccates, attenuates and warms moderately.

Cosmetics: The root of *fāshrā* if applied with peas and fenugreek, cleanses and purifies the outer surface (skin) of the body. It removes freckles and ulcer scars. Similarly when decocted with olive oil thoroughly, it removes the black spots below the eyes.

Swellings: Its roots remove warts and acne. When taken with wine it relieves whitlow, dissolves hard swellings and opens cold abscesses. If 2.25 gm of it is taken daily for three days with vinegar, it dissolves splenitis. Its plastering together with fig, is also useful in splenalgia and other diseases of the spleen. It is also useful in whitlow when plastered with wine.

Ulcers: Its roots are plastered with salt on malignant ulcers. It is incorporated in the ointment to be used in rodent ulcers of the flesh. Its fruits are used as epithem in ulcerative and non-ulcerative scabies and ichthyosis.

Joints: Its roots are plastered with wine to facilitate extraction of bone fragments (from wounds). It is taken in a dose of one

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darkhamī (3.5 gm) a day in cases of paralysis. Its oral use or painting is useful in cases of "splitting" of the muscles.

Head: Oral intake of 3.5 gm per day for 6 days is useful in epilepsy and giddiness. Sometimes it might produce adverse effects on intellect.

Chest: It is taken with honey as a lincture in cases of hysteria, dyspnoea, cough and pleurisy. When the extract is taken with decocted wheat it increases the formation of milk.

Food: Galen states that the use of sprouting extremities of *fāshrā* is useful for the stomach because of its astringency and pungency with little bitterness and acidity.

Excretion: The central parts of the sprout of this plant are taken orally which are diuretic and purgative. A dose of 3.5 gm of its root kills the foetus. When taken as pessary it expels the foetus and cleanses the uterus specially when the patient is given a sitz bath in it. Its extract evacuates the phlegm. It is one of the good drugs for the spleen.

Poisons: The root of *fāshrā* in a dose of 3.5 gm proves to be useful in the bite of viper as well as in stings of all kinds of insects.

Substitutes: Doronic in its equal weight and common polypody of its two-third act as the substitutes for *fāshrā*.

3. *Fāsharistīn*

Black bryoni

Tamus communis Linn.

Nature: It belongs to the genus of white bryoni. Its leaves are like leaves of long lablab and the roots have a yellow interior and a black exterior.

Properties: It is similar to white bryoni but is comparatively weaker in action.

Joints: Black bryoni is useful in paralysis.

Head: The central parts of its sprout are taken orally and prove to be useful in epilepsy.

Chest: It clears the chest.

Excretion: The central parts of its sprout, when taken orally, act as a diuretic and emmenagogue.

4. *Fāṭ*

A Turkish drug

Nature: *Fāṭ* is a Turkish drug.

Poisons: It is suitable to be used in cases of consumption of hemlock seeds and insect bites particularly when the drug is taken with cold water. Similarly it counteracts the effect of thorn-apple and all other poisons.

5. *Fāghirā* Split cubeb *Tanthoxylum alatum* Roxb.

Nature: Spilt cubeb is similar to chick pea. Its seeds are like wild cherry. It contains black seeds resembling hemp seed. It is brought from *safāla* i.e. the land of Zanj.

Temperament: It is hot and dry in the third degree.

Properties: It is dissolving and astringent.

Food: It is incorporated in medicines prepared for improving 'cold' stomach and liver. It is useful in cases of indigestion caused by coldness.

Excretion: It is also useful in cold diarrhoea and causes constipation.

6. *Fāghiah* Henna blossom _____

Nature: It has already been discussed under the heading "*Hinā*".

7. *Fānidh* Sugar candy _____

Nature: It is the extract of sugar cane which is decocted to such an extent that it becomes viscid and then converted into sugar candy. It is made at Makrān on the out-skirts of Kirmān and exported to other cities. In fact, it is not prepared in any other city except Makrān.

Choice: The best kind of sugar candy is that which is white, thin and brought from Harrān.

Temperament: Sugar candy is hot and moist in the first degree. The white sugar candy is particularly richer in moistness.

Properties: It is thicker than the common sugar.

Chest: It is suitable to be used in cough.

Excretion: Sugar candy relaxes the bowels and is beneficial in coldness of uterus and intestines.

8. *Fāwāniā* Peony *Paeonia officinalis*

Nature: Peony is of two kinds: (a) male and (b) female. The roots of male peony are white in colour, finger-like in thickness, and astringent in taste. The female variety is multi-rooted and multi branched.

Temperament: It is moderately hot.

Properties: It is desiccant and astringent with dissolving, deobstruent and attenuant property. It is also diluting and detergent. Thoroughly chewing for an hour produces somewhat pungent taste inclining towards astringence.

Cosmetics: Peony clears the skin from black, spots.

Joints: It is useful in gout.

Head: It is useful in epilepsy even when suspended around the neck. We have found it useful in epilepsy by personal observations; as long as the drug remained suspended there were no epileptic attack but when it was removed the disease reappeared. Yahūdi (a physician) states that a fumigation with its fruits is useful for treating lunatics and epileptics and cures them. Similarly oral intake of peony filings along with roses preserved in honey are very useful. I consider it to be a kind of Roman peony. The peony which is brought from India is not very useful in this respect. Peony is useful in cases of nightmare specially when 5-10 of its seeds are taken with water mead or wine.

Food: When used after decocting it with some pungent drinks, it causes constipation. It stops infiltration of (harmful) matters towards stomach. It strengthens the stomach, relieves colic and removes gastric irritation. Its roots are useful in jaundice and for removing obstructions of the liver.

Excretion: Peony, if taken orally with wine and some other diuretics, promotes menstruation. Besides, its oral use proves to be diuretic. Intake of fifteen of its seeds with wine or water mead is considered useful in hysteria. Oral use of twelve seeds with wine stops bleeding. Ingestion of its roots, in a dose equivalent to an almond nut, facilitates expulsion of puerperal bleeding and 'cleansing' of women after childbirth. The use of same quantity of its root is also useful in cases of nephralgia and cystalgia. In the form of a decoction with wine it proves to be constipatory and diuretic.

9. *Fujl*

Radish

Raphanus sativus Linn.

Nature: The seeds of radish are strongest in action followed by other parts: peel, leaves and pulp respectively. Its oil is similar to the castor oil in potency but is comparatively warmer. The wild radish shares all properties of castor but is stronger than the latter.

Choice: The strongest part of radish is its seed. However, boiled radish is considered more nutritious.

Temperament: Its roots are hot in the first degree while the seeds are not in the third degree.

Properties: It produces gases but its seeds are dissolving and highly attenuant. The seeds of cultivated radish and wild radish excite thirst. The boiled radish becomes more nutritious because of the loss of its medicinal properties by such treatment. It produces meagre and phlegmatic 'nutrition'. It is rapidly putrefactive because of its harmful contents. In spring season its leaves become more nutritious than its

roots specially when taken in boiled form along with olive oil and *murry* (a kind of pickle or vinegar prepared by steeping rice in water and letting the liquor fermented).

Cosmetics: When mixed with the flour of tars darnel, it enables growth of hair in cases of alopecia. When plastered with honey it removes the dark spots appearing under the eye. Its seeds are useful in all kinds of external reddish or other coloured spots on the body, scars and freckles. When used as a paint with white hellebore and vinegar, it removes *pityriasis nigra*. A bath with radish water may produce abundant lice in the body.

Swellings: Radish clears acne when applied with the flour of tars darnel.

Ulcers: When plastered with honey it removes malignant and milky ulcers. Application of its seed with vinegar removes gangrenous ulcers and ringworms.

Joints: Its seeds relieve joint pain. It is very effective for treating arthralgia.

Head: It is harmful for the head, teeth and palate. Its extract and oil are, however, very useful in cases of 'wind' in the ear.

Eye: It is harmful for the eye. Its instillation into the eye, cleanses it and removes the spots under the canthus. Ibne Māswhaih states that the leaves of radish improve the eye-sight.

Respiration: The decocted radish is good to be used in old and chronic cough and (removes) thick chyme found "in the chest". It is useful in cases of suffocation caused by the fatal fungi. Its decoction with oxymel is used as a gargle for treating suffocation. In spite of these properties it is harmful to the throat. It increases milk.

Food: It is not suitable for the stomach. It causes eructation and, if taken after meals, it loosens the bowels. It is also assimilative and its intake before meals, makes the food "floating" in the stomach and prevents its stay long enough for adequate digestion. It is also an emetic drug particularly so are its peels when used with oxymel. Its plaster is suitable to be used in pleuralgia and splenalgia. Its seeds, when used with vinegar, prove to be emetic and dissolve splenic inflammations. Ibne Maswhaih state that radish and its leaves are digestive when taken after meals. Water of its leaves removes hepatic obstructions and jaundice. Some people have the opinion that its leaves are digestive but basically its 'substance' is emetic in nature. Its seeds are antifatulent and purge out undigested food. It is also appetizing and relieves hepatalgia. Its juice is good to be used in dropsy.

Poisons: Radish is useful in viper's and horned snake's bite. When it is crushed and placed on the body of a scorpion, the latter dies instantly. Its juice, when tested for this effect, was found to be

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stronger and more effective. Its precautionary intake protects one against the harmful effects of scorpion bite.

10. *Farāsīūm* Black horehound *Marrubium vulgare* Linn.

Nature: Black horehound is the same drug which is called 'alqam' i.e. squirting cucumber. It is a herb with a bitter taste.

Temperament: According to Arībāsīyūs its warming and desiccant properties are not strong but, some others consider it to be hot and dry in the third degree.

Properties: Black horehound is deobstruent, detergent, melting, dissolvent and diluting drug.

Head: Its extract is useful in chronic otalgia. It cleanses and opens auditory aperture as well as relieves chronic ear-ache.

Eye: The extract is used with honey to strengthen the eyesight.

Chest: It clears the chest and lungs through expectoration.

Food: *Farāsīyūn* is deobstruent for the liver and spleen.

Excretion: It promotes discharge of menses and 'purifies' uterus.

Poisons: It is plastered along with salt in cases of rabid dog bites.

11. *Farbiūn* Gum euphorbium *Euphorbia resinefera* Berg.

Nature: It is a kind of bitter gum and its potency is altered after three or four years of storage. Its old variety is brownish or yellowish in colour. It is not easily miscible with olive oil. The fresh variety, however, is not so. Some people opine that its potency can be preserved if it is stored with peeled broad beans in a vessel.

Choice: The kind of gum euphorbium which is fresh, pure, yellowish red, intensely odorous and most pungent is considered good. Some other available varieties are adulterated with sarcocolla and (other) gums.

Properties: Gum euphorbium is detergent and contains attenuant, burning and cleansing properties. Fresh variety is more warming than asafoetida. No other gum can be matched with asafoetida in warming property.

Joints: It is used with some aromatic syrups in cases of sciatica. It removes scales of bones in a day but the excessive flesh around the bone should be protected from it by applying a lukewarm *qairūṭī* made from some oil. It is very useful when smeared on the organs affected by paralysis and loss of sensation.

Eye: When applied as a collyrium, it acts as a detergent and also removes bluish secretions from the eye. The irritation caused by

it persists for the whole day and so it is used with honey in all kinds of medicines for the eye.

Excretion: It is useful in removing yellow water and 'coldness' of the kidneys. It is useful also for colic patients. Its dose is three *obūlūs* (2.25 gm) administered with honey-water and some other odorous seeds. According to Khūzī it constricts the os-uteri so perfectly that all ecobolic drugs become ineffective. He states that the gum euphorbium evacuates the viscous phlegm already accumulated in the region of hips, back and intestines.

Poisons: According to some people the skin of the head of a person bitten by a snake or an insect, is given a deep incision till the parietal bone is visible. Then the gum euphorbium is put therein and the wound is closed by thread sutures. This treatment would protect the patient from ill effects of the bite. A dose of three *dirham* (10.5 gm) of euphorbium taken orally for three days becomes fatal by causing ulcers in stomach and intestines.

12. *Faras*

Horse

Equus caballus

Properties: The dung of horse is similar to that of ass in properties.

Swellings: The skin of a colt is burnt and painted with water to remove the pimples.

Head: It is said that the ligaments of horse's knee are taken orally with vinegar to cure headache.

Excretion: Rennet from the horse is, specially, suitable to be used in chronic diarrhoea, intestinal ulcers and sprue.

13. *Farfakh*

Purslane

Portulaca oleracea Linn.

Nature: Purslane and *al-baq̄la-al-ḥamq̄ā* are the same drugs and we have dealt with the latter under the letter *Ba*.

14. *Fasāfis*

Bed bug

Cimex lectularius

Nature: Bed bug is a living creature like a tick. It is also well known in Syria and commonly found in homes. It is probably similar to the organism called *anḥal*.*

Chest: It expels leeches from pharynx particularly when taken with wine or vinegar.

*It is an animal of lenticular shape residing in mats and beds. It emits an offensive smell.

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Excretion: When inhaled it proves to be useful in hysteria. It is also an invigorating drug. When powdered and put in the meatus it cures dysuria.

Fevers: Swallowing of seven bed bugs with broad bean before the beginning of quartan fever, proves to be a useful treatment in this disease.

Poisons: When swallowed without broad bean it is beneficial in insect bites.

15. *Fustuq* Pistachio nut *Pistacia vera* Linn.

Nature: Pistachio tree is well known. It is found in some countries.

Temperament: It is said that it is warmer than walnut which is hot in the last phase of the second degree. It possesses some moistness also. Some people consider pistachio to be cold but this is not true.

Properties: It is deobstruent due to its bitterness and fragrance. It is pungent and contains very little sweetness.

Food: Pistachio is good for the stomach. Specially so is its Syrian variety which is similar to *ḥab al-sanobar* i.e. edible pine, as it has some bitterness with acidity. It is also deobstruent for the liver due to its bitterness and fragrance. It cleanses the liver. It opens the channels of food. Its oil is useful in hepatalgia caused by thick fluids. Some one stated that he did not find it to be either very harmful or useful for the stomach. However, I consider it to be useful as it prevents nausea, inversion of the stomach and strengthens the cardiac orifice.

Excretion: Pistachio neither relaxes the bowels nor causes constipation.

Poisons: It is useful in insect bites particularly when used after decocting it with a strong wine.

16. *Fasūriqūn* A compound medicine made of impure oxide of lead and *ferrous sulphate*

Nature: *Fasūriqūn* is a medicine to be used in scabies prepared from one part of impure oxide of lead and two parts of *ferrous sulphate*. Both the ingredients are pestled into an aged vinegar. They are kept into a new earthen pot and buried into a heap of dung for forty days during hot summer season.

Properties: It is more desiccant than the yellow vitriol but is lesser irritant and attenuant.

Ulcers and wounds: It removes scabies.

17. *Fiddah* Silver *Argentum*

Nature: Silver is a well known metal

Temperament: It is cooling and desiccant.

Properties: Its rust is very astringent. It contains absorbing and desiccant properties. Silver filings, mixed with other drugs, prove to be useful in conditions associated with viscosity of fluids.

Ulcers: It is very good to be used in scabies, ulcers and prurigo.

Head: Its filings are useful in halitosis particularly when used with some other materials.

Chest: Its filings, in combination with some other drugs, are useful in palpitation.

18. *Futr* Mushroom *Boletus crocatus* Batsch.

Choice: The most suitable variety of mushroom is known as *Qulā'ī*. Though it may cause cholera, its intake is not fatal for anybody. Dried mushroom is inferior in quality.

Temperament: Mushroom is cold in the last phase of the third degree and moist almost in the same degree.

Properties: Mushroom produces thick humours of inferior quality. It may be improved by boiling and mixing it with fresh or dried pear and mountain mint followed by an intake of strong wine (*nabīdh*).

Head: It causes numbness and apoplexy.

Chest: Even the non-fatal variety of mushroom causes suffocation. Ingestion of fatal variety invariably produces such symptoms.

Food: Excess intake of the non-fatal variety causes cholera. It is nutritious but is difficult to digest. Fatal kind causes syncope and cold perspiration.

Excretion: It causes dysuria.

Poisons: The fatal kind of mushroom grows near the places where there are rusty iron or putrid matters or insects. It may also be found in the proximity of such plants, which infect the mushrooms growing nearby e.g. the olive plant. The characteristics of such kind of the mushroom is that it bears rapidly putrefying viscous and moist contents on the surface. It causes dyspnea and syncope. This may be treated by some diluting drugs like oxymel and mint. Sometimes the consumer of mushrooms dies instantly or within a day.

19. *Fuṣr asāliyyūn* Rock-parsley *Petroselenium sativum* Hoffm.

Nature: Rock-parsley will be discussed under the chapter dealing with *karafs*.

20. *Fuqqā'* Beer

Nature: Beer is a well known substance occasionally used as a drug.

Choice: Good quality beer is prepared from white bread, mint and celery. The beer prepared from cooked bread is not considered as good as that from the bread prepared by kneading the unleavened flour.

Properties: Beer is flatulent. It produces inferior humour and poor nourishment. It is harmful to animal organs to such an extent that when a piece of ivory is soaked therein, it becomes so soft as to be moulded easily. The beer, made from white bread, celery and mint, produces good chyme and it is very suitable for hot-tempered people.

Joints: It is very harmful to the nerves.

Head: It is also harmful to meninges.

Food: The beer, made from white bread, is good for the 'hot' stomach.

Excretion: Barley beer is diuretic and harmful to kidneys and bladder.

21. *Faqlāminūs* Greek cyclamen *Cyclamen europaeum* Linn.

Nature: It is said that Greek cyclamen is the same drug which is called *bukhūr maryam* that is a kind of '*arṭanīthā*'.

Properties: Greek cyclamen has purifying, deterging, diluting, deobstruent, dissolvent and intense soporific properties. Oral intake of its root causes giddiness.

Cosmetics: Its oral intake in a dose not more than three *mithqāl* (13.5 gm) along with a *ṣilā* (a kind of wine) or water-mead and other natural waters cures jaundice. Patient should, thereafter, be made to lie down and covered adequately with clothes to ensure profuse sweating having a bile like colour. Its root cleanses the skin and removes freckles. Its decoction is useful in fissures attributed to cold exposure. The olive oil, which has been placed in its hollowed roots and cooked on hot ash, has similar properties.

Swellings: Cyclamen root removes the pimples. Its extract dissolves hard swellings, splenitis, scrofula, fresh or dry wounds and also cures *miliaria rubra* (due to prickly heat).

Ulcers: Its root alone or with vinegar or honey, cures the wounds before they become chronic. A decoction of the drug is poured to cure the head-ulcers.

Joints: When applied as a plaster, it proves to be useful in the tortuosity of the nerves and gout.

Head: Its use along with wine proves to be highly toxic. Sometimes it is snuffed with water for the purpose of "purification" of head. When its decoction is poured on the head, its ulcers are cured. Similar use relieves the cold headache.

Eye: The water of Greek cyclamen with honey is suitable in cases of cataract and weakness of sight. It acts similarly if taken as a snuff.

Chest: Some people recommend it for the patients of asthma.

Food: It is taken orally in cases of jaundice. It is plastered over the splenic region with vinegar.

Excretion: Its oral intake with honey wine removes phlegm and 'hydrous' chyme. If taken orally or used as a pessary it helps the discharge of menses. Some people have the opinion that the fresh Greek cyclamen is an ecbotic drug. When tied around the neck or forearm, it is said to prevent the pregnancy. It is also used in the form of a suppository for the purpose of relaxation of the bowels. Similarly when the regions of the umbilicus, hypocondrium and waist is smeared with it, the bowels are relaxed. It may also cause abortion and proves to be fatal for the foetus. Its extract is stronger in this respect. Its water is mixed with vinegar and applied to restore normalcy in prolapse of the anus. It also opens up the anal vessels. Its root is taken orally or used as a suppository to restore normal menstruation. If 17.5 gm of its root is taken orally with honey, it becomes highly purgative. Its dose is upto four *darkhami* (14 gm).

Poisons: It is taken with wine to counter the effects of consuming fatal drugs and poisons specially the poison of sea-rabbit.

22. *Fill*

Root of water lily

Nature: *Fill* is a well known Indian drug having the potency of belladonna and mandrake.

Head: Its plaster is beneficial in headache.

23. *Filfil*

Pepper

Piper

Nature: According to Galen the first fruit which sprouts from this plant is called long pepper. Later on it gets separated from the pepper seeds and apparently becomes more moist. Due to this reason its after-taste is felt corrosive and irritant. Its roots resemble the black

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costus which is more pungent. The white pepper is weaker in warmth and moisture content. Some people opine that the black pepper, on drying, loses the potency of bitterness. The white pepper, however, retains its potency until it is fully dried.

Temperament: Pepper is hot and dry upto the fourth degree.

Properties: It contains the properties of absorption, dissolution and detergent. It is chewed with dried grape raisin (currant) to clear out and remove viscous phlegm, relieve pain and give warmth to the nerves. It is suitable for healthy persons.

Cosmetics: When used with sodium nitrate it removes pityriasis and also makes the body slim.

Swellings: When used with pitch, it dissolves scrofula.

Joints: It gives intense warmth to the nerves and muscles and it is matchless in this action.

Head: When used with vinegar, it is beneficial for the teeth.

Eye: The white pepper is incorporated in the collyrium to be used for cleansing effect in the eyes.

Chest: Its linctus is suitable to be used in cough and chest pain. It also is useful for treating diphtheria like symptoms particularly when the palate of patient is rubbed with honey. It cleanses the lungs also.

Food: It is a digestive and an appetizer. When taken with the fresh leaves of bay-tree, it proves to be useful in gripes and flatulence. Its oral intake with vinegar or application as a paint, proves to be useful in splenitis. White pepper is very suitable for the stomach and is a good gastric tonic. The long pepper promotes rapid propulsion of the food.

Excretion: It is a diuretic drug. It helps in downward movement of the foetus. Its post coital use spoils the semen. Unlike scammony it relaxes the bowels, whether taken in small or large quantities. It desiccates and destroys the semen. However, both long pepper and white pepper, increase the sexual desire due to their excessive moisture content. When taken with fresh leaves of bay tree, it proves to be useful in gripes.

Fevers: Its massage with oil is useful in shivering fevers.

Poisons: The white pepper is incorporated in medicines used as antidotes. Long pepper is also useful in cases of insect bite particularly when painted with oil.

24. *Filfil al-mā'* Water pepper *Polygonum hydropiper* Linn.

Nature: Water pepper is a vegetable herb which grows in and around the water. It is somewhat similar to pepper in taste but is not so bitter.

Properties: It is an adequately warming drug but is comparatively less warm than the pepper. Its plaster dissolves hard swellings.

25. *Filfil mōyah* Root of long pepper *Piper longum* Linn.

Nature: *Filfil-mōyah* is said to be the root of pepper.

Properties: It is specially useful in cold pains and convulsions.

Joints: It is also useful in gout.

Excretion: It is particularly a useful drug in colic and cold gases.

26. *Filinjmushk* Basil *Ocimum gratissimum* Linn.

Temperament: The variety of basil called *qathamān* is comparatively more moderate in temperament than the sweet marjoram and sweet basil. It is also mildly desiccant.

Head: When inhaled or painted or taken orally, it removes the cranial and nasal obstructions.

Respiration: When taken orally, it proves to be useful in cases of palpitation attributed to the presence of phlegm and black bile in the heart.

Excretion: It is a good remedy to be used in piles if taken orally or applied as a paint.

27. *Filinjah* A kind of cubeb -----

Temperament: It is hot and dry in the second degree.

28. *Fanjankusht* Chaste tree *Vitex agnus castus* Linn.

Nature: It is the same drug which is called *banjakusht*. It has already been dealt under the letter *Bā*.

29. *Fū* Valerian *Valeriana officinalis* Linn.

Nature: The leaves of valerian resemble the large leaves and branches of celery. Its stem measures approximately a yard in length and is smooth, soft and thick. Its upper part is as thick as a finger, purple in colour and knotty in shape. It bears abundant flowers which look like those of narcissus. Its white colour has some purplish tinge. The lower part of its root is divided into several sub-roots which are aromatic. It is similar to nard in potency in many respects.

Temperament: The potency of its root is warming.

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Chest: Valerian is useful in pleurisy.

Excretion: If taken in dry form it becomes diuretic. Its decoction helps in the discharge of menses. In this property it is stronger in action than the Indian and Roman nards. It has some resemblance with *manjūshah* i.e. Indian nard.

30. *Fūdhānj*

Mint

Mentha piperata Linn.

Nature: Mint is mainly of two varieties (a) water mint and (b) mountain mint. The latter is similar to hyssop in taste. Its leaves are also similar to those of hyssop. Some other varieties of mint are: (a) *ghalejan* and (b) *marrubium*. These are also pungent like the varieties mentioned earlier. The potency of its syrup is the same as that of wild thyme. The mass of mint is tenuous in nature. The mountain mint is stronger than the water mint.

Properties: Mint, specially the wild mint, is very rarefying due to its pungent and bitter properties. For this reason it is rube-facient and ulcerating also. It elicits diaphoretic actions particularly when taken alone. It also proves to be highly warming, absorbing (the matters) from remote parts of the body, diluting and desiccant.

Cosmetics: The mint, specially the fresh one, is decocted with wine and plastered to remove black spots of the body and the dark grey marks occurring round the eyes.

Ulcers: Mountain mint is useful for healing fractures and ruptures. One should take bath with its decoction for treating itch and scabies.

Joints: When the decoction of mint is taken orally it proves to be useful in contusions in the body or extremities of the muscles. When plastered on sciatica, it burns the skin and changes the temperament of the concerned organs. It absorbs matters from remote parts of the body. Oral intake of mint followed by whey continuously for several days proves to be useful in cases of elephantiasis and varicose veins. *Ghalijan* variety of mint is useful in convulsion when taken orally. Painting on gout proves to be useful because of its rube-facient action.

Swellings: Oral use of mint is beneficial in leprosy not only because of its dissolving potency but also by its diluting and rarefying qualities.

Head: The extract of mint kills the ear-worms but may cause headache. Mountain mint is useful in oral ulcers. It pushes down the superfluous matter and helps their expulsion through the nostrils. The ash of *ghaltjan* strengthens the gums.

Chest: Its decoction is useful in orthopnoea. Its oral intake alongwith fig is highly effective for clearing thick and viscous humours from the chest. It is also useful in rib pain. Mountain mint is more effective in this respect. *Ghaltjan* is beneficial in all the above mentioned ailments. When *ghaltjan* is sprinkled over vinegar and used immediately as an inhaling drug, it cures the patient of syncope. Marrubium is useful in palpitation.

Food: Mint, particularly the wild variety, is useful in cases of loss of appetite and gastric weakness. It is beneficial in hiccough. It is useful for the patient of black and white forms of jaundice, due to its deterging, dissolving, deobstruent and rarefying qualities. Same is the property of its decoction. A bath with the decoction of mountain mint cures the jaundice by inducing perspiration. When taken with fig, it proves to be useful in dropsy. Mountain mint acts as an appetizer. Its decoction is also useful in dropsy. The *ghaltjan* variety elicits a soothing effect in nausea. An ointment is prepared from it to be used as plaster for reducing the enlargement of spleen. Similarly marrubium is highly useful in cases of palpitation, attributed to gastric ailment, pain and nausea.

Excretion: Its decoction is diuretic and is useful in gripes and cholera. If pounded as such, or decocted and taken with honey it becomes fatal for foetus. It is also an emmenagogue. It expels phlegm by inducing vomiting. Some people have the opinion that mountain mint, and specially its wild variety, reduces the sexual desires and prevents nocturnal emission. It causes harmless relaxation of the bowels and is beneficial for the uterus. It kills the worms. The wild and mountain varieties remove black bile. Its dose is 4.5 gm to be administered with roses. The other variety of mint also elicits similar actions. All varieties of mint serve as a tonic when mixed with vinegar and some *maibukhtaj*. The best method of its oral use is that it should be powdered and sprinkled over the vinegar and taken after mixing it with water and salt. The variety, known as *ghaltjan*, expels the superfluous melanotic matters through the urine. The wild mint also possess similar actions

Fevers: Its decoction is taken orally in shivering fever. It is also effective when the oil, in which the mint is decocted, is used for massage.

Poisons: Its oral intake or massage is useful in cases of insect bite. In such cases the painting of mint proves to be no less effective when compared to cauterisation. Its intake with wine would remove the fatal effects of the poisons. Fumigation with its leaves drives away the insects. Similar action would be achieved when it is sprinkled on the ground. The wild mint is good to be used in cases of scorpion

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bite. The oral intake of its soup is useful for treating cases of bites by beasts.

31. *Faufal* Betel nut *Aseca catechu* Linn.

Nature: *Faufal* is the fruit of an Indian plant resembling the nutmeg except that the former is red in colour and hard to break. When broken, all of its pieces are scattered. It has a pleasant odour. Therefore the Indians use it for the sake of fragrance. It imparts a red colour to the teeth (with some ingredients). Its potency is equal to that of sandal wood.

Temperament: It is cold and dry in the third degree.

Properties: It is a cooling drug with astringent potency.

Swellings: Betel nut is good to be used in hot and hard swellings.

Eye: It is suitable for persons suffering from ophthalmalgia.

32. *Fūwah al-ṣabbāghīn* Dyers madder *Rubia tinctorium* Linn.

Nature: It is pungent in taste.

Properties: It is moderately detergent.

Cosmetics: It cures ringworm. It is applied with vinegar to cure pityriasis alba. It also clears the skin and removes all kinds of spots and stains.

Joints: When taken with water mead it proves to be useful in sciatica, paralysis with defect of touch sensation. When 3.5 gm of dyers madder is taken with 7 gm of Himalayan rhubarb, it becomes useful for treating cases of injury and fall. For this purpose, it is taken with a cup of *nabīdh* (a kind of wine).

Food: Its fruit is taken together with oxymel in splenitis. It cleanses the liver and spleen and removes their obstructions. This is its main characteristic.

Excretion: It is highly diuretic and sometimes causes hematuria. It is necessary to take bath daily during its use. Its use as a pessary may cause excessive menses and expels the foetus.

Poisons: The use of its branches with leaves counters the adverse effects of insect bites.

33. *Filzahraj* Ophthalmic berberry *Berberis aristata* DC

Nature: It is said that *filzahraj* is *Berberis aristata* DC. plant and its fruits resemble the pepper. The medicinal extract called *Ḥudād* is obtained from this plant and also *zirishk* i.e. berberry. Another variety of ophthalmic berberry is the Arabian berberry. The potency

of the ophthalmic berberry is similar to its extract but is comparatively weaker.

Cosmetics: If painted alone or with any other oil, it strengthens the hair.

Food: Its branches are decocted with vinegar and taken orally in cases of splenitis. It proves to be very useful in this regard. Similarly it is beneficial in jaundice.

Excretion: A decoction of its leaves and branches acts as an emmenagogue. Similarly the oral intake of its fruits in small doses helps through evacuation of phlegmatic humours.

LETTER "QĀF"

1. *Qātil al-dhi'b* Wolf's bane *Aconitum napellus* Linn.

Properties: The potency of wolf's bane is similar to that of panther's bane but the former is specially meant for wolves.

2. *Qātil al-Kalb* Nux vomica *Strychnos nuxvomica* Linn.

Head: Dogs' bane causes epistaxis.

Chest: It also causes haemoptysis.

Poisons: It kills dogs instantly and causes epistaxis and haemoptysis in human beings.

3. *Qāqlah (ṣighār)* Lesser cardamom *Elettaria cardamomum*
Maton.

Nature: There is a variety of cardamom which is as large as chick pea. It is black in colour but on rubbing yields white seeds which are irritant like cubeb and possesses some fragrance. The lesser cardamom is also fragrant and resembles the lentil.

Temperament: It is hot and dry in the third degree.

Properties: It has some astringence alongwith warming qualities specially in the variety having a burr. The burr also elicits similar effects.

Food: It is useful in nausea and vomiting particularly when it is administered with the water of mastic and the pomegranate juice. It strengthens the stomach.

4. *Qāqulī* Salt herb *Atriplex* Sps.

Nature: *Qāqulī* is a herb which resembles alkali plant.

Temperament: It is hot and dry in the first degree.

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Properties: It is somewhat saltish and astringent in taste. It is heterogenous in nature and elicits mild flatulent effects.

Chest: When mixed with milk and gargled, it becomes efficacious for treating chest diseases.

Food: The seeds and the extract of its herb purge out yellow water. It is advised to be taken in small doses or otherwise it might cause weakness.

Excretion : It is diuretic and also helps in the formation of semen. It promotes the secretion of bile and other fluids. The dose of *qāqūlī* is from 1/3 to 2/3 of a *ratl* (1 *ratl* = 450 gm).

5. *Qabaj* Red headed partridge *Alectoris chukor chukor*

Nature: It is a well known bird. Hazel grouse is similar to it in many respects.

Properties: The meat of this kind of partidge is the most 'rarefied' in quality.

Cosmetics: Its meat fattens the body.

Respiration: Its meat 'cleanses' the heart.

Food: The meat of red headed partridge is useful in cases of dropsy and some gastric diseases.

Excretion : The meat of both (red headed partridge and hazel grouse) is light and costive and it increases the sexual desire.

6. *Qat* Alfalfa *Medicago sativa* Linn.

Nature: *Qat* is the same drug which is called *asfast* i.e. *raṭbah* which is used as fodder for all the animals.

Joints: The oil of alfalfa is the most useful remedy for chorea.

7. *Qatād* Tragacanth *Astragalus gummifer* Lab.

Nature: It has been dealt with its gum under the letter "*Kāf*". The gum of tragacanth is also called *al-kathīrā*.

8. *Qiththā* Cucumber *Cucumis melo* var *utilissimus* Duthie.

Choice: The seeds of cucumber are better than those of *khiyār*. The ripe cucumber is considered superior and tenuous.

Temperament: It is cold and moist upto the second degree.

Properties: It relieves the patient of adverse effects of heat and bile but produces inferior type of chyme. The latter is susceptible to putrefaction and enhances the temperature in tenacious fevers.

Melon acquires harmful properties relatively more quickly than cucumber but the ripe one is more detergent in action. The seeds of cucumber are better than those of *al-khiyār* which slowly assimilate and pass through the vessels in immature form. It produces chronic fevers. Ajowan counteracts the symptoms of severe gastric burning and other harmful effects attributed to *khiyār*.

Swellings: Application of its leaves with honey is useful in phlegmatic urticaria.

Respiration: The patient of hot syncope gets relief and feels pleasure when he takes it as a snuff.

Food: It relieves the thirst and is suitable to be used in stomach ailments though, in some cases, it is not fully assimilated. Its roots, when taken with honey wine in a dose of a few *obūlūs* (1 *obūlūs*=750 mg), evacuate thin humours by inducing vomiting.

Excretions: It is diuretic, laxative and useful in the penile pain. It is suitable for the bladder. Cucumber is an inferior diuretic than melon.

Poison: Its leaves are useful in rabid dog bite cases.

9. *Qiththā^o al-himār* Squirting cucumber *Momordica elaterium* Linn.

Nature: Its extract is obtained from the fruits collected at the end of the summer season when they become yellow. The fruits are kept in a piece of cloth and suspended in the air to remove the moisture. After cleaning and drying on hot ash, these are kept on a slab in a shadowy place.

Choice: The best squirting cucumber is that which is yellow in colour, straight like the cucumber and truly bitter in taste. Extract of white, smooth and light squirting cucumber is considered good. It resembles the squill in action particularly after storage for an year.

Temperament: It is hot and dry in the third degree.

Properties: It is an attenuant and dissolving drug. Its roots, fruits and leaves are detergent and dissolvent. Desiccating property of its leaves is greater but its roots and leaves are equal to each other in potency.

Cosmetics: The extract of squirting cucumber or its roots and leaves are useful in jaundice. Dusting with powdered drugs helps in the removal of the black scars of the healed up wounds and the dirtiness from the face.

Swellings: Application of a plaster made from its root and barley flour dissolves all kinds of chronic and phlegmatic swellings. When the extract is applied with the gum of turpentine, it opens the abscesses.

Ulcers: Its dry powder is useful in scabies and ringworm.

Joints: Squirting cucumber is useful in arthralgia. An enema of its decoction is beneficial for treating sciatica. Its plaster with vinegar is also useful in gout.

Head: Its extract removes severe migraine particularly when used as a snuff with milk. When the nostrils are smeared with its extract and milk, it helps in removing the superfluous matters. It is also useful in helmet and chronic headache. The extract of its leaves is weak in potency but, if used as ear-drops, it relieves the ear-ache.

Respiration: Its extract as a purgative drug is very suitable to be used in patients suffering from irregular respiration. In cases of phlegmatic diphtheria, the palate of the patient is smeared with its extract, honey and olive oil.

Food: It is wonderfully useful in dropsy by removing the fluid harmlessly. For this purpose its roots are taken orally in a dose of one and a half *obūlūs* (appr. 1.125 gm). Alternatively half *raṭl* of the root is decocted in 7 litres of wine and then taken orally for three days in a dose of 3-5 *obūlūs* (2.250-3.750 gm). Similarly 1.5 *obūlūs* (1.125 gm) of its roots or 1/4 *iksonāfin* (21 gm) of its barks, expel phlegm and yellow bile by inducing vomiting. This preparation is also taken with honey water in cases of persisting phlegm and yellow bile. The highly beneficial action is elicited by easy evacuation of these humours. It does no harm to stomach. In order to make it a good purgative, its extract is mixed up with its double quantity of salt and thereafter pea-sized tablets are made. These tablets are taken orally with water. To induce vomiting, a little bit of the drug is dissolved in water and smeared on the sublingual glands and their surrounding parts. If quicker and stronger emetic effects are desired, lily and olive oils replace water in the above process. For immediate relief in severe disease, the patient should be given its syrup with olive oil. If there is no response, barley flour with cold water and vinegar, should be given to the patient.

Excretion: It evacuates the phlegm and (unwanted) blood. Extract of squirting cucumber helps in discharge of urine and menses but its use as a pessary, is harmful to the foetus.

10. *Qardamānā* Caraway *Carum carvi* Linn.

Nature: Caraway is a plant growing in Armenia and *Qamā'inā* town. It is also found in India and Arabia. Caraway (seeds) are obtained from this plant.

Choice: Good variety of caraway is brought from India and Armenia. The seeds should not be easily breakable, compact and adhering to each other. The variety which does not possess these qualities, is considered inferior and it should be discarded. Similarly the

caraway with an intense smell and a bitter pungent taste is also inferior in quality.

Temperament: It is hot and dry in the third degree.

Properties: It is one of the rubefacient drugs possessing some liquefying potencies. Its chief property is to strengthen the internal organs of the human body.

Ulcers: If painted with vinegar it proves to be useful in scabies and ringworm.

Joints: It is useful for neural diseases, phlegmatic coxalgia, paralysis and muscular contusions.

Head: Its intake with water is useful in epilepsy.

Chest: It 'clears' the chest and relieves the cough.

Excretion: It is also useful for treating gripes and worm infestation including tapeworms. If taken with wine, it cures nephralgia and dysuria. In cases of (renal) stones, one *darkhami* (3.5 gm) of caraway is taken with the root bark of bay tree. Fumigation with caraway kills the foetus.

Poisons: Caraway is useful in scorpion sting and also for treating all other animal bites.

Substitutes: Lemon grass and Syrian rue act as substitutes for caraway.

11. *Qirṭās*

Paper

Papyrus

Temperament: Paper is hot in the first and dry in the second degree.

Properties: The burnt paper stops bleeding.

Swellings: Burnt paper is also useful in favus.

Head: Burnt paper stops epistaxis.

12. *Qurṭum*

Carthum seed

Carthamus tinctorius Linn.

Nature: Carthum seeds are of two kinds: (a) cultivated carthum and (b) wild carthum. Some people call wild carthum seeds as *aṭriṭulis*. The spikes of the wild variety have some resemblance with cultivated carthum seeds but the leaves of the former are longer. The leaves of the plant grow only at the terminal end of the stalk; the remaining part is leafless. It bears yellow flowers and thin roots which are of no use. Application of its rubbed leaves and fruits is useful.

Temperament: Wild carthum is hot in the second and dry in the third degree though it is popularly believed to be hot in the first and dry in the second degree.

Properties: Oils of carthum seed and nettle are identical in properties but the former is weaker in action. It is one of those substances which curdle the milk and separate the whey. According to Masih it dissolves the condensed milk and also condenses the milk as such. It is very poor in nutritive value.

Chest: It 'cleanses' the chest and clears the voice.

Food: Carthum seeds are harmful for the stomach and coagulate the milk therein.

Excretion: When used with fig or honey, it relieves colic and evacuates the 'burnt' phlegm. Similarly it proves to be useful in (loss of) sexual desire. Oil obtained from cultivated carthum seeds relaxes the bowels. For purgative action its seed-pulp is administered with any soup or it is incorporated into pills alongwith almond and honey. The dose is four *darkhami* (14 gm) given as pills made from its seed-pulp. It evacuates the faecal fluids when its pulp is taken with costus and bitter almond in a dose of three *obūlūs* (2.250 gm). For this purpose 3.5 gm each of anise and sodium nitrate are mixed alongwith some dry fig and honey. The preparation, so formed, should be taken in doses ranging from 21 gm to 42 gm. Sometimes a sweet dish is made from it by mixing peeled almond, anise and decocted honey to be taken in small quantities after dinner. When 15 gm of its fresh seed-pulp is soaked in 450 gm of hot water alongwith 15 gm of powdered white sugar candy, it forms a useful medicine for evacuating phlegm.

Poisons: In cases of scorpion sting the leaves or/and fruits of wild carthum are taken orally. Some people express their opinion that as long as a person, stung by a scorpion, keeps the leaves or fruits of its wild variety in his mouth, he will not feel the pain but as soon as the drug is taken out of his mouth, the pain would be felt again.

13. *Qaraz*

Gum arabic tree

Nature: Dioscorides states that some people call it *aqākiā* while according to some others it is called *aqāqiā*. It is obtained from a plant growing in Egypt and some other countries. Its stem and branches bear thorns. Its branches are not straight and erect in position. It has white flowers. The fruits resemble white lupin in appearance and are covered with a sheath. An extract is obtained from the fruits and flowers and dried in shade. The colour of the extract from ripe fruits is black but the extract of unripe fruits is of ruby colour. The latter variety should be selected for use. A collection of all varieties of *aqāqiā* emits fragrance. People generally put the leaves and fruits of gum arabic tree together and prepare their extract. The gum arabic is also obtained from the thorns. Gum arabic tree treated with water

is seldom used in ophthalmic medicines. For this purpose it is triturated with water and the material which comes up is discarded. This process is repeated again and again till the water becomes clean. Then the tablets are made from this substance. Sometimes the gum arabic is boiled in an earthen pot which is suitable for placing on a furnace. Alternatively the drug is roasted on live coal. The best part of this spiky plant is its gum which is a worm-shaped glass like structure, quite pure and free from wood. Another variety of this gum is white. The gum resembling the pine resin, is dirty and hence is not suitable for use. It has agglutinent property and, when administered alongwith some hot drugs, it reduces their intensity. Similarly the plant growing at *qabādūqiā*, is another variety of Egyptian gum arabic. It is very small in size and more tender. This type of gum arabic tree is full of thorns like the spines of date tree. Its leaves are like those of common rue. It grows in autumn having the seeds contained in three or four kinds of covers. Its seeds are smaller than those of lentil. This kind causes constipation. Potency of its extract is weaker than that which grows in Egypt. This kind is not suitable for inclusion in ophthalmic medicines for internal use. Thus the gum has been discussed fully with respect to its nature and properties. Some people call it by (a separate) name of *qaraz* but I have heard from some reliable persons of Kirman that *aqāqiā* is the extract of gum arabic tree. However, we have already explained all of its actions which are related to the human organs under the chapter "*Alif*".

14. *Qar'* White pumpkin *Cucurbita pepo* Linn.

Temperament: White pumpkin is cold and moist in the second degree.

Properties: Boiled white pumpkin is moderate in nutrition. Its descent after digestion is quite rapid. Unless it is perversed before digestion due to any reason, it does not produce any harmful humour in the stomach. It decays either on contact with harmful humours in the stomach or when stuck up in gasteric passages like all fruits. Unless dominated by some other humour, the humour produced by white pumpkin is insipid. If it is mixed up with quince, the resultant humour would be suitable for the people of bilious temperament. Its combination with grape or pomegranate juice elicits similar actions but its harm to colon increases. It is nutritious by nature if taken along with other homogeneous substances. If it is taken with mustard, salt or some astringent agents then the pungent, saltish and astringent humours would be produced respectively. In short the white pumpkin is harmful for people having melancholic and phlegmatic temperaments and is

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suitable for the people of bilious temperament. Its jam is not used in medicine as it has no cooling and warming effect. However, it is sometimes used for its good taste.

Head: The extract of white pumpkin when used with rose oil, acts as a sedative in cases of acute otalgia. It is also useful in cephalic and meningeal inflammations and painful conditions of the pharynx.

Chest: The flour of white pumpkin is useful in cough and chest pain attributed to heat.

Food: Its decoction facilitates the removal of hot superfluous matters in the stomach by promoting their 'slipperiness'. Similar action is observed by oral intake of wine contained in its hollowed shell. The extract is used (and sniffed) in cases of odontalgia. It is one of the drugs which produces the moisture of stomach and prevents thirst. However, the unripe pumpkin is harmful to the stomach of infants and young people. Its ill effects in the stomach cannot be removed except by vomiting. It is very harmful for the colon.

Excretion: Intake of water after boiling it with honey and mixing it with sodium nitrate, relaxes the bowels. Similar effects are noticed when it is buried in live coal, or decocted as such and taken with sugar. It is very harmful to the intestines, specially to colon.

15. *Qirfah al-dārshīnī* Cinnamon *Cinnamomum zeylanicum* Blume.

Nature: It is said that *Qirfah al-dārshīnī* is a kind of cinnamon but some people consider it to be a different substance which resembles cinnamon in hardness. Other varieties may be not so hard, stripped, white or brittle. These are comparatively weaker in action and have already been mentioned under the chapter on *Dārshīnī*.

Temperament: It is hot and dry in the second degree.

16. *Qirfah al-qaranfal* Cloves rind *Caryophyllus aromaticus* Linn.

Nature: The rind comes from thick peel of cloves and has the same colour. It has the taste of cloves having a sweetness other than that of cinnamon. Being sweeter than cloves, it is comparatively weaker in action.

Temperament: It is hot and dry in the third degree.

17. *Qarqūmaghmā* Mogma of saffron oil *Crocomagma*

Nature: It is said that *qarqūmaghmā* is the sediment of saffron oil.

Choice: Its variety which is fragrant, heavy, black, free from the pieces of wood is considered best. On mixing, it imparts its colour to the water. Similarly if chewed, the whole set of teeth would get a dark colour.

Properties: It has warming and maturative properties.

Eye: It has the potency of cleaning the eyes and removing dim-sightedness.

Excretion: *Qarqūmaghmā* is a diuretic drug.

18. *Qarn*

Horns

Cornu

Nature: *Qarn* is a well known thing.

Head: The burnt horns of stag and he-goats cleanse the teeth, strengthen the gums and also prove to be a sedative in cases of severe pain. The horn should be burnt till it becomes white.

Eye: Stag horn is burnt till it becomes white like washed salt. It is then applied to prevent suppurative conditions in the eye.

Chest: The washed and burnt stag horn is useful in haemoptysis.

Food: It reduces dropsy and is not harmful for the stomach. Besides, it is useful in jaundice.

Excretion: The burnt and washed stag horn is useful for treating dysentery.

19. *Qaranful*

Cloves

Caryophyllus aromaticus Linn.

Nature: Cloves are similar to jasmine but are black in colour. The male variety resembles the olive kernels but is somewhat larger and darker than the latter. Clove is a fruit of a plant found in an Indian island. The property of its gum is similar to that of terebinth resin.

Choice: The best cloves are similar to the kernels which are dry, sweet and intensely fragrant.

Temperament: It is hot and dry in the third degree.

Cosmetics: It imparts a pleasant odour to the body.

Eye: Cloves, when taken orally or applied as a *kohl*, strengthen the eye-sight and are useful in hemeralopia.

Food: It strengthens the stomach and the liver and proves to be useful in vomiting and nausea.

20. *Qurrah al-'ain*

Water cress

Nasturtium officinale R. Br.

Nature: It is said that water cress is the same drug which is called by the names *Jirjir al-mā'* and *karafs al-mā'*. It is fragrant in nature and grows in stagnant water.

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Properties: It possesses warming and dissolving properties.

Excretion: It is a diuretic and an emmenagogue drug. If taken unripe or as a decoction, it removes the kidney stone. It is also useful in intestinal ulcers.

21. *Qurayş* Roman nettle *Urtica piluli-fera* Linn.

Nature : Roman nettle is also called *anjurah*.

22. *Qasab* Dried date

Nature: According to the people of *Hijāz*: *tamr al-idqāl* and *qasab* are the same drugs but the natives of *Najd* call it by the names *al-'arq* and *al-yarsūm*.

Temperament: Dried dates are moderate in heat and dryness. They are said to be hot in the second degree.

Properties: Dried dates are astringent.

Alimentary organs: The dates strengthen the stomach.

Excretory organs: They cause constipation.

23. *Qusṭ* Costus *Saussurea lappa* Clarke

Nature: There are three varieties of costus: (a) Arabian costus which is white in colour and mild in fragrance (b) Indian costus which is slightly black and (c) bitter costus. There is also another variety of costus which is intensely fragrant and is called *qusṭ al-qaranfulī*. The variety which emits an odour similar to aloe and is somewhat black in colour, is considered inferior. The Roman variety of costus resembles marjoram and possesses a diffusing odour. Sometimes good quality costus is adulterated with the hard elecampane roots which neither irritate the tongue nor bear a strong odour.

Choice: The best quality of costus is that which is white, fresh, compact, irritant and biting to the tongue. It should not be worn out and stinking. The variety next in order of quality is light and called black Indian costus. Next to it comes the black Syrian costus variety. A thin skinned sea costus variety is also considered to be good.

Temperament: It is hot in the third and dry in the second degree.

Properties: It possesses bitter, pungent, hot and burning qualities so much so that it causes ulceration. Costus is useful for all the organs requiring warmth and absorbs humours from deep parts of the body.

Cosmetics: If smeared on the skin with water or honey, it cleanses the freckles.

Ulcers: It is ulcerative but the bitter variety dries up wet ulcers.

Joints: It relaxes the nerves and is useful in torn muscles. Its plaster proves to be beneficial in sciatica.

Head: It is useful in lethargia.

Chest: It is also useful in chest pain.

Excretion: Oral intake or inhalation of fumes through a funnel helps in the discharge of menses. It kills the foetus, causes diuresis, expels tapeworms and stimulates the sexual desire. It is used as a pessary in cases of uteralgia. Its oral intake or a sitz bath is useful for treating cold uteralgia. If taken with any type of wine it loosens the bowels and vitalizes the sexual power. These actions are attributed to its flatulent superfluous moisture content.

Fevers: Smearing it with olive oil proves to be useful in shivering fevers.

Poisons: It is useful in all kinds of bites including snake bite. For this purpose it is taken with wine and absinth.

Substitutes: Half quantity of pellitory acts as a substitute for costus.

24. *Qissūs*

Labdanum

Cistus creticus Linn.

Nature: Labdanum is of three varieties: (a) black (b) white and (c) red. All of them are pungent and astringent. One of its varieties is called *Lādhan*. Actually *qissūs* is either the same drug as *lādhan* or something different. However, labdanum and *lādhan* are identical with each other in many respects.

Temperament: Temperament of *qissūs* inclines towards hotness. Some of its varieties are cold but *lādhan* itself is hot in the last of the second degree.

Properties: Labdanum, specially its leaves, are astringent but its flowers are constipating. The variety, generally known as *lādhan*, is warming, deobstruent of the vessels and laxative.

Cosmetics: Drops of the exudate from this plant are fatal for the lice and they are also useful for removing hair. *Lādhan* is mixed with honey wine and painted to remove the scars. Its use along with wine, myrrh and the oil of murtle stops the falling of hair. However, it is not quite strong to cure alopecia as its dissolving property is weak for this purpose.

Ulcers: The decoction of labdanum if mixed with wine, is very useful for treating ulcers. Its plaster stops spreading of malignant ulcers. *A qairūḡī* is also made from it to treat the burns.

Joints: Labdanum is harmful for the nerves.

Head: Sniffing of its extract with the oil of orris root, honey and sodium nitrate gives relief in chronic headache. Similarly ear drops prepared from an extract of the tips of its black variety rubbed with the peels of pomegranate, when instilled into the opposite ear, relieve

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tooth-ache. Its juice is suitable to be used as a snuff for 'cleansing' of the head. Besides, it cures chronic flux of the nose and dries up nasal ulcers.

Food: Plastering of fresh labdanum along with vinegar proves to be useful in splenic ailments.

Excretion: A heap of its white flowers, measuring about three fingers in height is taken orally with wine for treating dysentery. For this purpose, it should be taken twice a day. If the fresh tips of labdanum are plastered, it would act as an emmenagogue. Similarly when 3.5 gm of labdanum is used as a fumigant drug after menstruation, it prevents conception. Tips of this plant are used as a suppository to facilitate discharge of menses and expel the foetus. When the patient is fumigated with labdanum, the placenta is removed. Its flowers cause constipation.

Poisons: Oral intake of its roots with vinegar or wine proves to be useful in cases of trantula bite.

25. *Qaşab*

Cane

Arundo donax Linn.

Nature: There are many varieties of cane such as (a) solid variety from which arrows are made, (b) female variety used for making flutes (c) thick and multi-knotted variety which is suitable for writing purposes (d) thick and hollow variety growing on river banks and (e) thin variety growing in salty lands. The thin variety is white in colour and people are generally aware about its origin (f) the very thin and hollow variety from which the mats are made and (g) a very thick, long and hard variety which is difficult to break. It is brought from India and used for making spears.

Temperament: The cane is very cooling but its ash is hot.

Properties: Its paint helps in extraction of placenta, thorns, splinters of wood and arrows embedded in the flesh.

Cosmetics: Its barks and roots are detergent and useful in alopecia. Roots, when used along with wild onions, facilitates expulsion of placenta.

Swellings: Application of its fresh leaves prove to be useful in erysipelas and hot swellings.

Joints: It relieves the 'twisting' of nerves.

Head: *Al-khirqagh* which is the flower of cane, if dropped accidentally into the ear, causes deafness as it gets stuck up there and is not easily removed. The burnt cane is useful in favus and ringworm infestation in the head region.

Excretion: It is an emmenagogue and a diuretic drug.

Poisons: It is useful in scorpion bite.

26. *Qaşab al-dharīrah* Chirata *Swertica chirata* Ham.

Nature: Chirata grows in India.

Choice: The best variety of chirata is that which is of ruby-colour and has closely inter connected knots. When broken, it yields many splinters. Its hollow pipe is stuffed with a cobweb like material when chewed, it gives a pungent taste. Its powder is white or yellow in colour and fragrant in taste.

Temperament: It is hot and dry in the second degree.

Properties: It is rarefying and somewhat astringent alongwith some pungency. It contains a proper combination of earthy and airy substances. It is very dessicant. Like other aromatics it possesses rarefying properties.

Cosmetics: It is useful in cases of bluish discolouration of skin attributed to 'dead' blood.

Joints: It is also useful in splitting of the muscles.

Eye: It clears the vision.

Swellings: It dissolves the swellings.

Chest: Flumigation of the throat, using a funnel, with this drug as such or in combination with the gum of turpentine, relieves the cough.

Food: Administration with honey and the seeds of celery is useful in hepatitis and stomatitis. It is also useful in dropsy.

Excretion: It is diuretic and emmenagogue. When given with the seeds of celery, it is useful in renal diseases and strangury. Oral intake of its decoction or a sitz-bath in it is useful in uteralgia. It is taken with honey and seeds of celery in cases of metritis.

27. *Qaḍm quraish* Fir *Picea abies* Linn.

Nature: It is dealt with under the chapter of *tannūb*.

Excretion: Fir is a suitable to be used in cases of renal and cystic ulcers.

28. *Qaḩā* Sand-grouse

Temperament: Sand grouse is weak in hotness and strong in dryness.

Properties: It produces black bile.

Food: It is useful in dropsy.

Excretion: It is also useful in loose bowels.

29. *Qīṯrān* Cedar tree (resin) *Cedrus libani* Loud.

Nature: *Qīṯrān* is a plant-resin which is also called *sharbīn*. The potency of its smoke is equal to that of pitch. It yields a kind of oil

on extraction with a piece of wool by a process similar to that for pitch.

Temperament: It is hot and dry in the fourth degree.

Properties: Dead bodies are preserved in this resin. It is a red-dening and cauterizing drug.

Cosmetics: It is useful in cases of infestation with lice and their eggs in both men and animals.

Ulcers: It tones up the flabby flesh. It is useful in scabies in man and animals. Its oil is also used in quadrupeds e.g. dogs and camels.

Joints: It is useful in muscular splitting, congestion of blood and formation of pus. It is a drug to be used in elephantiasis and varicose veins both when licked or smeared.

Head: It is a very useful drug for relieving cold headache. Painting of the head or instillation into the ears kills the ear-worms. It is used as ear drops alongwith the water of hyssop in cases of throbbing in the ear and tinnitus. Similar formula relieves the pain in case of toothache. It is also useful in tooth decay.

Eye: It improves the eye-sight and removes ulcer-scars from the eye.

Chest: It is painted on throat in tonsils and associated pain. It cures the ulcers of the lungs when licked in a dose of one and a half *ūqaiyah* (45 gm.) It is also useful in chronic cough.

Food: The fruits of cedar tree are harmful for the stomach.

Excretion: When taken as an enema, it kills the intestinal worms. It is an emmenagogue. It kills all types of worms. It kills the foetus and 'spoils' the semen. If applied to the penis before intercourse, it prevents conception. The fruits of cedar tree, also called *sharbūn*, are harmful for the stomach. They are useful in strangury.

Poisons: It is used as a plaster on the bite of horned snake and taken orally with *ṭilā* in cases of poisoning caused by sea-rabbit. When dissolved in the fat of a stag and then rubbed on the body, it repels the insects.

30. *Qaṭaf*

Goose foot

Chenopodium album Linn.

Nature: *Qaṭaf* is the same drug which is called *sarmaq*.

Temperament: It is cold in the second degree. It is somewhat moist in temperament.

Properties: Its seeds have laxative potency for the patients having a bilious temperament.

31. *Qun* Cotton plant *Gossypium herbaceum* Linn.

Properties: The seeds of cotton plant are warming. These are very laxative.

Chest: Its seeds are very suitable to be used in chest affections and cough.

Excretion: Its seeds are laxative for the bowels and the extract of its leaves is useful for treating diarrhoea in children.

32. *Qafir al-yahūd* Jews' Pitch *Asphaltum*

Nature: According to some experts Jews' pitch is obtained from the mountains. Some of its kinds float on the surface of spring waters. This variety is used by the people for lighting lamps as a substitute for olive oil. The black variety like *zift* is considered harmful. It is found in the form of light black pieces which are fragile and when chewed it tastes like the liquid pitch.

Choice: The best variety is purple, shining, hard and heavy. Its black variety is considered impure and inferior in quality.

Temperament: It is hot and dry in the third degree.

Properties: Its potency is similar to that of pitch. Its oral intake strengthens the body and dissolves the coagulated blood in the abdomen.

Cosmetics: Its paste is useful in whiteness of the nails.

Swellings: It matures scrofula.

Ulcers: Its painting proves to be useful in ringworm and swelling wounds.

Joints: It is used as a plaster and as a drink in cases of gout. It is also painted on sciatica.

Chest: It is useful for treating cough and pulmonary ulcers. It is a good expectorant, removes purulent matters from the chest and also proves to be useful in tonsillitis and diphtheria.

Excretion: It is useful in cases of uterine hardness. Pessary or fumigation is useful in prolapsus uteri and uteralgia. Its oral intake or enema with barley water is useful in dysentery.

33. *Qult* Horse gram *Dolichos biflorus* Linn.

Nature: Horse gram is also called *al-māsh al-hindī*. It resembles linseed but is slightly bigger in size and has a tinge of dusty colour.

Temperament: It is cold in the second and moist in the first degree.

Food: It relieves hiccup.

37. *Qalimiah al-dhahab* Litharge of gold *Scoria of gold*

Choice: The best variety of gold litharge resembles a golden 'bunch' of grapes and having ash colour and flakes. It bears a thick surface.

Temperament: It is moderate (in cold and heat) and dry in the third degree.

Properties: The litharge of gold and its washed variety is more attenuant than the litharge of silver. It is somewhat desiccant and detergent.

Ulcers: It fills up the wounds (by granulating tissues) and removes dirt and excessive flesh thereof. It also heals the malignant ulcers.

Eye: It is useful in corneal opacity and also in the initial stages of cataract. It strengthens the eye.

38. *Qalimiah al-fiddah* Litharge of silver —————

Nature: Litharge is obtained from gold, silver and, sometimes, from copper and pyrite. However, it is a dross or smoke emanating at the time of metal casting. It is also something which settles down like the scales of metal.

Temperament: Litharge of silver is identical with that of gold or it may even be colder.

Properties: Litharge from silver specially the washed one is desiccant and moderately detergent without causing irritation. It is very suitable to be used in ointments. Its desiccant and detergent properties are more suitable for the organs which are moderate in structure and have no hard flesh.

Ulcers: Application of its powder or ointment is useful in scabies and moist ulcers which resist healing.

39. *Qamarquraish* Fir *Picea abies* Linn.

Nature: According to Dioscorides some people call it *fiṭwīdās* which is the fruit of *tamūb*. It is wrapped in a cover called *ṣanobar*.

Properties: It is astringent and slightly warming.

Chest: When taken alone or with honey, it is useful in cough and chest pain.

40. *Qunna barā* Asclepias *Cynachum vinietoxicum*

Temperament: Asclepias is hot in the first degree.

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Properties: It is an attenuant, detergent and erosive drug. According to Paulos, it produces black bile particularly when the drug preserved in salt is used.

Cosmetics: It clears freckles and pityriasis. Its oral intake or plaster is the most useful way of treatment for *pityriasis alba*. In this way the freckles and pityriasis are removed in a few days. Arabs are familiar with this property

Ulcers: The leaves, when plastered, are useful in malignant ulcers of the breath.

Head: Sniffing the water of its roots clears the congestion of thick fluids from the brain.

Respiration: It clears and removes obstructions from the lungs.

Food : Besides, it removes the hepatic and splenic obstruction.

Excretion: Its water relaxes the bowels. It is plastered in cases of piles, removes gripes, dissolves the hardness of the uterus and evacuates thick chymes.

Poisons: *Asclepias* is used as a plaster in all kinds of insect-bite cases.

41. *Qinnab* Indian hemp *Cannabis sativa* Linn.

Properties: Indian hemp seeds are carminative, desiccant, and difficult to digest. The drug produces harmful humours and is very warming in actions. The roasted seeds are, however, less harmful. Sugar-oxymel removes the harmful effects. The seeds are said to produce much flatulence.

Swellings: A decoction of the roots of wild hemp is used as a plaster to be applied on hot swellings and erysipelas.

Head: Its extract and oil is used in otalgia. When the head is washed with the extract of its leaves, dandruff is removed. Its seeds cause headache because of their intense warming and evaporating properties.

Food: Its seeds are difficult to digest and harmful to the stomach.

Excretion: The peels, when excessively used, stop the formation of semen.

42. *Qunburah* Crested lark *Cristata galerida*

Food: When the meat of crested lark is well digested, it produces much nutrition but it is slow to digest.

43. *Qanbil* Kameela *Mallotus philippinensis* Muell Arg.

Nature: The seeds of *qanbil* are sandy in colour with red tinge in the upper parts. The red colour is of lighter shade than that of *wars* i.e. pseudo-saffron.

Temperament: It is hot and dry in the third degree.

Properties: According to Ibne Māsawaih it is highly astringent.

Respiration: It kills and expels the worms including tape worms.

44. *Qanṭariūn* Common centaury *Erythraea officinalis*

Nature: Common centaury is of two varieties: (a) Lesser centaury and (b) greater centaury. Both grow towards the end of the spring season. Its leaves are similar to those of small tamarix gall. The branches of thick variety are white and yellow. The branches have green tips and the whole plant is like a big broom. Its dose for treating the patients suffering from fever is 7 gm. The small variety is similar to mountain mint and *heofāriqūn* i.e. hypericon. Its leaves are similar to those of common rue. Extract is prepared from the fresh or dry centaury. To make the extract the plant is decocted till the water absorbs its potency. This water is preserved for future use.

Choice: The best variety is that which is thin, small, yellowish and irritant to the tongue.

Temperament: It is hot and dry upto the third degree.

Properties: Centaury is detergent, astringent, pungent and contains some sweetness and desiccant properties without causing irritation. When used during cooking, it is said to consolidate the smaller pieces of meat.

Ulcers: It cleans the fresh wounds and cicatrizes the chronic ulcers. Incorporation of dry centaury in an ointment cures fistulae, deep ulcers and complicated wounds. Sometimes common centaury is stuffed in the fistula and bandaged for cure.

Joints: It is useful in dissolution of continuity of the muscles and prevents the formation of pus therein. An enema with its thin variety is useful in sciatica, neuralgia and muscular contusions. This variety is more useful in these cases. If blood tinged purgation follows after its use, then it would be more effective. Sometimes an enema prepared from its ash mixed with water is used for similar effects.

Head: The extract of centaury is used as collyrium with honey. It is applied to cure *fistula lachrymalis*. It is useful in catarrh and dissolves swellings.

Chest: It prevents haemoptysis by its astringent property. Both the varieties are useful in dyspnea. In cases of 'cold' pleurisy and haemoptysis a dose of 7 gm of common centaury is taken with wine.

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Food: It is useful in hepatic obstructions and splenic hardness.

Excretion: Centaury promotes menstrual discharge, expels the foetus, kills the worms and causes diuresis. Oral intake in a dose of 7 gm is useful in cases of gripes, uteralgia and colic. A decoction of the lesser variety purges out phlegm and immature bile. Excessive intake, particularly of the thin variety, causes hematochezia.

Fevers: It is useful in fevers. Pyretic patients are advised to take 7 gm of the drug orally.

45. *Qunfudh*

Porcupine/Hedgehog

Echinus marionus

Nature: The wild hedgehog is well known. The species found in mountains is also called porcupine and it possesses arrow-like thorns. The mountain species is similar to the wild hedgehog in temperament. The marine species is a kind of fish having a shell.

Properties: Fat of hedgehog prevents the flow of matters towards the viscera. Its dried liver acts similarly. Ash, obtained from wild and sea hedgehogs, is detergent, dissolvent and desiccant.

Cosmetics: Salted wild hedgehog is useful in elephantiasis. The flesh of its wild species is useful in leprosy due to its highly dissolvent and desiccant properties. Application of burnt hedgehog mixed with olive oil is useful in alopecia.

Swellings: The skin of sea hedgehog is one of the ingredients of a medicine prepared to be used in scabies. Its flesh is very useful in scrofula.

Ulcers: The ash of its skin is useful for treating foul ulcers and removal of excessive flesh from them. Its flesh is very useful in scrofula and hardness of glands.

Joints: The flesh of salted wild hedgehog is useful in paralysis, convulsions, all kinds of neural diseases and elephantiasis.

Chest: The flesh of wild hedgehog is useful in consumption.

Food: The flesh of wild hedgehog is useful in dyscrasia. The salted one, mixed with oxymel, is good to be used in dropsy. The liver of hedgehog is kept in a piece of cloth and dried in the sun to be used for similar effects.

Excretion: Sea hedgehog is good for the stomach. It is laxative and diuretic. Wild hedgehog, mixed with salt and oxymel is useful in nephralgia. Its flesh is useful for preventing bed wetting in children. Its constant use may, however, cause dysuria.

Fevers: The flesh of wild hedgehog is useful in chronic fevers.

Poisons: The flesh of all kinds of hedgehog, is useful for treating cases of insect bite.

46. *Qanqabin* Castor oil *Ricinus communis* Linn.

Nature: It is said that castor oil is the same drug which is called *duhn al-khirwa*'.

Wounds and ulcers: It is suitable to be used in scabies and the head ulcers.

Excretory organs: Its paint proves to be good for treating the blockade of the uterine orifice (adhesion of uterus) and hot anal swellings. Its oral intake causes diarrhoea and expels worms from the abdomen. It is a very effective drug for this purpose.

47. *Qinnah* Galbanum *Ferula galbaniflua* Boiss.

Nature: According to Dioscorides it is a gum obtained from a plant which resembles the cane in shape. It grows in the Syrian towns. It is called by some people as *makāniyūn*. Galbanum is of two varieties: (a) foam-like variety which is light in weight and more white and (b) another variety which is comparatively thicker and heavier.

Choice: The thicker variety is considered best.

Temperament: Galbanum is hot in the second and desiccant in the third degree.

Properties: It is laxative, dissolvent and carminative. It is one of those substances which decompose the flesh. However, it possesses warming, burning, absorbing and dissolving properties.

Cosmetics: It removes a kind of boil erupting on the body called 'adasia'.

Swellings: It is useful in scrofula.

Ulcers: It is painted with vinegar on 'milky ulcers'.

Joints: It is also useful in fatigue, tetanus and muscular convulsions.

Head: It is useful in headache and epilepsy. When an epileptic patient inhales it, he regains consciousness. It gives prompt relief in giddiness, molar pain and tooth decay. It is useful in 'cold' pain of the ear and dissolves its swellings without any trouble. It acts so when it is dissolved in the oil of blue lily and used as luke-warm ear-drops.

Chest: It is useful in asthma and chronic cough.

Excretion: It forcefully discharges menses, expels the foetus and causes abortion when taken as a pessary. Its intake with wine is useful in hysteria. It also cures dysuria.

Poisons: Its oral intake with wine serves an antidote in persons poisoned by Armenian arrows. It is useful against the effect of snake and scorpion poisoning. Its fumes act as insects repellent. Body massage with it also keeps the insects away. When the body is smeared

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with galbanum, spleen wort and olive oil, all the insect which come into contact with the body are killed. It counteracts all kinds of poisons. It is, however, inferior to sagapanum in this respect.

Substitute: Sagapanum is the substitute for galbanum.

48. *Qawāniş*

Gizzards

Properties: Gizzard of the birds is very rich in nutritive value. Gizzard of chickens is not easily digestible.

Food: Some people think that the interior layer of the gizzard is desiccant and cures painful conditions of the gastric orifice. According to Ibne Māswaih the gizzard of cocks is particularly useful in these ailments.

49. *Qūqa*

Narwhal

Monodon monoceros

Nature: *Qūqa* is a sea-animal. Its potency is identical to that of an animal origin drug called castoreum.

Head: Its flesh is useful in epilepsy.

Excretion: It is also used in hysteria.

50. *Qaishūr*

Pumice-stone

Nature: Pumice-stone is the same drug which is called *fainak* that has already been discussed under the chapter '*zabad al-baḥr*'.

51. *Qaişūm*

Southern wood

Artemisia abrotanum Linn.

Temperament: Southern wood is hot in the first and dry in the third degree.

Properties: It is attenuant and bitter alongwith some earthy and rarefying properties. According to Galen its flower is more effective than absinth and also possesses some deobstruent property.

Cosmetics: The burnt southern wood, when applied with castor or radish oils, is useful in alopecia. Application of its decoction in some warming and deobstruent oils increases the growth of slow growing beard. It also makes the gum strong.

Swellings: It dissolves phlegmatic swellings. When decocted with quince it proves to be useful for swellings which resist dissolution.

Wounds: It is irritant and so is not suitable to be used on wet wounds.

Joints: Its decoction is useful in chronic muscular contusions with a poor response to other treatment and also in sciatica.

Head: Its decoction with olive oil makes the head warm and removes its coldness.

Respiration: Its decoction is useful in acute orthopnoea. Decoction of its flowers is comparatively better in this respect.

Food: When used in 'cooked' form with olive oil it 'warms' (tones up) the stomach and removes its 'coldness' (atony).

Excretion: It increases the flow of menses, expels the foetus and removes renal and cystic calculi. Its oil is warming in nature and useful in uterine adhesions. It is also useful in dysuria.

Fevers: When mixed with oil, it proves to be useful in shivering fever.

Poisons: Its intake with wine, proves to be useful for treating cases of insect bite and when sprinkled on the bed, it drives away the insects.

52. *Qaiqahan*

A resin

Nature: *Qaiqahan* is a gum having an unpleasant taste. It is procured from Arabia. According to some people it is the same drug which is called sandarus but it has not been confirmed. It forms a fumigatory drug to be used with myrrh and storax.

Properties: It is somewhat sticky.

Cosmetics: It rapidly removes the ulcer-scars. It possesses some slimming properties. For this purpose it is taken in a dose of 14 gm with oxymel or water.

Head: No other drug is better than it for removing odontalgia and strengthening the weak gums.

Eye: It strengthens the eye-sight.

Respiration: Its intake with hydromel is useful in asthma. Generally it is used by the wrestlers.

Food: When taken orally for three days with oxymel, it shrinks the (enlarged) spleen.

Excretion: Its oral intake with honey water promotes menstrual discharge.

53. *Qaimiliā*

Toledo-earth

Terra cemolia

Nature: The layers of toledo earth are white and bright and resemble marble in appearance.

It possesses a camphor like taste. However some of its kinds are not shining. All the varieties can be pulverized.

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Ulcers: Application with water and vinegar is useful in burns. Burnt and washed toledo earth is useful for the ulcers which are difficult to heal.

Letter *Kāf*

1. *Kāshim* Lovage *Levisticum officinalis*

Temperament: The seeds and roots of lovage are warming. Seeds are warm and dry in the third degree.

Properties: It is carminative, deobstruent and dissolvent.

Food: Lovage is maturative, digestive and an antifatulent drug for the stomach.

Excretion: A dose of 3.5 gm of lovage purges out worms including tapeworms. Its seeds possess potent emmenagogue properties.

Poisons: It is useful against the ill effects of all kinds of bites.

2. *Kāfūr* Camphor *Camphora officinarum*

Nature: There are many varieties of camphor such as (a) *Qaišūrī* (b) *al-riyāhī* (c) *al-āzad* (and (d) *al-asfarak al-azraq*. The last one is found mixed with its wood but it can be separated because of its volatile nature. According to some people *kāfūr* tree is sufficiently big to provide shelter for a large group of people under its shadow. Leopards are often seen near this tree during a specific period (summer season) of the year. Its plant is spongy and grows near water. According to another opinion it grows near China. We have seen its wood many times. It is white, fragile and very light. A camphor like substance can often be seen in its pores.

Temperament: It is cold and dry in the third degree.

Cosmetics: Its regular use makes the hair grey.

Swellings: It prevents hot swellings.

Head: Camphor stops epistaxis when used in combination with vinegar, extract of unfertilized dates, water of myrtle or sweet basil. It is useful in severe headache associated with acute fevers. It causes insomnia and helps febrile patients to regain consciousness. It is very useful in stomatitis.

Eye: It is considered to be a drug to be used in hot ophthalmia.

Chest: It forms one of the ingredients of some cardiac remedies.

Excretion: It reduces the sexual desire, produces kidney and bladder stones and also stops biliary diarrhoea.

3. *Kākenj* Alkakenje *Physalis alkakenge* Linn.

Nature: The plant or its leaves are equal to garden night shade in potency.

Temperament: It is cold and dry in the second degree.

Ulcers: Its extract is used for protecting the ulcers. It removes hardness of fistula and chronic ulcers of the ear.

Respiration: It is useful in cases of asthma, lolling of the tongue due to excessive thirst and dyspnea.

Food: It is also used in jaundice.

Excretion: It is also useful in urinary ulcers.

4. *Kāozuwān* Borage *Borago officinalis* Linn.

Nature: I think that *Kāozuwān* is the Persian equivalent of a herb called *lisān al-thaur*. i.e. borage.

Properties: Exhilaration and alleviation of anxiety are its chief characteristics. We shall discuss its uses later on while dealing with *lisān al-thaur* under the letter of *Lām*.

5. *Kabābah* *Cubeb* *Cubeba officinalis*

Nature: The potency of cubeb is similar to that of madder but it is more attenuant. Cubeb is procured from China.

Temperament: According to some people it elicits some cooling effects alongwith its inherent hotness. Actually cubeb is hot and dry upto the second degree.

Properties: Cubeb is deobstruent and rarefying but it can not be used as a substitute for cinnamon.

Ulcers: It is good to be used for in putrid ulcers of the gums.

Head: Its use is beneficial in cases of foul stomatitis.

Chest: When kept in mouth, it clears the voice.

Food: It is a strong deobstruent to be used in hepatic obstructions.

Excretion: It 'cleanses' urinary tracts, facilitates the flow of sandy materials through the urine and removes kidney and bladder stones. Local use of saliva secreted by chewing cubeb enhances coital pleasure in women.

6. *Kabid* Liver *Hepar*

Properties: Liver produces thick humours. The liver obtained from a fat duck or a hen is preferred to be used.

Head: Goat liver, particularly from a male animal, helps in detection of epilepsy as its oral intake by such patients promptly leads to an epileptic fit. Local application of lizard liver relieves pain associated with tooth decay.

Eye: Its oral intake or application as a *kohl* of the water of goat liver, with or without pepper, is good for treating night-blindness. Fomentation of its vapours is also undertaken in this ailment.

Food: Wolf liver is useful in all kinds of hepatalgia. Galen stated that he incorporated it into a preparation of agrimony but this did not enhance its utility. The passing of all kinds of liver through vessels, except the liver from a fat duck, is slow (i.e. its absorption is slow).

Poisons: The liver of a rabid dog is given orally to the persons bitten by it. According to some people it prevents hydrophobia. A large number of people got relief from such treatment. Other measures were, however, used concurrently.

7. *Kabar*

Caprifole

Capparis spinosa Linn.

Nature: Caprifole is a kind of fruit. It has a root. There is another type of fruit which is similar to cucumber but it is not *kabar*. It is pungent and hot. It is so intense that when added to the grape syrup like mustard, it protects the latter from fermentation. Its root is bitter and pungent. The variety called *qulzumi* is irritant and it causes swelling of the gums and pustules in the mouth.

Choice: The root bark is its most useful part.

Temperament: The variety found in hot countries is considered hotter. All of its varieties are hot and dry in the second degree.

Properties: It is dissolvent, deobstruent and detergent. Its root is erosive, attenuant, cleansing and deobstruent. The bark is bitter, pungent and astringent. The nutritive value of its fruits is reduced when they become salty. Fresh fruit are more nutritious than the dry ones.

Cosmetics: Its paint cures pityriasis.

Swellings: Its root dissolves scrofula and other hard swellings. It is used after mixing it with something which reduces its potency. Its leaves have also been stated to be useful for this purpose.

Ulcers: Application of root bark proves to be extremely useful for treating putrefied and malignant wounds.

Joints: Its root-bark is useful in sciatica and coxalgia. Sometimes its extract is used as an enema for beneficial effect in coxalgia. It is useful in paralysis, loss of local sensation and tetanus. It strengthens the organs due to its astringent property. This quality

also calls for its usefulness in muscular tearing for the trunk or the extremities.

Head: Chewing of its root-bark absorbs 'moistness' from the head and relieves cold headache. The extract is instilled into the ear in case of worm infestation. Biting the root-bark relieves tooth-ache. A mouth wash prepared from its decoction in vinegar or wine or in both used one after the other, elicits similar action.

Respiration: The salted caprifole is useful for treating the patients of asthma.

Food: *Kabar* as such and specially its root-bark is the most beneficial drug to be used in splenic hardness. For this purpose it is taken orally or used as a plaster with barley flour or some similar substance. In most cases the thick melanotic matters of the spleen are evacuated following its use and thus the patient is relieved.

Excretion: It evacuates immature thick humours and menses, kills intestinal round-worms, increases sexual desire and is also useful for treating piles. Oral intake of salted *Kabar* before meals proves to be laxative.

Poisons: It acts as an antidote against poisons.

8. *Kibrīt*

Sulphur

Sulfurem

Temperament: Sulphur is hot and dry upto the fourth degree.

Properties: It is an attenuant and absorbent drug.

Cosmetics: It is one of the drugs used for treating leukoderma but is effective only when it does not come in contact with fire. When mixed with the gum of terebinth it removes the spots from the nails. It is used with vinegar in cases of pityriasis.

Ulcers: Its paint is useful in ulcerated scabies. When used alongwith terebinth gum and vinegar, it removes the ringworm. A body wash with sulphur and sodium nitrate proves to be useful in scabies.

Joints: It is painted with sodium nitrate and water on gout.

Head: Its fumigation prevents coryza. It is also used with vinegar and honey to facilitate auripuncture.

9. *Kabikaj*

Wild celery

Apium petroselinum Linn.

Nature: Wild celery is of four varieties. According to Dioscorides one of its varieties resembles the coriander leaves but it is comparatively wider and somewhat whitish in colour. Its flowers are generally yellow in colour but occasionally they may also be found purple. These flowers are located at the height of about two forearms from the

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ground level. The middle part of the plant is not thick and its root is white. Its branches resemble to those of hellabore and grow on the banks of flowing water.

There is a larger variety of wild celery having elongated roots and serrated leaves. This is called *karafs al-bar*. Next variety is smaller in size and golden in colour. Fourth variety is similar to the third variety but its flowers are milky white in colour.

Temperament: It is hot and dry in the third degree.

Properties: All varieties of wild celery are attributed with hot, pungent, ulcerative, erosive, detergent, exfoliative, irritant and scabies inducing properties.

Cosmetics: Even a slight contact with its leaves and wood, which are not dried, is useful for removing leukoderma, white discoloration of the nails and alopecia.

Swellings: It removes scabies, cuneiform warts and such swellings which hang down and cause discomfort.

Ulcers: Its decoction prepared in tepid water is useful in favus. It is also used for fomentation purposes.

Head: Its dry roots form a strong errhine drug. The root powder is also useful in throbbing tooth-ache.

10. *Kathīrā* Gum tragacanth *Astragalus gummifer* Lab.

Nature: Gum tragacanth is the same drug which is called *qatād*. According to Dioscorides, it is the gum obtained from a plant called *ṡarghāfīthā*. The latter has been discussed earlier.

Temperament: It is cold and dry.

Properties: The potency of tragacanth plant is similar to that of its gum. The desiccant property of the two is also similar.

Eye: Like other gums, it is incorporated as an ingredient in collyrium.

11. *Kurrāth* Leek *Allium porrum* Linn.

Nature: There are several varieties of leek such as (a) Syrian leek (b) Nabatian leek and (c) wild leek. The nature of its third variety is midway between the leek and garlic. Its medicinal value is greater than its food value. The Nabatian variety is more frequently used in therapeutics than the Syrian variety.

Temperament: Nabatian variety is hot in the third and dry in the second degree. The wild variety is comparatively hotter, drier and inferior in quality.

Cosmetics: Syrian variety is used with sumach in cases of warts.

Swellings: Syrian variety, when used with sumach, removes urticaria.

Ulcers: Syrian variety is used with salt in cases of malignant ulcers. Wild leek causes breast ulcers but a plaster of the Nabatian variety with vinegar facilitates rupture of the swellings.

Head: It stops epistaxis. Fumigation with its seeds and cedar resin is useful in dental caries. Its oral use induces headache and bad dreams. Application of its ash with rose oil and wine-vinegar is useful in ear-ache and sonitus. It is one of the drugs which are harmful for the gums and teeth. The leek, specially its Syrian variety, therefore facilitates extraction of the teeth. Nabatian variety is useful in ear-ache, 'tinnitus aurium, and sonitus. For this purpose it is instilled into the ear with its juice along with frankincense, milk or rose oil.

Eye: Leek is harmful for the eye-sight.

Respiration: The leek, specially its Nabatian variety along with honey and barley water, is useful in cases of asthma caused by thick humours. It is also useful in swellings of the lungs as it 'matures' them. Its seeds are used orally in a dose of two *dirham* (7 gm) with equal quantity of myrtle seeds in cases of haemoptysis. Unripe leek is useful for treating wind-pipe diseases.

Food: Wild leek is harmful for the stomach. It is comparatively more flatulent and inferior than the cultivated variety because it is very bitter, pungent and irritant. All varieties of leek are flatulent and should be boiled twice to reduce their adverse effects and flatulence. According to Rhupos it prevents sour eructation. It is slowly digested.

Excretion: Leek, specially its wild and Nabatian varieties, are diuretic and emmenagogue. Both of them are harmful in cases of ulcerous affections of the bladder and kidney. Oral intake of boiled leek or local application of a plaster prepared from it is useful in piles. It stimulates the sexual desire. Its roasted seeds have also the similar effects. Roasted seeds of leek alongwith the seeds of myrtle are given in cases of dysentery and anal bleeding. A sitz bath in the decoction of its leaves is useful in cases of uterine hardness and adhesions. The decoction of its roots administered with zinc oxide along with carthum seed oil or almond oil or sesame oil is useful in colic. The dry extract of leek is one of the drug which cause bleeding.

Poisons: Its juice, together with water mead, is used in all kinds of bites.

12. Kurā⁶

Trotters

Properties: The chyme produced by trotters is viscous but not very thick. It is quite good and contains less superfluous matters.

Chest: It is useful in hot cough when taken with barley broth.

Food: Trotters are good for digestion. They produce good viscous chyme which is not very thick. The proof of its good digestibility is indicated by the fact that it swells considerably on oiling and gets properly mixed up with the food but it is not very nutritious.

Excretion: It relaxes the bowels due to its viscosity.

13. *Karāwiā* Caraway *Carum carvi* Linn.

Nature: According to Dioscorides caraway is the seed of a well-known plant. Its 'dusky' branches and leaves resemble purslane. Its potency is almost similar to that of anise.

Temperament: It is hot and dry in the second degree.

Properties: Caraway is carminative. It is desiccant but unlike cumin, it is not attenuant.

Food: When taken orally, it stops vomiting attributed to indigestion. It 'warms up' the stomach and promotes digestion.

Eye: It is incorporated as an ingredient in ophthalmic drugs and collyria intended to improve the eye-sight. Its excessive use, however, weakens the eye-sight.

Chest: Caraway is useful in hiccough and palpitation

Excretion: Oral intake of a decoction of the caraway plant and its seeds proves to be diuretic and relieves gripes but it 'stops' the formation of semen. A sitz bath with its decoction relieves uteralgia in women. Its seeds are burnt and plastered to remove the growth of piles. Oral use of fruits or seeds elicits anthelmintic and diuretic actions.

14. *Karsannah* Peas *Pisum sativum* Linn.

Nature: According to some experts peas are a kind of seeds. They are smaller than *mulk* (another kind of peas) in size, lenticular unflattened, multifaceted, greyish yellow in colour. Their taste is similar to that of black gram and the lentil which is used as fodder for cows. According to Khūzī its seeds resemble the seeds of quince but in my opinion these seeds, particularly the wild ones, are *mulk*. The latter is generally described to be yellowish white in colour but it may sometimes be red. According to Dioscorides it is a small herb having thin leaves and seeds in calyces.

Temperament: It is hot from the first to the second degree and dry in the third degree.

Properties: Peas are detergent, deobstruent and possess inferior type of humour. Their potency may be improved by a process similar

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Choice: Roman mountain celery is more potent.

Temperament: Initially it is hot but later becomes dry. According to Rhupos the garden variety is basically moist but there is a general agreement about the dryness of its roots.

Properties: It removes flatulence. It is deobstruent, diaphoretic and sedative. The wild variety is ulcerating and painful. Its preserve is suitable to be used in patients of hot temperament.

Cosmetics: The wild celery is used in cases of alopecia, cracks in nails, warts and cold-eruptions. The garden variety improves complexion.

Swellings: Celery, specially its well known variety called samarnion, dissolves the phlegmatic, hard and hot swellings in their initial stages.

Ulcers: Plaster of wild celery is ulcerating and hence it is useful for treating cases of scabies, ringworm and allied wounds. It also cicatrizes them. Wild samarnion is more specific for such use.

Joints: All parts of samarnion are suitable to be used in sciatica.

Head: It is not suitable for treating headache. It aggravates cases of epilepsy. Suspending its root around the neck is said to be useful in odontalgia but it may cause disintegration of teeth.

Eye: The garden celery is incorporated in a plaster to be used in ophthalmalgia.

Chest: Celery, specially samarnion, is useful in cough also in asthma and dyspnoea. Similarly celery is used as one of the drugs prepared for treating 'hot' mastitis.

Food: It is beneficial for the liver and spleen. It induces eructation due to its potency of dissolution. It is easy to digest and is assimilated quickly. Seeds of celery, except in roasted form, cause nausea and vomiting. Experts consider all kinds of celery to be useful for the stomach. Rhupos denies this and opines that it produces intense and harmful moistness in the stomach. The unripe celery is retained for longer time in the stomach and it causes vomiting. The Roman variety is, however, better than other kinds to be used in stomach ailments. Galen recommends it to be taken with lettuce and preferably after meals to rectify its adverse effects. Its seeds are useful in dropsy. It 'cleanses' and tones up the liver.

Excretion: It is a diuretic and emmenagogue but its use is harmful in pregnancy. When a pregnant woman takes it as a pessary, it proves to be an ecbolic drug. All of its kinds and parts 'cleanse' the kidneys, bladder and uterus. Seeds and leaves do not relax the bowels and the roots are purgative. Mountain celery removes the calculi. It is useful for treating dysuria. Wild samarnion expels the placenta. Its excessive intake fills the uterus with pungent fluids. Some people

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Head: The leaves and tendrils of grape-vine are used as a plaster in 'warm' headache. The root of black and white grape vine is one of those drugs which facilitate rapid cleansing of the ear. It is also useful in deafness. The bark of wild grape-vine if used with honey, cures the bleeding gums.

Eye: A plaster prepared from the leaves of grape-vine along with barley flour is applied on the eyes to check the infiltration of superfluous fluids.

Chest: The extract of the leaves of cultivated grape-vine is useful in haemoptysis. Similar is the effect of the oral use of its fruits.

Food: The leaves and tendrils are used with the barley flour as a plaster to relieve gastric distension and colic. The leaf extract is used in gastralgia attributed to heat. The root of wild grape-vine is taken orally with water or wine in cases of dropsy to expel dropsical fluids. The fruit of wild grape-vine is good in nausea, gastric pain and acidity.

Excretion: The extract of its leaves is used in cases of dysentery, gastralgia and the restlessness associated with fevers. The guttae, which are similar to gum, are taken orally with wine to remove calculi. The ash of its oil cake is used with vinegar for treating piles and *tūth* (a kind of pustule similar to mulberry in shape). Its fruits are good in anal diseases and possess diuretic and costive properties.

Poisons: The ash of oil cake is an antidote for snake bite.

19. *Karam dānah*

Kermes

Coccus cacti

Nature: It is a kind of seed valued by the physicians for its medicinal actions.

Excretion: It warms the sexual parts of the body and expels (dropsical) water and bile.

20. *Kurumb*

Cabbage

Brassica oleracea capitata Linn.

Nature: Cabbage is a well known leguminous plant.

Temperament: Cabbage roots are whiter and moister than its leaves. Wild cabbage is comparatively more warm and dry than the garden variety. As a whole, it is hot in the first and dry in the second degree. There are several varieties of cabbage: (a) garden cabbage, (b) sea-cabbage, (c) wild cabbage and (d) water cabbage. The wild cabbage is bitter, pungent and not suitable to be used as food. The decoction of its roots is a good food if taken with pomegranate juice. Cauliflower is structurally thick and produces viscid blood and fluids. When it becomes larger in size, its digestibility is reduced and it causes flatulence around the umbilicus and the sides of the chest. It causes

pain which does not shift location unlike the pain caused by gases in general. According to Dioscorides the *farmasī a'rabā* i.e. wild cabbage grows on sea-shores, in lofty places and their plane surroundings. It is similar to garden cabbage except that it is whiter and more fibrous. It is bitter in taste but, when boiled, with pomegranate juice, it becomes sweet and palatable. There is another variety of western cabbage which differs from garden cabbage. Its leaves are long like the leaves of round aristoloceum. The leaf stalks are very close to the small red branches, which are positioned like the leaves of lablab. Its latex content is not much. It is somewhat salty and mildly bitter in taste. Its intake in cooked form relaxes the bowels.

Properties: It is coctive, laxative and desiccant specially when cooked and used after discarding the first water in which it was boiled. Ash of its branches is highly desiccant and analgesic. Its nutrient content is small and it is comparatively moister than lentil. Its guttae are inferior in quality. On cooking it with fat, meat and chicken, its quality is slightly improved.

Swellings: All varieties of cabbage viz: wild, sea and garden cabbage have maturing effects on phlegmona. The leaves of the wild and garden cabbage, when crushed mildly and plastered either alone or with flour, prove to be useful in all kinds of hot inflammations, phlegmatic swellings, erysipelas and urticaria.

Wounds: It heals the wounds and prevents spread of malignant ulcers. It is applied to burns with the white of an egg. Its application is useful in ulcerating scabies and, in combination with salt, in eczema.

Joints: Its dried branches are burnt and mixed up with old clarified butter to form an application for relieving chronic pleuralgia. It is useful in chorea. It is applied with fenugreek on gout. Its decoction is poured on the organs affected by arthralgia. When mixed with fenugreek flour and sesame oil and used as a plaster, it proves to be beneficial for treating gout and arthralgia.

Head: Its decoction and seeds delay intoxication. Besides, they prove to be useful for removing dandruff. Sniffing of the extract cleanses the head. A dehydrating effect on the tongue is one of its chief characteristics. It is soporific and also cleanses the face.

Eye: It darkens the eye-sight but is still used as an ingredient in some collyria. According to Dioscorides, oral use of cabbage is beneficial in cases of weakness of eye-sight.

Respiration: Gargling with its extract or decoction and sesame oil proves to be useful in diphtheria. Its oral use clears the voice. When chewed or sipped as a juice, it restores the (the lost) voice.

Food: It is not suitable to be used in stomach ailments. Oral intake of its extract with *nabīdh* is useful for treating splenic diseases

sence of some tenous substance which gets dissolved after oral ingestion. It cannot however, be inferred that the excessive use of its extract may be fatal due to its cooling properties.

Properties: It is an astringent and anesthetic substance. Its extract, if used with milk, provides relief from all kinds of severe injuries.

Swellings: It is useful in hot swellings when applied with white lead and vinegar. It is also used with rose oil, honey and dried grape raisin in cases of urticaria and eczema and with broad bean, roasted wheat and chick-pea flours in scrofula. The preparation becomes effective when the extract of coriander is mixed with the above mentioned ingredients. Galen argued that if the extract of coriander dissolves scrofula, how could it be cold? Its action may, however, be attributed to the specific property of coriander or due to its rarefying contents which penetrate deep into the body and settle there. It is obvious that the cold fraction of coriander can never go deep into the body but its hot fraction gets readily dissolved after oral intake leaving behind only the part having cooling property. It is also said (in replying the Galen's objection) that erysipelas could not be cured by coriander till it is accepted to be cold as this disease can only be treated with substances which are cold or which contain a mixture of melanotic or phlegmatic humours.

Head: Coriander is useful for alleviating symptoms of giddiness and epilepsy associated with bilious or phlegmatic fevers. Its chief characteristic is to prevent the vapours ascending towards the head. For this purpose it is used as a food additive in epileptic patients with concurrent gas troubles. Excessive use of fresh and dry coriander causes mental confusion. Moist coriander is soporific and stops epistaxis. Dusting with the powder of dry coriander or mouth wash with its liquid extract is useful in stomatitis.

Eye: Coriander causes dark sightedness. Its liquid extract is mixed up with human milk to form eye drops for treating throbbing of the eye. A plaster of its leaves prevents the (unhealthy) matters from affecting the eye.

Chest: Its oral intake in a dose of two *dirham* (7 gm) is useful in hot palpitation. Its ingestion with the juice of great plantain stops haemoptysis.

Food: It is slow to digest. It strengthens the hot-tempered stomach and if used in roasted form stops vomiting. It is said to prevent sour eructations occurring after meals. If this is true, it may be due to its preventive effect on the movements of gases in the stomach.

Excretion: Its roasted seeds cause constipation. When used in combination with *maybukhtaj*, it purges out snake-like worms. Fresh coriander with honey and dried grape raisin, is useful in hot orchitis.

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The fresh and dry coriander reduces the sexual desire, erectile power and the volume of semen.

Poisons: Its oral intake in a dose of four *ūqiah* (120 gm), may be fatal because it causes severe depression and fainting. Therefore its excessive use must be avoided.

22. *Kazmāzak* Tamarix *Tamarix articulata* Vahl

Nature: *Kazmāzak* is the fruit of *ṭarfā*. It has already been described under *ṭarfā*.

Temperament: It is cold in the first and dry in the second degree.

23. *Kasīlā* A kind of cinnamon _____

Nature: *Kasīlā* is a kind of wood resembling maddar and it is predominantly black in colour.

Temperament: It is hot and moist approximately in the first degree.

Properties: It is agglutinant and reduces the potency of hot drugs such as gum.

Cosmetics: It is a fattening drug and is said to improve the complexion.

24. *Kasht bar Kasht* Screw tree *Helicteres isora* Linn.

Nature: It resembles a bunch of threads twisted with one another. Generally these are five in number found wrapped around a single root. They are blackish-yellow in colour and are almost tasteless. According to some people it is the same thing which is called *badāshkān* i.e. spartium and this (in my opinion) is true. Besides it is also considered to be a well known herb having a shape bending towards left or right.

Temperament: It is hot and dry in the second degree.

Properties: It is attenuant.

25. *Kashnaj* A kind of mushroom _____

Nature: *Kashnaj* is a kind of mushroom. It is compact, colourful and as large as a kidney in size. It bears very deep notches. It grows in sandy places in a manner similar to that of fungi and mushrooms. *Kashnaj* is very delicious. It is found abundantly in our country and also in transoxiana and Khurāsān. I have never come across a case in which *kashnaj* might have been more harmful than the other mush-

rooms or fungi. If its taste is compared to that of other mushrooms, it would be found to have a mildly sweet taste.

Temperament: It is cold but to a lesser degree when compared to other mushrooms and fungi. In spite of being a dry substance, it is not free from foreign humours.

Properties: It is a thick and thirst-quenching drug.

26. *Kashūth*

Dodder

Cuscuta reflexa Roxb.

Nature: Dodder is seen encircling the thorns and trees and it resembles the plant *lif al-makkī*. It has no leaves. Its flowers are small and white. It is bitter and pungent in taste but the bitterness is dominant.

Temperament: It is slightly hot in the beginning of the first degree and dry in the last phase of the third degree. It is, however, composed of constituents with contradictory potencies.

Properties: Dodder is a purifier and it removes tenuously superfluous matters from the vessels. It causes heaviness in the stomach because of its astringency. It cleanses the vessels. It removes superfluous matters from the stomach. It is lubricant, softening and attenuant.

Food: *Kashūth*, particularly the roasted one strengthens the stomach. When taken orally with vinegar, it relieves hiccough and removes hepatic and gastric obstructions. It also strengthens the stomach and liver. Its juice has a wonderful effect on jaundice. If the extract of its wild variety or the powdered dodder is sprinkled over the wine and taken orally, it strengthens the weak stomach.

Excretion: It cleanses the filth from the foetal belly because of its capability of clearing the veins. It is diuretic and an emmenagogue. It is useful in gripes. It is used as a pessary to stop the haemorrhage. The roasted dodder causes constipation and stops leucorrhoea.

Fevers: Its seeds and juice are very useful in chronic fevers.

27. *Kalb*

Dog

Canis familiaris

Cosmetics: Urine of a dog is used on warts. According to Galen's statements at several places, the claims that the milk of a bitch removes the hair and prevents their regrowth are wrong.

Excretion: Galen has also refuted the claims of persons who state that dog's blood expels the foetus.

Poisons: Rabid dog's blood is used to counteract effects of its own bite as also against the poisoning by Armenian arrows.

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28. *Kaln* Ervalenta *Litsea selifera* Pers.

Nature: It is an Indian wood that is brought in large quantity to our country. It is most likely to be identified as *mughāth al-hindī*.

Joints: It is most beneficial in cases of fracture, sprain and dislocation.

29. *Kuliah* Kidney *Ren*

Nature: Kidney is a well known organ.

Choice: Kidney of the suckling kid is a most nutritive diet.

Temperament: It is moderately dry.

Properties: It produces inferior humour but the kidney of a kid is most nutritive.

Food: Kidney is difficult to digest and its downward movement (in bowels) is slow.

30. *Kamāt* Truffle *Tuber cibarium*

Nature: According to Dioscorides *Kamāt* is a kind of round root having no stem and shoots. It is grey in colour like cotton and found underground in the spring season. Truffle, that is taken as a food by the people in cooked or uncooked form, has comparatively more earthy substance than the moist substance. It has also some airiness and a mild rarefying quality but it is tasteless.

Choice: Best kind of truffle is white and of sandy colour with an agreeable smell. The dry one is comparatively inferior to the moist. Truffle is considered to be a good food. For this purpose it is peeled and cut with a knife and boiled with salted water. Thereafter it is cooked with olive oil, *murry*, spices and asafoetida. Its inferior variety is called *futr* i.e. mushroom and particularly that which grows under the trees and in rough land.

Properties: Its substance is thick and it produces thick and melanotic nutrition. Nothing is equal to it in this respect. Pure wine and condiments are its antidotes. The nutrition produced by boiled and cooked truffle, though thick, is not harmful. It is tasteless.

Joints: Paralysis may be feared by its use.

Head: Apoplexy is also feared by its use.

Eye: Its water, as the Prophet, may peace be upon him is reported to have said, strengthens the eye-sight. The well-known physician *al-Masīh* has also admitted this fact.

Food: It is slow to digest, harmful, causes heaviness in the stomach and produces thick chyme. Galen has, however, mentioned at some other place that it does not produce harmful chyme.

Excretion: Truffle also produces colic and dysuria.

31. *Kamādrīūs* Germander *Teucrium chamaedrys* Linn.

Nature: Germander consists fragile stalks and leaves. These are greenish like thick and sweet basil. The plant is known amongst Greeks as *bullūṭ al-arḍ* due to the resemblance of its small leaves to those of *bullūṭ*. Its root is somewhat reddish in colour.

Choice: It should be collected when its seeds appear.

Temperament: According to Galen it is hot and dry in the third degree. Its warming potency is stronger than its desiccating potency.

Properties: Germander is deobstruent, erosive, attenuant and warming.

Ulcers: Its use with honey cleanses the chronic ulcers.

Joints: Oral intake of the fresh germander or its decoction is useful in cases of muscular cracks. Its syrup is useful in convulsions. All types of old germander are considered better.

Eye: Its pills are used in ophthalmic ulcers. Similarly its decoction in olive oil and its powder is useful for treating *fistula lachrimalis*.

Chest: It is useful in chronic cough.

Food: It dissolves the hardness of the spleen. It is useful in melanotic jaundice. Its syrup is very useful in indigestion. Old germander is considered better and beneficial in the initial stages of dropsy.

Excretion: It is diuretic and an emmenagogue. It facilitates delivery.

Poisons: It is plastered in cases of insect bite.

Substitutes: The roots of agrimony, spleen wort and beet are the substitutes for germander.

32. *Kamāshīr* Opoponax-gallbanum *Ferula galbaniflua* Boiss.

Nature: *Kāmashīr* is almost similar to *jāoshīr* but is comparatively stronger in action.

Temperament: It is hot and dry in the second degree.

Properties: It is dissolvent and attenuant.

Excretion: It is diuretic and an emmenagogue. It is a potent ecboolic drug. It is matchless in this respect. It is also a unique drug for treating serious diarrhoea.

33. *Kamāfīṭūs* Tecrium *Teucrium chamaephytis*

Nature: It has small branches with tiny flowers of colours ranging from red to greenish black. Its flowers are bitter and slightly

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astringent in taste having less pungency than bitterness. Its herbaceous leaves creep on the surface of earth. They resemble the leaves of bupthalmum but are comparatively thinner and weaker. It has more flowers than bupthalmum in number and their blossoms are yellow.

Temperament: It is hot in the second and desiccant in the third degree.

Properties: *Kamāfiṭūs* is deobstruent. Its 'cleaning' effect on internal organs is more than its warming property. It is also a mild purgative.

Swellings: It is applied to hard swellings particularly in the breast region. It also prevents herpes.

Ulcers: When plastered with honey, it heals up wounds and putrid ulcers.

Joints: Its oral intake with honey-water is useful in sciatica. According to some people its intake with honey-wine for forty days cures sciatica. It also dissolves the hardness of gout.

Food: It removes hepatic obstructions and is useful in some hepatic and splenic diseases. Its continuous intake for seven days is also useful in melanotic jaundice.

Excretory organs: It removes the uterine obstructions and also acts as a diuretic and emmenagogue. It cures dysuria and dysmenorrhoea. It is also useful in nephralgia. Its pessary cleanses the uterus. When a dose of 9 gm of *kamāfiṭūs* is taken as a suppository with fig or honey, it adequately evacuates the phlegm.

Poisons: It counteracts the injurious effects of the poison called 'ōquṣṭūn'.

Substitutes: Lovage in its half quantity and cassia bark in its one-fourth quantity act as its substitutes.

34. *Kamāliyyūn* Pine thistle *Atractylis gunmiifera*

Nature: Pine thistle is a kind of laurels purge which is fatal and known as *khamaliyyūn*. We have dealt it under the letter 'Khā'.

35. *Kummatharā* Pear *Pyrus communis* Linn.

Nature: Pear contains earthiness and wateriness, Another variety of it found in our country is called *shāh amrūd*. This variety is very fleshy and round. It is thin-skinned and has a beautiful colour which is almost transparent and resembles coagulated and thickened juice. Its compact form owes its shape to its coagulative property rather than to the thickness of its substance. It is very fragrant but

when it falls from the tree on the ground these qualities gradually fade away. It is one of the harmless varieties of pear.

Temperament: The variety known as chinese pear, is cold in the first and dry in the second degree while the *shāh amrūd* variety is moderate and moist.

Properties: All the varieties of pear are astringent. It is incorporated as an ingredient in plasters that stop the flow of matters. It is mildly cleansing. According to Rhupos its humour is superior to that of apple. The variety known as *shāh amrūd* in Khurasan is contrary to the pear in properties. It softens the bowels and produces very good chyme.

Ulcers: The wild and dry variety heals up the wounds.

Food: It improves the digestive power of the stomach. Chinese variety specially strengthens the stomach. It quenches thirst and relieves bile.

Excretion: Pear, specially the dried one, causes constipation. Exclusive use of pear may cause colic. Therefore intake of honey water with aromatics is advised after its use. Its rob is useful for treating bilious diarrhoea.

Poisons: Ash obtained from a variety of pear, which is highly astringent and very slow in ripening, is used to treat the mushroom. When this mushroom is cooked with pear, it becomes less harmful.

36. *Kammūn*

Cumin

Cuminum cyminum Linn.

Nature: Cumin is of various kinds: (a) Kirmānī cumin, (b) Persian cumin (c) Syrian cumin and (d) Nabatian cumin. Cumin of Kirmān is black in colour and Persian variety is yellow. The Persian variety is stronger than Syrian one. Nabatian cumin is found everywhere. The above varieties have been divided into two sub varieties: (i) garden cumin and (ii) wild cumin. The latter is more pungent. Another type of this variety is weak and its seeds are similar to those of lily.

Choice: Kirmānī cumin is more effective than Persian cumin. The latter is, however, more effective than all of the remaining varieties.

Temperament: Cumin is hot in the second and dry in the third degree.

Properties: It is warming in property and dissolves and removes the gases. It is also erosive, desiccant and astringent.

Cosmetics: Washing with it cleanses the face. Similar effect is achieved by its use in different forms. Its excessive use, however, imparts a yellow colour to the body.

Swellings: It is used in the form of a *qairūṭī* prepared with olive oil, and the flour of broad bean in orchitis. Alternatively olive

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oil or a mixture of olive oil and honey is used for treating orchitis.

Ulcers: Finely powdered cumin, particularly from the wild variety which resembles lily seeds, heals the wounds.

Head: Inhalation of cumin powder with vinegar stops epistaxis. It acts similarly when a bougie made from it is inserted into the nostrils.

Eye: Chewed cumin is mixed with olive oil and applied in cases of ecchymosis and blood spots in or under the eye. It is chewed with salt to enable it to get mixed up with saliva. In this form it is applied in cases of scabies, pterygium and after scrapping in vascular keratitis. It prevents the adhesion of the eye. The extract of wild cumin improves eye-sight and absorbs epiphora. In Greek it is named as *qābiūn* that means fume and forms an ingredient of the caustic drugs used to remove the trichiasis and prevent its further growth.

Chest: According to Galen its oral intake with vinegar and water is useful in dyspnea. It is also useful for treating orthopneic respiration and cold palpitation.

Excretion: Cumin is applied on orchitis with olive oil. Sometimes it is used as a *qairūfi* prepared with olive oil and the flour of broad bean to dissolve the stones. The wild cumin is particularly useful in cases of strangury, haematuria, gripes and flatulence. The powdered extract of wild cumin when used with honey water acts as a relaxant drug for the bowels. According to Rhupos Nabatian cumin is a purgative drug. On the other hand, cumin of Kirmān does not relax the bowels but causes constipation. Wild cumin facilitates downward flow of bile in the urinary tract.

Poisons: The cumin, specially its wild variety which resembles the lily seeds, when taken orally with common rue, is considered to be useful in cases of insect-bite.

37. *Kundur*

Frankincense

Boswellia glabra

Nature: Frankincense is a well known drug. It is adulterated with different kinds of gums and pine resin. Frankincense is inflammable on contact with fire while the pine resin gives only smoke. Hence all the adulterated varieties of frankincense do not catch fire. The Indian frankincense is greenish in colour. Another variety of frankincense is cut into square pieces, kept in a jar and rolled till the pieces become round. On storage it becomes red. Its another variety is white and when used in fresh state, it becomes laxative like the mastic. Among the contents of frankincense, its gum, flour, scrappings and smoke are used. Other parts of the plant, specially the leaves, are also used. All these parts are likely to be adulterated.

Choice: Male frankincense, which is white in colour, round in shape and has a sticky interior, is considered best. On breaking the internal portion appears to be golden in colour.

Temperament: The scrappings of frankincense are desiccant in the second degree but are slightly colder in comparison to frankincense itself. Frankincense is hot in the second and desiccant in the first degree. Its peel is desiccant approximately in the third degree.

Properties: It is not strongly desiccant but it is weakly astringent. Its desiccant property is due to its scrappings. Frankincense is a coctive drug. Its scrappings are not coctive and do not irritate the flesh. It stops bleeding. Its excessive use 'burns' the blood. Its smoke is highly desiccant and astringent. According to some experts the red variety of frankincense is more detergent than the white one. The potency of its flour is weaker than the intact drug.

Cosmetics: Application of frankincense with honey removes whitlow, Its bark is moderately effective in removing the scars. Its application as epithem made of vinegar and olive oil is useful in the pain called 'markaba'. The latter appears like the eruption of warts in the body and a sensation like the creeping of ants is felt.

Swellings: It is applied on the hot swelling of the breast with camolian earth and rose oil. Besides it is incorporated in the plasters which are made to dissolve the inflammation of viscera.

Ulcers: It is a good wound healing drug particularly when it is fresh. It prevents the spread of malignant ulcers. It is applied with duck-fat on ringworm. It is also applied with swine fat on burn-ulcers and cold-fissures. It heals the ulcers caused by burns.

Head: It strengthens the memory when used by taking its infusion regularly on an empty stomach. Its excessive use may, however, cause headache. It is also used for washing the head. Sometimes it is applied with sodium nitrate to remove the dandruff and dry up the ulcers. Its drops made in wine are used in ear-ache. A paint prepared from it alongwith olive oil or pitch or milk proves to be useful for cracks in the inner portion of the ear. It stops phrenic and nasal hemorrhage. It is a useful drug for treating contusions of the ear.

Eye: It heals and fills up ophthalmic ulcers and matures the associated chronic swellings. Its smoke is useful in hot swellings, stops the influx of ophthalmic fluid, heals serious ulcers and cleanses the underlying pus from the cornea. It is an important drug meant to be used in red and chronic pterygium and also for treating cancer of the eye.

40. *Kūr kundum*

Lichenea

Nature: *Kūr kundum* is a light substance like *ushmah ħinī* (a kind of rockmoss). In Riqqa (a town of Turkey) the people call it *Khur*³ *al-ħamām* (pigeon's excrement) and in Baghdad it is called *jauzjundum*.

Choice: *Berbarī* variety is better and strong than *Riqqī* variety.

Temperament: It is hot and moist in the first degree. Though it is said to be mildly cooling, but it can not be proved.

Properties: It is desiccant and thirst quenching. It is claimed about it to stop bleeding. One of its characteristic feature is as follows. When 10 *raṭl* (4500 gm) of honey, 20 *raṭl* (9000 gm) water and 1800 gm lichenea are mixed, whipped up strongly and stored in a covered vessel, the process will yield a kind of wine after the lapse of some time.

Cosmetics: It is a fattening drug.

Excretion: It increases the production of semen.

41. *Kahrubā*

Yellow amber

Vateria indica Linn.

Nature: Yellow amber is a gum resembling sandarus. When broken it reveals a bright yellowish white interior. Sometimes it inclines towards redness. It attracts straw and dried weeds. That is why it is called in Persian as '*Kah ruba*' i.e. "straw magnetizer". It is composed of tepid, moist and earthy contents which makes it attenuant. It is the gum of the plant called *al-jauz al-rūmī* (white dammer tree) which is composed of thin-earthly and dry-moist substances.

Temperament: It is mildly hot and dry in the second degree.

Properties: It is astringent and stops bleeding from any organs. The potency of yellow amber (a gum) is similar to that of the flower of white dammer tree but the former is comparatively colder.

Swellings: According to some people it is useful when suspended around the neck of the patient affected with swellings.

Head: It stops epistaxis and prevents the infiltration of fluids from the head towards the lungs.

Eye: It is incorporated in ophthalmic medicines.

Respiration: Oral intake of finely powdered yellow amber in a dose of half *mithqāl* (2.25 gm) with cold water is useful in palpitation. It effectively stops haemoptysis.

Food: Yellow amber stops vomiting and prevents the harmful humours coming towards the stomach. Its intake with mastic, strengthens the stomach.

Excretion: It stops diarrhoea and bleeding from the uterus and anus. It is also useful in dysentery and diarrhoea.

42. *Kail dārū* Male fern *Dryopteris felixmas* Linn.

Nature: It is the *sarkhas* that has already been dealt with under the letter 'Sin'.

*Letter Lām*1. *Lādhan* Ladanum *Cistus creticus*

Nature: Ladanum is a liquid substance found sticking to the hair and beard of goats grazing on a particular kind of grass called *qisūs*. When the dew falls on this grass, its moisture gets mixed up with leaves. It sticks to the hair of the goats grazing on this grass. The sticky substance adhering to hair of these goats is removed and called ladanum. The best variety of ladanum is found sticking to the beard of the goats and is considerably above the ground level. The variety which is sticking with the hooves of the goat is considered inferior as it is contaminated with sand and dust.

Choice: Good variety of ladanum is procured from Cyprus. It is greasy, heavy and fragrant. It is yellowish in colour and contains no sand. It is soluble in oil leaving no residue. The variety which is black and tar-like in appearance, is not good.

Temperament: Ladanum is hot in the last phase of the first degree and dry in the second degree. The variety, found in southern towns, is hotter. *Khūzī* described it to be cold and astringent but (in my opinion) it is not correct.

Properties: It is very attenuant and contains some astringency. It matures thick and viscous fluids and dissolves them moderately. It has absorbing, extracting and warming properties. Besides it removes obstructions from the lumen of the vessels. It is used for sedative purposes.

Cosmetics: It promotes rich growth of long hair and protects them against falling. These effects are observed specially when it is used with the oil of myrtle and wine. The actions are elicited because of its attenuant nature. It penetrates deep into the skin to dissolve and remove the adverse effects of corroding flesh. Though it is absorbing in nature and absorbs suitable matters for the hair but it is a cure for baldness only in its initial stages. It cannot be of use in alopecia because the fluids causing alopecia need more forceful dissolution than the dissolving potency of ladanum. It possesses more attenuant and detergent than the astringent properties.

Ulcers: It is mentioned in *Qātākhānis* that ladanum heals the resistant ulcers.

Head: It is instilled in cases of ear-ache and forms an ingredient in medicines used for the treatment of headache and throbbing pain in the head.

Chest: It is useful in cough.

Excretion: When used as a suppository it dissolves uterine swellings. Fumigation using a funnel helps in extraction of dead foetus and placenta. When taken orally with old wine, it causes constipation and diuresis.

2. *Lāzward*

Lazuli

Lapis lazuli

Nature: The potency of lazuli is similar to that of chryso-colla, but it is slightly weaker in action.

Temperament: It is hot in the second and dry in the third degree.

Properties: It possesses potent, extractive, putrefactive and detergent properties. Besides it is pungent and a mild astringent. It also elicits burning and ulcerating actions.

Cosmetics: It removes the warts.

Eye: It beautifies eyelashes and makes them thick and dense. In this respect it is said to be the best drug. Due to the potency of evacuating the inferior humours, it hampers the growth of hair.

Chest: It is useful in dyspnoea and asthma.

Excretion: When taken orally or used as a suppository, it acts as a good emmenagogue. It purges out black bile. It purges out foreign viscid matters from the blood. It is useful in nephralgia. Its dose is upto 4 gm when used alone and 3.5 gm when administered in combination with some other drugs.

3. *Lā'iyah*

Euphorbium

Euphorbia officinarum

Nature: *Lā'iyah* is a plant which grows at the foot of mountains. Its flowers are mildly fragrant. Bees feed upon it. That is why it appears like the plants called *farāwah* and *būsanj al-tiryāq* but I am not quite sure about it. Its potency is similar to that of black horehound but it is comparatively weaker. It comes under the category of latex-bearing plants.

Temperament: It is hot and dry in the second degree. It is also said that it may be hot and dry upto the fourth degree.

Properties: If certain amount of its latex is dropped into a tank of fish, the whole lot will come up to the surface of the water.

Food: It is a potent emetic drug.

Excretion: It purges out water.

4. *Libakh*

Lebbek tree

Balanites aegyptiaca Del

Lebbek tree has already been discussed under the letter '*Alif*'

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5. *Lablāb*

Lablab

Dolichos lablab Linn.

Temperament: Lablab is moderate but somewhat hot, dry and softening drug. According to Khūzī it is cold.

Properties: It is dissolvent, deobstruent and its well known variety, called *habl al-masākin*, possesses astringent, earthy, laxative, moist, and hot fiery properties. Its desiccating action removes its moistness. It is also a purifying drug.

Cosmetics: The larger variety of lablab elicits hair removing and lice killing actions.

Ulcers: Fresh leaves of *habl al-masākin* are suitable to be used on large wounds. Healing is achieved when it is decocted and given with wine. It is applied as a plaster, particularly in the form of a *qairūṭī* in cases of burns. It is matchless in this respect.

Head: Its extract is instilled into the aching ear using a piece of cotton. Its application is specially beneficial with rose oil in hot swelling of the ear. It is useful in chronic headache. Its extract prevents the harmful matters moving towards ear in later stages of chronic ulcers

Chest: It is good to be used in chest and lung affections and it cures asthma.

Food: It removes hepatic obstructions. The leaves, when used with vinegar, elicit good effect in cases of splenitis.

Excretion: Its juice purges out the 'burnt' bile. Undecocted lablab is considered stronger. Another kind of it is inferior in quality and it causes dysentery.

6. *Laban*

Milk

Galacto

Nature: The milk contains three substances (a) water (b) cheese and (c) fat. Cow milk is very rich in fat while the camel milk contains less fat and cheese. It is comparatively very dilute. Ass milk is also less fatty and dilute but goat milk is of moderate consistency. Milk of an ewe is thick and fatty but the cow milk is comparatively thicker and rich in fat content. Milk of breeding mares is similar to that of she-camels and as dilute as water.

Choice: Human milk is the best particularly when fresh and sucked directly from the breast. Finest milk is that which is very white and uniform in consistency (when fingers are dipped in this milk) it stays on the nails and does not readily flow. The milk obtained from an animal which grazes on good quality plants, is considered good. It should be free from abnormally sour, bitter and pungent taste and devoid of an unpleasant odour. It must be taken just after

milking and before it is spoiled. The milk of an animal, whose gestation period is longer than that of human beings is considered inferior. In view of these facts cows' milk is most suitable for human use.

Temperament: The whey is hot while the milk fat is moderate in temperament inclining towards hotness. Sour milk is cold and dry.

Properties: The whey is attenuant, abluent and purgative without causing any irritation. Milk makes the chyme moderate. When taken with honey, it strengthens and fattens the body, cleanses thick humours from internal ulcers and also matures and 'washes' them. The milk produces good chyme. It is agglutinant and gives extra nourishment to the brain. Specially so is the human milk. The milk is easy to digest because its source is the blood. The latter is most digestible as it has already undergone a process of digestion. Had milk been associated with an organ inclining towards coldness, it would have been unable to provide adequate nourishment. Besides it would have been like those edible substances which require considerable energy and multiple processes of refinement. On the contrary, its domination by external hotness enables it to acquire the nature of blood quickly. How correct was Rhupos in these statements! He was, however, criticised on the plea that the milk is somewhat cold and so it is harmful for phlegmatic persons. The temperature in these subjects does not allow it to be retransformed into sanguine state. The body utilizes the milk before any change sets in. That is why milk proves to be useful in persons having hot and dry temperaments when their stomachs are free from yellow bile.

All types of milk have some 'relationship' with the corresponding bodies but the precise nature of this relationship can not be determined. A person must take rest for sometime after consuming milk so that it is not spoiled or turned acrid. Further it is also suggested that one should not go to sleep after taking milk. Besides intake of milk should not be followed by consumption of any other food till it is in the process of digestion. Milk is more suitable for aged persons than the hot tempered young men because it gets converted into yellow bile in their stomach. Milk is also useful for old people due to its moisturising property. It removes dry scabies which is a specific disease of the elderly people. The latter are advised to take some honey to digest the milk. In most cases milk causes relaxation of the bowels and expulsion of morbid matters from intestines. Thereafter it provides nourishment and 'spreads' throughout the body. Unboiled milk causes constipation and flatulence. Milk has two different effects: (a) it relaxes the bowels due to its fluidity and (b) constipative due to its cheesiness. The first milk after delivery is slow to digest and assimilate. It

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contains thick humours. Honey rectifies it making it very nourishing for the body.

The milk which is sour and contains immature humours, or that which is boiled and viscid, is very constipative. All kinds of milk produce obstructions specially in the liver but the milk from a she-camel or similar animals is an exception. This is attributed to its lesser cheese content and detergence of its whey. It is useful against the infiltration of matters towards the internal organs, causing trouble because of their pungent and irritant effects. The milk weakens these matters due to its abluent property which is more than that of water. Such abluent action is not possible by water. Besides, it moderates the intensity of the humours and makes them congenial with the organ concerned. Moreover it agglutinates the harmful humours and prevents them from coming in contact with the body to produce adverse effects. That is why it is harmful to the persons having haemorrhage.

Milk is not suitable for the viscera. Goat-milk is particularly harmful for the viscera because goats generally graze on materials that cause constipation. The milk from sheep, however, possesses opposite properties. It is not good and possesses a 'burning' quality. The substance of milk is apt to be transformed quickly, particularly towards hotness. Nothing is more harmful to a body than the inferior kind of milk. Milk from a she-ass is very dilute while the swine-milk is dilute and immature. Milk obtained in spring season is more dilute than that in summer. Similarly the animals that graze on cultivated and marshy lands, yield dilute milk because the plants growing in spring season are more aqueous than those in summer season. With the advance of summer the density of milk increases. The milk which is obtained in the middle of the summer season, is considered good but there is a possibility of its change towards hotness after consumption. No such apprehension exists in case of the milk obtained in spring season. Cow milk is rich in fat. Sheep milk is rich both in fat and cheese. Cheese content in camel milk is scanty. Milk from mare and she-ass come next in this respect. That is why its coagulation in the stomach and in upper parts of the abdominal cavity is rare. Camel-milk is somewhat salty because camels are fond of grazing on sour fodder. This milk is, however, considered best. It is said to remain in the stomach and upper parts of the abdomen for longer periods than the milk from other animals.

It must be remembered that the milk varies according to the species and age of the naimal. It also depends on its size i.e. whether it is big, small or medium in size. Similarly it depends on its physique and colour i.e. whether its flesh is hard or soft and it is fat or lean

and white or of any other colour. Milk from a white animal is said to be weaker but it is quickly digested.

Cosmetics: Some physicians think that excessive use of milk produces lice and it does not seem to be far from truth. Nevertheless its local application clears off the ugly marks from the skin. Oral intake improves the colour of the body. Its use generally produces *pityriasis alba*. The sole exception is the milk procured from a she-camel which is rarely to cause this. When taken with sugar the milk improves the complexion in women. It fattens the body. The cheese water elicits similar effect in emaciated persons having hot and dry temperament. Milk fattens these people due to its moisturising potency and capability to expel the bad humours. It rectifies the (corrupt) food. The milk, which is curdled owing to its sour quality, quickly fattens such people. Cheese water removes freckles and ugly marks both when painted or taken orally.

Swellings: Mostly oral use of the milk cures those people who suffer from acute swellings, furuncles, facial erysipelas, scabies and prurigo. The effects are seen only when their temperaments are not inclined to corrupt the milk and convert it into yellow bile. Milk is harmful for the persons suffering from internal swellings.

Ulcers: Milk is suitable to be used in internal ulcers as it washes, cleanses and agglutinates them. The useful effects are elicited only when the temperaments of the people are not susceptible to adverse changes converting the milk into yellow bile. Cheese water is used with chebulic myrobalan in cases of scabies.

Joints: Milk is harmful for the nerves and the people suffering from neural diseases specially the cold and phlegmatic diseases.

Head: Goat-milk is useful in catarrh and prevents the nasal flow. It subsides the severity of symptoms. It is useful in throat ulcers. Milk is a remedy for amnesia attributed to dryness, sorrow and melancholia. Milk is harmful for the teeth as it causes decay, produces cavities and removes them in fragments. These effects are elicited specially when the temperament of the teeth is cold. It causes flabbiness in gums. Hence it is necessary that one should wash the throat with honey, wine and oxymel. A mouth wash using milk obtained from a she-ass is, however, said to strengthen the teeth and gums. Milk is not suitable for use for people suffering from headache, giddiness and tinnitus specially when they sleep after taking it. In short, milk is detrimental to the persons whose heads are easily susceptible to the diseases.

Eye: Milk 'darkens' the eye sight and causes hemeralopia. When milk is instilled directly from the udder into the eye, it cures roughness and ophthalmia and prevents hot harmful humours descending

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towards the eye. Similarly local application of the milk along with the white of an egg and the undecocted rose oil proves to be useful in ecchymosis.

Chest: Milk obtained from a she-ass or a she-goat is useful in cough, consumption and haemoptysis. This you will see later at an appropriate place.

Ewe-milk is more beneficial in haemoptysis. Milk is considered to be good drug in pulmonary ulcers and consumption. Gargling and mouth wash with milk is useful in diphtheria, angina, uvulitis and tonsillitis. It is, however, harmful in the patients suffering from 'moist' palpitation caused by phlegm or blood. Camel-milk is useful in asthma and dyspnoea. Milk is also more suitable for affections of the chest than those of head and stomach.

Food: Milk produces obstructions in the bladder. Cheese water is useful in jaundice. Goat or camel milk is invariably useful. Milk from a she-ass is useful in dropsy. All kinds of milk are useful in hardness of the spleen. Camel-milk is used with castor oil in cases of hardening of internal organs. Milk, specially causes flatulence, colostrum, swellings and pain in the stomach. Both milk and colostrum aggravate hiccough and induce 'smoky' eructation. It is harmful for use in patients suffering from spleen and liver diseases. These persons need a refreshing diet. Camel milk, however, is an exception. It is useful in various splenic and hepatic diseases and also softens the liver. It is also very useful in dropsy specially when taken along with the urine of an Arabian she-camel. It increases appetite and thirst. Sour milk is very slow to digest as it contains immature humours. It is, however, well digested by stomachs with natural or acquired hot temperament. It does not cause 'gaseous' eructation as it is devoid of cream.

Excretion: Cheese water purges out burnt bile. When used with *aftimūn*, it also purges out burnt black bile. Milk also produces stones. Boiled milk, when it is concentrated by removal of water, causes constipation and stops bloody stools. Camel-milk promotes the discharge of menses. Churned cow-milk is good to be used in bilious diarrhoea. Curdled milk is given as an enema in uterine ulcers. Goat-milk is useful in cystic ulcers. Milk compensates the loss (of energy) caused by intercourse and also improves the sexual desire. It produces flatulence in intestines. All kinds of milk are thick and aggravate colic and produce stones. The sour and curdled milk stimulates sexual desire in hot tempered person inspite of its moisturising and flatulent properties. In general the milk causes relaxation of the bowels, specially the milk obtained from animals e.g. mare, camel, ass, cow and goat. All kinds of milk with less water

content relax the bowels. Excessive use of milk reduces tonicity and so it is not properly digested. Addition of salt makes the milk and cheese water purgative. Milk boiled on hot stones or iron plates causes constipation. Milk is useful in abrasions. Boiled sour milk stops bilious and hemorrhagic diarrhoea. Camel-milk is useful in piles. Milk proves to be analgesic and useful when applied on the swellings, ulcers and irritation of the anus and pubic region.

Fevers: Milk obtained from female goats and asses is suitable to be used in tuberculosis as I have already discussed at a proper place. The sour milk has mostly been found to be useful in tuberculous fever, specially when used after removing the cream to make it easily digestible. Freshly procured viscous milk should be avoided by persons suffering from fever.

Poisons: Milk is useful against intake of fatal drugs and following substances: sea-rabbit, wild rue, hemlock seeds, henbane, particularly spanish flies, hellebore, wolf bane, leopards bane and all the putrid and corrosive matters. It is given as an antidote to persons who have consumed henbane. It helps them to regain their reasoning power.

7. *Lubna* Liquid storax *Styrax officinalis* Linn.

Nature: Liquid storax is the same drug which is called *mai'ah*. Its exudate is called '*asl-al-lubna aştarak*' and it comes from a tree resembling the quince tree. We have discussed it earlier under the title '*aştarak*' but we are discussing it here again though it is a mere repetition. *Lubna* is said to be the oil of a Roman plant.

Choice: The best kind of liquid storax is that which exudes spontaneously. It resembles fragrant honey and gum and appears somewhat yellow in colour. It should not be bran-like or black. Another kind of liquid storax resembles myrrh. It is sometimes found to be adulterated with oils and honey in which it is preserved and kept in the sun to be extracted and dried.

Temperament: It is hot in the first and dry in the second degree.

Properties: It has maturing, softening warming and dissolving properties. Its smoke resembles the smoke of frankincense. It possesses numbing properties. The oil of liquid storax, which is found in Syria, is highly softening.

Swellings: It is useful in hardness of the flesh and is painted with some oils on wet and dry pustules.

Ulcers: Storax is painted on dry and wet scabies. It is a good paint for this purpose.

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Joints: It strengthens the nerves and proves to be useful in twisting of joints both when taken orally or applied as a paint. It is incorporated in oils prepared to be used in fatigue.

Head: Fumigation with liquid and dry storax cures catarrh. It forms an excellent remedy for coryza. Storax, specially its oil, contains soporific property.

Chest: Storax is useful in chronic cough, phlegm and pain in the throat. Being a highly softening drug, it clears the hoarseness of the voice.

Food: It promotes digestion.

Excretion: If taken orally or used as a pessary, it relaxes the bowels and facilitates the discharge of urine and menses. It softens the hardness of the uterus. Dry storax causes constipation. When dry or liquid storax is used in a dose of one *mithqāl* (4.5 gm) with equal weight of almond gum, it purges out viscous phlegm without any trouble.

Substitutes: Castoreum in its equal weight in combination with double quantity of jasmine oil act as substitutes for storax.

8. *Lahm*

Meat

Choice: Good varieties of (quadruped) meat are the following:

(A) Meat of sheep possessing some 'rarefying' hotness.

(B) Meat of very young goat and calf is easier to digest and considered to be a fine food.

(C) Meat of kid produces less superfluous matters than that of lamb.

(D) Meat of suckling animal is considered fine but young ones fed on inferior quality of milk, is harmful. Meat of aged and emaciated sheep and goat is also inferior in quality.

(E) Meat of black cattle is lighter and delicious. Meat of the male goat or sheep is also similar in quality.

(F) Meat of the animals, living separately from other fat, red and white coloured animals, is considered lighter.

(G) Meat from young cattle (two or three years old) is less nutritive and it 'floats' in the stomach.

Good, healthful and tasty meat (organ wise) is procured from parts with bones. Meat from organs on the rightside is lighter and better than that from those on the leftside. Meat of the middle part of the muscles is free from any defect. Soft and nerveless meat, particularly which produces milk viz: the breast meat and saliva viz: the sub-lingual parts, is generally more delicious. Such meat, if well digested, is good but it may produce phlegmatic nutrition. Its nutri-

tive value is not more than the meat from other parts including the muscles. Meat of the breast region and the testicles of cocks is very nutritive. Meat of portions made for the support of other organs such as the meat formed by interwoven vessels of the liver and allied tissues, is considered inferior. The meat of the heart and its root, resembling a mulberry like process, is also a good variety of meat. Breast meat is very nutritive but when it contains milk, it becomes rather heavy. The meat obtained from testes is thought to be superior in quality.

Among the birds, meat from pheasants is considered good. Hen's meat is light but less nutritive in relation to the meat of partridges, hazel grouse and francolins. The meat of young dry-tempered animals is good e.g. a kid. The meat of sheep is not favoured and sometimes its humour might be inferior in quality. The meat of he-goat is also inferior. The meat of wild animals, big aquatic birds having long necks, peacocks, male bustards, pigeons having 'hard organs', sand grouses and all other birds which produce black bile is considered inferior. Similarly sparrows meat is also of inferior quality. The meat of such birds which have hard, big and continuously fluttering wings, produces good chyme.

Among the wild animals the meat of deer in spite of its melanotic nature, is said to be better. The christians and some others with similar belief state that meat from wild pigs is best amongst the wild animals. It is lighter than the meat from domestic pig. Besides it is more nutritious and easily digested. Meat procured from animals in winter is better in quality. It is also necessary to take into consideration the conditions of the animals such as their age, fodder and active nature etc. These factors have already been mentioned under the chapter dealing with milk.

Temperament: The meat of the birds, in general, is drier than that of quadrupeds. Meat of a cow is comparatively dry than that of a goat. Similarly goat-meat is described as dry but more difficult to digest when compared to that of sheep. Meat of slaughtered (camels or sheeps) animals is heavy in nutrition and highly warming.

Meat of rabbit is hot and dry. Similarly the meat of big birds, geese and male bustards is heavy. Meat of duck and other aquatic birds, due to their intense moistness, is considered equal to the meat of sheep. According to some experts the meat of hedgehog is moistening. Meat of fatty animals and from lower parts e.g. buttocks is hot and moist in temperament.

Properties: Meat is a nutritive and strengthening diet. It is more likely to be transformed into blood than other kinds of food. Roasted and fried dishes of meat are more dry. Boiled meat pre-

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parations are more moist. The meat cooked with condiments and *murry* (a kind of dish) acquires the potency of the condiments used. The fats form inferior type of food and even in small quantities, keep the food 'floating' in the stomach. The amount of added fats should be small just for making the food delicious. The salted meat, though basically moistening in nature, proves to be more desiccant than all the other kinds of meat but it is less nutritious. Meat with thin fat layers relaxes the bowels inspite of its poor nutritive value and rapid transformation into 'smoky' vapours and bile. It is also quickly digested. The meat from buttocks is said to be more inferior than that from other fatty portions. It is poorly digested and has less nutritive value. This type of meat is also hotter and thicker than that from other fatty parts.

The meat of cow which is compact is more nutritious. Black meat produces melancholic diseases. Calf meat is considered better. Cooking with mellon-peels lacerates cow's meat or beef. Spring and the beginning of the summer are the best seasons for taking beef. Christians and others with similar beliefs state that even thick portions of beef are not as viscous and compact as the pork.

The meat of piglets is less nutritive due to its intense dissolving and moistening property. The meat of a duck is more nutritive but it is not as rich as that of a hen. Gizzard and liver from hens are also good, delicious and produce fine humour. Meat of roller is carminative. Meat which is less fatty and dry is relatively safe from getting putrefied.

Cosmetics: Beef produces pityriasis. Massage with the fat of a wild ass is good in freckles. Similarly fat of corpulent ducks and 'burnt' meat of lambs is applied in the form of a paint on pityriasis. 'Burnt' frog-meat is used in alopecia.

Swellings: Beef may cause cancer. Similar effect is elicited by other thick (fibrous) meats. It dissolves hard swellings.

Ulcers: Beef complicates cases of wet scabies and ringworm. Thick fibrous meat also possesses similar properties. The 'burnt' meat of lamb is painted on ring worm.

Joints: Beef may cause leprosy, elephantiasis and varicose veins. Similarly thick fibrous meat and fats from the buttock portions are used for preparing a good paint for 'hard' nerves. Patients of gout and rheumatism are given a sitz bath prepared in the soup of rabbit's meat. Soup of fox-meat also elicits a similar action. The meat of vessel is used as a plaster in cases of arthralgia. Fat from a wild ass and costus oil constitute good ingredients of a liniment made to be used in dorsalgia and gases. Snake flesh is a drug for leprosy. This has already been mentioned at an appropriate place.

Similarly the usefulness of hedgehog-meat in leprosy has also been described in its relevant place.

Head: Beef and other thick fiberous types of meat mentioned above, produce black bile and melancholia because of their desiccant property. The meat of weasel is mixed with wine and taken orally by the patients of epilepsy.

Eye: Ash obtained from the meat of young lambs is good for use in corneal opacity. Meat of hunting and clawed-animals strengthens the eye-sight.

Chest: Meat of sea crab is very useful for patients of consumption. Meat of chickens may cause intense suffocation except when it is taken in the form of *maşuş* (a kind of dish of the meat of chicken or pigeon roasted in vinegar).

Food: The above mentioned types of thick fiberous meat cause hardening of the spleen. *Sikbāja* (a broth made of meat and vinegar) prepared from beef along with dry coriander and saffron, stops the infiltration of the humours towards the stomach. Meat of sand grouse is mentioned under the drugs said to be useful in dyscrasia, dropsy and obstructions of the liver and spleen. In cases of dropsy, it is better to take it in the form of *qariş* (a kind of dish prepared with meat, vegetables, condiments and vinegar) to avoid excessive thirst. Some people praise the meat of hunting animals and recommend its use in 'coldness', 'moistness' and weakness of the stomach. Quick digestion and rapid movement of food in the bowels or its sluggishness does not necessarily depend on its viscid or dilute nature. For example the meat of a wild or domestic pig is said to be quick in digestion and passage in the bowels resulting in good nutriment inspite of its being thick and fiberous. Stag-meat is similarly thick and fiberous but its movement in bowels is quick. The meat of hedgehog when taken with oxymel is useful in dropsy. Meat of sand grouse is useful in hepatic weakness, obstructions, dyscrasia and dropsy. The meat of hunting and clawed-animals is normally rejected by the stomach.

Excretion: Beef prevents the infiltration of yellow bile towards the intestines. Roasted meat of rabbit, is good for intestinal ulcers. Meat of a hedgehog, dried in oxymel is good for treating nephralgia. Soup prepared from the meat of an aged cock is good for colic and melanotic diseases. Fat of wild ass is used with costus oil in nephralgia attributed to thick gases. Meat of hunting and clawed-animals is beneficial in cases of piles. *Sikbāja* prepared from beef is good for treating bilious diarrhoea. Similarly beef *qariş* is a very suitable diet when used in combination with dry coriander, vinegar, a little saffron and other sour things. Roasted or unroasted-meat of birds, specially partridge and hazel grouse, elicits constipatory action. The

meat of sand grouse and crested lark becomes more potent when it is boiled and the soup is discarded. The meat of stag is diuretic. Fatty portions of meat are comparatively laxative in nature.

Fevers: Ingestion of meat procured from cows, stags, mountain goats and big birds causes quartan fever.

Poisons: The meat of weasel, when soaked in wine and dried, becomes useful in cases of poisoning. Burnt meat of young lambs is useful in bites by snakes, scorpions and *Jarrārāt* (the scorpions of small species). Its intake with wine proves to be good for treating rabid dog bite cases. Frog meat is useful in insect bite.

9. *Laḥya al-tais* Salsify *Tragopogon porrifolius* Linn.

Temperament: Salsify is mildly hot. Because of its tepid nature, it does not appear to be very cold. It is cold upto the last phase of the first degree. Its dryness is stronger i.e. upto the third degree.

Properties: It is somewhat astringent. Its root is very astringent. It is used as a component of antidotal medicines as it strengthens the organs. Its extract equals the seeds of rose in astringency.

Ulcers: Its dried leaves heal up the ulcers including the chronic ulcers. Its flowers possess more of these qualities than the other parts.

Head: Its root is one of the drugs used for cleaning dirty matters from the ear. It heals the ulcers of the ear and is also useful in deafness.

Chest: Its roots, leaves or flowers in combination with barley water are useful for treating the ulcers of the lungs. Its extract is used in haemoptysis.

Food: It 'strengthens' the stomach. The plant, specially its extract, prevents the infiltration of humours towards the stomach.

Excretion: When taken orally it proves to be some effective drug for intestinal ulcers. Its flower particularly in extract form is generally taken with wine or applied as a plaster in cases of uterine bleeding.

10. *Lizāq al-dhahab* Chrysocolla *Hydrous copper silicate*

Nature: The name i.e. *lizāq al-dhahab* is given to gum ammoniae which we have already discussed. This name is also applied to a substance obtained from a child's urine after triturating it in a copper mortar and keeping in the sun till it is dry. Its mineral variety is produced in mines from condensation of gases dissolved in hot water. The last mentioned variety is being described here.

Choice: The cultivated variety, which is pure and clean, is considered good. Artificial variety is believed to be stronger and

more tenuous. Next to these two is the burnt mineral variety.

Temperament: It is bitter and hot.

Properties: Chrysocolla is detergent, astringent, warming, putrefying, diluent, somewhat irritant, dissolving and highly desiccant. Its dissolving property is more than its irritant and desiccating effects. It is dissolving without causing much irritation. The artificial variety is more desiccant but is less irritant due to its extraordinary property of rarefaction. When the mineral variety is burnt, its tenuity is increased and it becomes therapeutically more useful.

Ulcers and wounds: It helps in removing the (dead) flesh and is also considered as a good drug for treating the wounds that are difficult to heal.

Food: It is an emetic and astringent drug.

11. *Lisān*

Tongue

Nature: Tongue is composed of soft muscular tissues through which veins and nerves pass. Its humour is moist.

12. *Lisan al-thaur*

Borage

Borago officinalis Linn.

Nature: Borage is a plant having wide leaves which are rough in touch and resemble Egyptian origan. The wood of its branches is like *rijl al-jarād* (yew) and its colour is yellowish green.

Choice: The Khurāsāni variety of borage should be used. Its leaves are thick and have some dots on their surface. The latter, as a matter of fact, are the marks left after removal of spikes or fibers. The drug commonly available in this country and often used by physicians, is a variety of Egyptian origin. It is not a borage and is devoid of medicinal properties.

Temperament: It is moderate in temperament slightly inclining towards hotness. Its moistness is in the last phase of the first degree. The dried form contains less moisture. According to Khūzī, it is cold and moist in the last phase of the second degree but (in my opinion) it is far from the truth.

Head: The burnt borage cures stomatitis in children. It relieves 'burning' of the mouth. The drug as such also possesses these qualities but is weaker in action.

Chest: It is a rarefying and cardiotoxic drug. It is good for treating restlessness, melanotic diseases and palpitation. For this purpose it is used with wine. Some physicians prescribe oral intake of 7 gm of the drug alongwith the armenian bole in patients of 'hot' palpitation. It is also useful in cough and roughness of wind-pipe

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specially when used in the form of a decoction with honey-water or sugar.

Excretion: It is a mild purgative for melanotic humours.

13. *Lisân al-ḥamal* Great plantain *Plantago major* Linn.

Nature: Great plantain is of two kinds (a) large and (b) small. According to Dioscorides, it is sometimes described as 'multi angled' or 'seven angled'. The leaves of the large variety are larger in size as compared to those of the small variety. It is composed of 'watery' and 'earthy' contents. The 'watery' contents cools it and 'earthy' contents makes it astringent.

Choice: The large variety is more useful, Its fruits and roots are similar to the leaves in temperament but they are relatively dry and less cold.

Temperament: Its root is quite dry and contains less moisture. Its cold effects are not sufficient to produce a benumbing action. Its dryness is not so intense as to cause irritation. This makes it an ideal drug for ulcers. It becomes rarefying specially when it is dried. According to Galen it is cold and dry in the second degree.

Properties: Its leaves are astringent and repellent. Its cool water contents facilitate homostatic action. It is dry without being irritant. Because of this property it is useful both in fresh and chronic furuncles. It is deobstruent due to its detergent property. Its root is suspended around the neck of scrofula patients.

Swellings: It is good to be used in hot swellings, burns, herpes articularia, erysipelas, parotitis and scrofula.

Ulcers: It is good for treating chronic, malignant and creeping ulcers, eczema and deep wounds. In these diseases it is the drug of first choice to be given to the patients. Its application with toledo earth and white lead proves to be useful in erysipelas.

Joints: When plastered on elephantiasis it restricts its further expansion and thereafter brings about its deflation.

Head: It is useful in otalgia attributed to heat. Mouthwash with a decoction of its root is useful in odontalgia. 'Adasiah (a dish made from lentil), containing great plantain, which acts as a substitute for beet, proves to be useful in epilepsy. Instillation of a decoction of its leaves into the ear relieves otalgia. Similarly chewing of its roots as such or a mouth wash with its soup gives relief in odontalgia. Likewise the juice of its leaves cures stomatitis.

Eye: It is useful in ophthalmia when applied in the form of suppositories dipped in its extract.

Chest: Its seeds are useful in haemoptysis. '*Adasiah* mixed with great plantain and acting as a substitute for beet, is useful in asthma.

Food: Its roots, seeds and leaves are used as a treatment for hepatic and renal obstructions. In the form of a dish of lentil containing great plantain and thus serving as a substitute for beet, it proves to be useful in dropsy.

Excretion: When its seeds are taken orally or the extract is given as an enemas, it becomes useful in intestinal ulcers and bilious diarrhoea. It stops bleeding of piles. Its leaves are taken orally with epithem in cases of nephralgia and cystalgia.

Fevers: It is said to be useful in tertian fever. For this purpose three pieces of its roots, mixed with 120 mls of wine, are used. Four pieces of its roots are taken in a similar manner in quartan fever.

Poisons: It is applied with salt on the bite of mad dog.

14. *Lisân al 'aşāfir* Conesse bark *Holarrhena antidysenterica* Wall.

Temperament: Conesse bark is hot in the second and moist in the first degree.

Properties: Its leaves are astringent and 'purifying' for the immature humours.

Ulcers: Its leaves heal and promote the growth of flesh in cases of wet ulcers.

Joints: Its bark, mixed with vinegar, is used in muscular contusions.

Chest: It is useful in palpitation.

Excretion: It increases the sexual desire.

Substitute: For an aphrodisiac action equal weights of peeled walnut and red erysimon are said to act as its substitutes.

15. *Lu'ab* Saliva *Ptyisma* (G)

Properties: Human saliva differs according to individual nature and temperament. In short, it has maturative and dissolving properties.

Cosmetics: It cleanses freckles, red spots and the marks caused by coagulated blood.

Ulcers: Saliva of a fasting man is massaged with camphor on ringworm.

Head: The saliva of a fasting man, when instilled relieves ear ache in cases of worm infestation by killing the worms and expelling them instantly.

Poisons: Saliva counter-acts the poisons. When a fasting man spits repeatedly on a scorpion, it would be killed.

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16. *Lu²bat barbariah* A drug similar to hermodactyle

Nature: It is a substance resembling hermodactyle. It is procured from African countries. It is commonly adulterated with *sūranjān* (hermodactyle).

Temperament: It is hot in the third degree.

Excretion: It stimulates the sexual desire.

17. *Luffāh* fruit of belladonna *Atropa belladonna* Linn.

Nature: Fruit of Belladonna is a well known drug which we have dealt with under the heading *yabruj*.

Temperament: In my opinion it is cold upto the third degree and also moist in temperament.

18. *Luk* Lac *Coccus Lacca*

Nature: According to some experts specially Paulos, it is a fragrant gum of a herb resembling myrrh. It must be used with caution. Some people have mistakenly described it as yellow amber. Some others state that yellow amber is nothing but lac. As a matter of fact lac is similar in properties to yellow amber in many respects.

Cosmetics: It is the most effective weight-reducing drug.

Respiration: Lac is useful in palpitation.

Food: It is also useful and strengthening for the liver. It is a good drug for jaundice, dropsy and hepatalgia.

19. *Lūbiā* Kidney beans *Vigna sineusis* Linn.

Temperament: The red variety of kidney beans is very hot. Both Ibn i-Māsawaih and Archigenis state that it is cold and dry but in my opinion, it is dry, superfluously moist and inclines towards hotness. The red variety is more warming.

Properties: Its digestion is quicker in relation to the black gram but its nutritive value is not less. It is said to be less flatulent but this statement is doubtful. It would be appropriate to describe it as more flatulent than black gram and less flatulent than broad bean. Kidney bean contains moist and phlegmatic humours and induces bad dreams.

Respiration: It is good drug for chest and lung diseases.

Food: It produces thick humour. Mustard rectifies its bad effects. Similarly vinegar, salt, pepper and origanum rectify its ill effects. Intake of a strong wine, after its use, has also the same effect. Kidney bean preserved in vinegar contains less moisture.

Excretion: It is an emmenagogue; specially so when its red variety is used with nard oil.

20. *Lauz* Sweet almond *Amygdalus communis* Linn.

Nature: Almond is a well known drug. Though its oil content is less than that of walnut, it is rich in oils which make it rapidly rancid. Walnut is quicker than almonds in digestion and also is readily converted into bile. Some people believe that the gum of sweet almonds is similar to the gum arabic.

Temperament: Sweet almond is moderately moist while the bitter variety is hot and dry in the second degree.

Properties: The gum of bitter almond causes constipation and gives warmth to the body. All kinds of almonds are detergent, purifying and, deobstruent. Sweet almond is weaker than the bitter variety in eliciting deobstruent effects because its attenuant, detergent and deobstruent actions are indirect. It is said to have no constipative property at all. It is less in nutritive value. One of the properties of bitter almond is that it kills the fox. The bitter variety may be used as a drug but not as a food. Sweet almonds provide moderate nutrition of good quality. The almond oil is 'lighter' than the almonds used as such.

Cosmetics: The bitter almond is applied to the freckles, red spots and other ugly marks on the body including the sun-burns. Besides it removes facial inflammation. The root of bitter almond tree, when decocted and painted, serves as a strong drug for treating freckles. The use of sweet almond fattens the body.

Swellings: The use of bitter almond is good in urticaria.

Ulcers: It is painted with honey on creeping and herpetic ulcers and with vinegar and wine in cases of ringworm. The bitter almond is the most effective drug in all such cases.

Head: It is very suitable for treating otalgia and tinnitus. For this purpose the bitter variety is used in powdered form or as its oil. It clears the moisture and dandruff. Washing the head with it induces sleep. Oral intake of fifty almonds before taking wine prevents intoxication. Tender parts of the tree of bitter almond are lightly pounded with vinegar and rose-oil to form a plaster for application on forehead in cases of headache. Similarly the oil of bitter almond is also useful in such cases.

Eye: Almond improves the eye-sight.

Chest: The bitter almond alongwith wheat starch is good for haemoptysis. It is useful in chronic cough, asthma and pleurisy. Specially so is the oil obtained from sweet almonds. The flour of almond is useful in cough and haemoptysis.

Food: Almond removes the hepatic and splenic obstructions. The bitter variety is particularly useful for removing obstructions found

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in the peripheral vessels. Oral intake of fresh almond, alongwith its skin, absorbs superfluous moistures from the stomach. It is slow to digest but good in nutritive value. However if taken with sugar it is quickly digested. Its flour is heavy and stirs up yellow bile due to its sweetness.

Excretion: Bitter almond removes nephrolith. Oil of bitter almond, specially when taken orally with blue lily, cleanses kidney and bladder and removes the calculi found therein. Plastering with blue lily and rose oil may also be useful in such cases. It is also useful in uteralgia, hot inflammation and hardness of the uterus, hysteria, dysuria and nephralgia. Its pessary elicits an emmenagogue action. Sweet almond is useful in colic due to its detergent property. The bitter almond is more useful in this respect. Its oil is considered to be lighter than the almonds as such.

Poisons: Almond is useful in cases of bite by a mad dog.

21. *Lūf* Dragon wort *Arum daracunculus* Linn.

Nature: There are two varieties of dragon wort: (a) Long dragon wort (*Arum gratum* Schott.) (b) Cuckoo-pint (*Arum maculatum* Linn.). The latter variety is comparatively more warming. Long dragon wort is rich in earthy contents. Hence its power of detergence is less than that of cuckoo-pint, According to Dioscorides its leaf resembles the leaf of *darāqīṭūn* but it is apparently smaller than latter. Its stem measures one hand span in length. Its root is pestle shaped and resembles root of the above mentioned drug i.e. (*darāqīṭūn*). Its fruit is yellow in colour like the olive. Cuckoo-pint itself is also yellow with a tinge of purple.

Temperament: Long variety of dragon wort is hot and desiccant in last phase of the first degree while cuckoo-pint is hot in the last phase of the second degree. The seeds of dragon wort are stronger than its other parts. Its root is considered more useful than the other parts.

Properties: It is deobstruent, moderate diluent of thick and viscous humours and also detergent. In all these respects cuckoo-pint is more potent. The potency in both the varieties, particularly in the long dragon wort, is attributed to its earthy contents specially when the root is taken with honey.

Cosmetics: The root of cuckoo-pint is taken orally with honey to clear the freckles, lentigo, pityriasis and red spots. It is mixed with wine and applied on frost bitten parts of the body.

Swellings: It is useful in the swellings which need detergence.

Ulcers: The root of dragon wort particularly of the cuckoo-pint variety is incorporated with white bryoni in ointments intended to be used in malignant ulcers. The variety of dragon wort having some moistness, is relatively more useful in wounds than the one which is dry. Such type of dragon wort is needed for the treatment of wounds. Sometimes it is powdered and incorporated into ointment. Suppositories impregnated in this ointment are used for treating ulcers and fistula. Occasionally suppositories are also made using its roots as such in cases of fistula. Its leaves are good for treating spoilt wounds.

Joints: The root of dragon wort is applied with cow-dung on affected parts in cases of gout and muscular fatigue.

Head: An extract prepared from a bunch of garden dragon wort is useful in otalgia. Its local application with rose-oil proves to be useful in nasal corrosion and cancer. Instillation into the ear along with olive oil relieves pain. Its root is applied with other detergent drugs to remove dirty matters from the ear,. It dries up the ulcers and proves to be useful in deafness. Oral intake of seeds of dragon wort is useful not only in cases of *polypus nasi* but also in its malignant forms. In such cases it is desirable to administer it in the form of nasal suppositories.

Eye: Its root is useful in ophthalmic ulcers.

Respiration: It is an expectorant. In cases of orthopnoea and chronic asthma it should be taken after repeated boiling till its (other) medicinal properties are lost. Its root also elicits similar actions but cuckoo-pint variety is more effective than the long variety.

Food: Its oral use produces thick humours.

Excretion: Cuckoo-pint, if taken with wine, stimulates sexual desire, cleanses the kidneys and cures piles. It is said when thirty pieces of dragon wort are mixed with water and vinegar or wine and given to the pregnant woman, it would cause abortion. Its use as a pressary may also expel the foetus. In some cases even inhalation of its faded flowers may cause abortion. It is also a diuretic drug.

Poisons: Massage of the body with its roots prevents snake bite.

22. *Lūqfardīs*

Egyptian stone

Lapis aegyptiaca

Nature: It is an Egyptian stone used by washermen for whitening the clothes. It is soft and readily soluble in water.

Properties: Egyptian stone is agglutinent, desiccant without causing irritaion and astringent. It prevents the infiltration of (harmful) matters to other organs.

Ulcers: It is useful in ulcers and wounds specially those which develop in soft organs.

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Eye: It is also useful in *fistula lachrymalis* and forms an ingredient of recipes for ophthalmic ulcers.

Chest: It is good for treating haemoptysis.

Excretion: Egyptian stone is useful in chronic diarrhoea and cystalgia. It is also applied as a pessary in cases of uterine bleeding.

23. *Līmūniūn,*

Lemon

Citrus limonum

Properties: Lemon is astringent and desiccant.

Excretion: When taken with wine, it proves to be useful for relaxing the bowels. It is similarly used in cases of excessive menses. Its dose is 84 gm.

*Letter Mīm*1. *Mā'*

Water

Aqua

Choice: We have discussed good quality water in the 1st volume and one should refer it there. Inferior type of water is stagnant and found in ponds. It has an abnormal taste, smell, turbidity etc and is viscous and heavy in consistency with inclination to be condensed. Normally some dirty scums are floating on its surface. The water, having some coagulated matter over it, is also inferior in quality.

It should be noted that the alkalinity of the water is removed with the use of milk, thick wine and starch. The harmful effects of aluminous water are removed by the use of thin and fragrant wine, unripe fruit of service tree, green cucumber and rarefying and diuretic vegetables. Turbid and thick water are corrected by rarefying substances e.g. garlic, onion and leek. Such water removes the intense effects of the intake of wine. Rough water would either be thick or pungent and detergent. The term 'rough water' is sometimes used for the water which is highly cleansing. The bitterness of water is corrected by the use of sweet substances while the saltish taste in water is corrected with Syrian carob, myrtle berry, azarole, potter's clay and flour. Waters of inferior quality are generally corrected with vinegar.

Temperament: Sea-water is pungent and bitter in taste. Alkaline water is warming and desiccant. Copper and iron containing water is useful for the viscera.

Properties: Cold water is harmful for the patients having calculi but is useful for the people suffering from the flaccidity of organs and also in various types of exudative conditions. People having some ailments due to the above mentioned causes are also benefitted with its use. Moderately cold water strengthens the

functioning of all organs with respect to the state of digestion, absorption, retention and expulsion.

Cosmetics: Sea-water is useful in cold eruptions before they are ulcerated. It kills the lice and dissolves hematoma. Sulphuric water is good for pityriasis and leukoderma.

Swellings: Sulphuric water is useful in arthritis, hardness and hanging warts.

Ulcers: Pure water is harmful to ulcers because of its moistening property. This water is not suitable for the treatment of ulcers. Sea-water is useful in scabies, itch and ringworm. Sulphuric water is also good for scabies, ringworm and porrigo specially when it is used in taking bath.

Joints: Sea-water and other similar types of water are useful for treating nerve diseases e.g. chorea, paralysis, loss of sensation etc. Similarly sulphuric water is useful in various kinds of arthralgia and 'cold' neuralgia.

Head: The epileptic patients get benefit from the use of tepid water but the use of hot water is harmful in such cases. Inhalation of vapours arising from sea water are useful in 'cold' headache. Copper containing water is useful in ear and mouth ailments.

Eye: Desert water is harmful for the eye.

Chest: Chilled water is harmful for the chest as it adversely affects the wind-pipe due to its moistness while this organ (wind-pipe) needs desiccation. Tepid water is good in swellings of throat, uvula and chest. Sea-water is used for fomenting swellings of the breast. Sometimes alkaline water may be useful for the lungs. Aluminous water is useful in haemoptysis. Iron rich water is useful for the spleen and stomach. Copper containing water is also similar to it in properties.

Food: Chilled water is harmful for the patients having obstructions. Sea-water and other similar types of water are harmful to the stomach. The vapours emanating from sea water are useful in cases of dropsy. Intake of boric water is useful in gastric acidity of 'moist' stomach. Alum water prevents vomiting. Both hot spring water and sulphuric water are useful in splenic and hepatic swellings and associated pain.

Excretion: Sea-water is taken as an enema in case of gripes. If taken orally, it causes diarrhoea. In such cases chicken-soup is taken to remove irritation. Alum water prevents abortion and excessive menstrual bleeding. Sulphuric water is useful in uteralgia. Chilled water adversely affects libido, causes constipation and controls movement and excessive discharge of semen. Salty water is purgative initially but, later on it stops purgation due to its desiccant property.

All kinds of mineral water cause dysuria, difficult labour and dysmenorrhoea but these mostly relax the bowels and dissolve (harmful) matters. Some kinds of mineral water e.g. alum water cause constipation and produce colic. Iron and copper containing waters are good in renal ailments and colic pain. Turbid water produces renal and cystic calculi. The water, in which hot iron is extinguished, is useful in haemoptysis.

Fevers: Water from sulphuric, hot springs, putrid, stagnant and muddy places may cause fever. Similarly hard water may cause quartan fever.

Poisons: Sitz bath in sea water gives relief to the patient bitten by a snake. Similarly it (sea water) is useful for treating all kinds of fatal insect bites.

2. *Mādhriūm*

Mazerion

Cliboria ternatea Linn.

Nature: Mazerion is a plant rich in poisonous latex content. It is of two varieties: (i) having large and thin leaves and (ii) bearing small and thick leaves. The second variety is considered inferior. The variety which is black in colour may be fatal.

Choice: The variety which bears large leaves resembling those of olive tree is considered superior. This variety is more tender than others. The variety, which has small and twisted leaves, is harmful. The intensity of mazerion is reduced when it is used in the form of a solution.

Temperament: Mazerion is hot and dry in the fourth degree.

Properties: It is detergent, purifying and exfoliating. It is very pungent.

Cosmetics: All of its varieties are used. These are painted externally in cases of pityriasis, leukodarma and red spots of the body. In these cases it is also used in combination with sulphur.

Ulcers: All of its varieties are also used in cases of ringworm and dirty ulcers, specially when used with honey. It removes sloughs because of its dissolving and corrosive contents. Similarly it dries up wet scabies.

Head: A mouth wash with its decoction, specially of the black variety, relieves toothache. It is also pasted with pepper and wax on corroded and painful teeth.

Food: Mazerion is very harmful for the liver.

Excretion: Mazerion, particularly plucked afresh at the time of its flowering season, 'purges out water'. Its pungency is reduced by soaking it in vinegar. Mazerion in a dose of 24.5 gm is decocted with 675 gm of water till it is reduced to 337 gm. Oral intake of this quantity as such expels the snakeworms and tape-

worms. It is particularly effective when taken in a dose of 84 gm. along with the decoction of mountain mint. Alternative method of its use is to keep 77 gm of it in two jars of wine for two months, filter and store for another two months. Such a preparation would be useful in cases of dropsy and parturition. Its decoction is also useful in severe dysuria. According to some physicians it evacuates black bile and phlegmatic humours particularly when used in combination with double quantity of absinth. Some physicians make an electuary from 4.5 gm of mazerion and 9 gm. of absinth kneaded with boiled honey. This electuary is also used as a suppository. It is advocated for persons in whom evacuation of yellow water (bile) is indicated. It is mixed with other purgatives. Similarly the patients in whom, purgation of black bile is required should take it with other drugs that evacuate the black bile.

Poisons: Mazerion is taken with wine in cases of insect bite but black mazerion is a fatal poisons. It is administered along with wheat or barley flour, water and olive oil to kill rats, dogs and pigs. Its dose of 7 gm is fatal for human beings. Death is accompanied by extreme pain, vomiting and diarrhoea.

3. *Māsh*

Black gram

Phaseolus mungo Linn

Nature: Black gram is closer to broad bean. The appropriate time to its use is summer season.

Temperament: It is moderately moist and dry. Peeled *māsh* is moderate while the unpeeled form inclines towards dryness because its peel is pungent.

Properties: It is not flatulent unlike the broad bean. If flatulence is present, it would be considerably less in the former. Unlike the broad beans, it is not a detergent drug. Similarly it is not cold unlike the lentils. If it is mixed with some carthum seeds, its harmful effects would be removed.

Joints: It is used as a plaster in cases of organic pain specially when painted with grapes and a decoction of saffron in wine. It is also applied on muscular contusions and rupture.

Food: The chyme, produced by black gram, specially the peeled one, is good. Its passage down the stomach is not slow unlike that of broad bean. When decocted with sweet almond oil, it produces good humour.

Excretion: If used after boiling in water, discarding this water and preparing a decoction again, it causes constipation specially when this decoction is made sour by adding pomegranate seeds and sumach. According to some physicians it reduces the sexual desire.

4. *Māmīthā* Horned poppy *Glaucium corniculatum* Curt.

Nature: Horned poppy is similar to oak. It is yellow in colour but inclining towards blackness, easy to break, bitter and having watery and earthy substances. The degree of coldness of its substance is not severe but is similar to that of pond water. It is a herb found at 'Manbaj' (a city in Syria). Its odour is quite diffusing. It is bitter in taste and its extract has a saffron like colour.

Temperament: It is cold and dry in the first degree.

Properties: It is a good astringent.

Swellings: Horned poppy is useful in hot and thick swellings. It cures such cases of erysipelas which are not very large or of severe intensity. It is comparatively more beneficial in patients having hard physique than those having small and soft bodies. In the latter cases it produces adverse effects due to its desiccant potency.

Eye: It is used in ophthalmic medicines in initial stages of the disease.

5. *Māmīrān* Golden thread root *Coptis teeta* Wall.

Nature: Golden thread root is a kind of knotty wood which is somewhat black in colour. It is slightly curved in shape and its taste is sharper than that of turmeric.

Temperament: It is hot and dry in the last phase of the second degree.

Properties: It is very detergent and purifying.

Cosmetics: It removes white marks from the nails.

Head: Its extract absorbs thick 'moistures' from the head and cleanses the 'superfluous matters' from the brain. Its root is useful in toothache.

Eye: A collyrium of golden thread root removes opacity of the cornea and improves the eye-sight. Its extract is specially effective in removing thick moistures from the eye.

Food: Its root is useful in jaundice.

Excretion: It is beneficial in gripes and possesses some diuretic property.

6. *Māhudānah* Croton *Croton tiglium* Linn.

Nature: Croton is also called *ḥab-al-mulūk*. Its plant is known as *al-sīsban* in our (Avicenna's) country. It leaves resemble small fishes and measure about the length of a finger. Its fruits are found in bunches of three pieces as in the case of large hazel nut. Smaller varieties are also observed. Each fruit contains three black seeds.

Temperament: It is hot and dry in the third degree.

Joints: It is useful in arthralgia, gout and sciatica because of its purgative action.

Food: Croton is useful in dropsy. It causes forceful vomiting and is not suitable for the stomach.

Excretion: It serves as purgative like other latex yielding plants. A decoction of its leaves administered with the soup of an old cock, proves to be useful in colic and also serves as a diuretic. When six or seven of its seeds are taken as such or in granulated form and followed by drinking cold water, bile and phlegm would be purged out. The maximum oral dose of big variety is fifteen seeds while that of small variety is twenty seeds. When a highly effective purgative effect is desired, it should be chewed well but if one intends to use it as a mild laxative, it should be swallowed.

7. *Māhīzahraj* Great mullien *Verbascum thapsus* Linn.

Nature: *Māhīzahraj* is a plant similar to spurge but it is comparatively longer. It is dusty yellow in colour. Some people consider it to be a latex yielding plant.

Temperament: It is hot and dry in the third degree.

Properties: If thrown in a pond, it would intoxicate the fishes making them float over the surface of water.

Joints: It is useful in gout, sciatica, arthralgia, dorsalgia and coxalgia. When given along with purgative medicines, it removes the gases.

Excretion: It purges out thick humours e.g. phlegm.

8. *Mahrūth* Root of asafoetida plant _____

Nature: *Mahrūth* is the root of *anjudhān*. It is less potent than asafoetida. Whatever we have said under the caption *anjudhān* is also applicable to the root of asafoetida.

Properties: It is a laxative and coctive drug.

Food: It is difficult to digest and harmful to the stomach. If the stomach is 'cold', it would be strengthened by its use.

9. *Mihlab* Wild cherry *Prunus virginiana* Linn.

Choice: Wild cherry which is clean and white like pearls, is considered best.

Temperament: It is hot in the first degree and mildly dry in temperament.

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Properties: It is a fine, detergent, dissolvent and sedative drug.

Joints: It is very good in dorsalgia and backache.

Respiration: Its oral intake with honey water is useful in syncope.

Excretion: It is also useful in colic, nephralgia and cystalgia.

10. *Mukh* Brain bone marrow *Marrow mucloi*

Choice: Good marrow in order of quality is procured from calf, stag, ox, goat and sheep. Brain of male goats and oxen are dry; specially those obtained from the male animals. Bone marrow of the extremities is fatty.

Properties: Marrow, if assimilated, is warming, laxative, detergent and nutritious.

Swellings: It is good for treating hard swellings and ankylosis. The marrow procured from calf and stag does not resemble that of he-goats and mountain goats because it is dry and of no value.

Food: If marrow is applied to the stomach, it decreases appetite. It should be taken with aromatics and condiments.

Excretion: A pessary made from good quality marrow, when placed into uterus, proves to be useful in cases of uterine hardness.

Poisons: Smearing of insects' marrow is said to repel the insects.

11. *Midād* Ink stone _____

Choice: The variety of ink stone, which is light in weight and dark in colour, is considered good.

Temperament: All varieties of ink stone, except the Indian variety, are desiccant. Paulos and the Indian physicians (like Charak) consider it to be a cooling drug.

Properties: Ink stones are generally desiccant.

Swellings: According to some people application of the Indian variety of ink stone cures the swellings.

Ulcers: Ink prepared from the smoke emanating from burning pine wood is mixed with arabic gum and Indian bedellium. The mixture is then applied to the burns and left over there. It falls down (after the healing of the wounds).

12. *Murr* Myrrh *Balsamodendrom myrrha* T. Nees.

Nature: Myrrh is a gum of two varieties: (a) pure and (b) adulterated.

Choice: The variety which is reddish white, uncontaminated with pieces of its wood and fragrant is considered good. Occasionally it is adulterated with some fatal latex-bearing plants and thus becomes harmful. This adulterant is called *Bārḡāsīs* which is a poisonous plant.

Temperament: It is hot and dry in the second degree.

Properties: Myrrh is deobstruent, dissolvent of gases, astringent, adhesive and laxative. Its smoke is equally suitable for treating such cases where it is used as such. The smoke is highly desiccant but myrrh as such is rarefying and causes no irritation. It resembles the smoke of frankincense. It is used in important medicines due to its beneficial effects. It prevents putrefaction and possesses the property of preserving dead bodies from being deteriorated and decomposed. It desiccates immature superfluous matters. The smoke of its *iqḥīṭiā* variety is very desiccant, maturing and softening.

Cosmetics: When myrrh is mixed with myrtle oil and ladanum oil, it strengthens and promotes rich growth of hair and removes the scars. Its oral use renders a pleasant odour to the mouth and removes its foul smell. Local application of myrrh, wine and alum, on the armpits act as a deodorant. It is decocted with honey and cassia barks and applied to the warts.

Swellings: It is useful in phlegmatic swellings.

Ulcers: It heals the ulcers and facilitates growth of flesh on bones. Its application with vinegar cures ringworm and putrefactive wounds.

Joints: It is decocted with the pulp contained in shells and applied with pure wine in cases of loss of sensation in cartilages e.g. cartilage of the ear.

Head: According to Galen the smell of myrrh may induce headache even in healthy persons. Needless to say what it will do in a person who is already suffering from headache. It is one of the drugs which is beneficial for treating contusions of the ear specially when used along with wild rue, opium and castoreum. It causes giddiness and sleep. When used as a mouth wash with wine and olive oil, it strengthens the teeth, facilitates their tight fixation, prevents tooth decay and secretions by obstructing their flow. Sprinkling of its powder dries up ulcers in the head region. It is used with castoreum, horned poppy and opium in cases of painful and purulent ear ulcers. Local application in both nostrils prevents chronic catarrh. When sniffed in a dose of 600 mg it cleanses the brain.

Eye: It removes and cures the scars, ulcers, whiteness, and purulent conditions of the eye and softens roughness of the eyelashes without causing irritation. Its use mostly dissolves cataract at the initial stages when the causative secretions are very dilute. Myrrh adulterated with some milky juices is considered potent in collyrium.

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Chest: It is good for chronic and moist cough associated with asthma, orthopnoea and chest pain. It clears the voice. All these qualities are due to its fine cleansing properties which make it effective without causing any roughness. In cases of the dryness of throat it should be retained under the tongue and only its juice be sucked.

Food: Pure myrrh is useful for treating gastric atony, yellow water (ascites) and distention of the stomach.

Excretion: An enema with the water of common rue or absinth or lupin promotes the discharge of menstrual flow. It expels the foetus and worms including tapeworms because of its bitterness. It softens and opens up *os uteri*. Its oral intake in a dose of a *bāqla* grain is useful in cases of intestinal ulcers, abrasions and diarrhoea.

Fevers: A quantity equivalent to *bāqla* grain taken with pepper and water prevents the intermittent fever in its initial stage.

Poisons: It is used orally in cases of scorpion bite.

Substitutes: According to some physicians black pepper of its half quantity acts as a substitute for myrrh but this is doubtful.

13. *Mararah*

Gall-bladder

Vesica fellea

Choice: The gall bladder of quadrupeds is considered stronger. In order of potency, gall bladders are procured from cow, hyena, bear, he-goat, and sheep respectively. Among the birds *marārah*, from cock, partridge and francolin are preferred. The gall bladders obtained from birds are comparatively stronger than those from the quadrupeds; if this comparison is between ordinary birds and ordinary animals or hunting birds and hunting animals. The stronger and more irritable gall bladders belong to the hunting animals and birds, particularly the larger species. The choicest gall bladders are those which are yellow in colour while verdigris and lazuli coloured bladders are inferior. Similarly those which are red are also inferior. The gall-bladders of pig, carp and scorpion fish are weaker but the gall bladder of tortoise is stronger than those of quadrupeds. Dioscorides advised that the gall bladder should be bound on both sides when it is boiled in water for a period of time in which three meals are taken by a man. It should then be taken out and left to dry in a shadowy place. When it becomes moistureless, it should be preserved for future use.

Temperament: All types of gall bladders are hot and dry in the fourth degree.

Properties: All types of gall bladder produce warmth and detergence. Their potency varies according to the following factors: (a) Sex: male or female (b) State of thirst and hunger (c) Satisfaction (d) Alertness and activity.

Cosmetics: Gall bladder of wild ass is useful for removing the sty and when painted, it clears the marks left after the swellings subside.

Swellings: It forms an ingredient in the ointments used for treating erysipelas.

Ulcers: The gall bladder, when mixed with sodium nitrate, pine-resin and toledo earth, is useful in ulcerative scabies. The gall bladder of cow is incorporated in preventive ointments to be used on wounds except in cases of erysipelas and severe pain. The gall bladder of he-goat helps in removing abnormal growth of flesh. Ulcers require strong or weak gall bladders depending on their type. These ulcers differ according to their age and state of cleanliness or contamination.

Wolf's gall bladder is good for treating neural wounds. Its use during cold season prevents convulsions and tetanus which are more likely to occur in such weather.

Joints: Gall bladder of he-goat is applied for beneficial effect in elephantiasis and varix. Similarly the gall bladder of wild ass and wolf, particularly the latter, prevents convulsions and tetanus which follow nervine wounds specially in cold weather.

Head: Gall bladder of he-goat and ox is applied to fresh ulcers in the ear. Gall bladder of vulture, together with olive oil, is instilled into the ear in cases of the feeling of heaviness therein and also in deafness. Gall bladder obtained from a vulture is used in combination with the extract of nabatean leek in cases of *tinnitus aurium* and deafness. The gall bladder of an ox is mixed with sodium nitrate and camolian earth for washing the head to remove dandruff. It is said that the gall bladder of beer, when licked, is useful in epilepsy and gall bladder of tortoise is useful in malignant stomatitis developed in the mouth of children. Its inspiration benefits the patients of epilepsy. All kinds of gall bladders are useful for restoring the lost power of smell. It effectively clears obstructions from the ethmoid bone.

Eye: All types of gall bladder are useful in the darkness of the sight. The gall bladder of hunting birds, particularly in dried form, is useful in initial stages of cataract and pupillary dilatation. One must not use it except after depuration of the body and head. Gall bladders from quadrupeds and deer are beneficial in eye diseases. Amongst the birds the gall bladder of partridge and amongst the fish the gall bladder of *shabbūt* (a kind of large fish i.e. carp) are considered very beneficial for the eye. The gall bladder of goats, specially from hilly regions, are useful in cases of night-blindness.

Chest: Ovgall bladder is rubbed on the palate with honey in cases of diphtheria. Similar action is elicited by gall bladder obtained from a tortoise.

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Excretion: The gall bladder of an ox opens the mouth of piles. Every kind of gall bladder, including that of a pig, is laxative and purgative; specially so when it is massaged on umbilicus or used as a pessary. Ox gall bladder is painted with honey on anal ulcers. An epithem made from it is used in cases of uteralgia and pain in the testicles. It is also applied on scrotal swellings.

Poisons: The gall bladder of male goats from hilly areas and oxen act as antidotes in cases of bites.

14. *Murrān* Dog wood *Cornus muscula* Linn.

Nature: It is the fruit of a tree which is used orally only after it becomes intensely pungent.

Properties: It is astringent and desiccant.

Ulcers: Ash of its barks is applied to ulcerative scabies. It heals wounds with thick secretions because of its potent astringent action.

Poisons: The extract of dog wood, taken with wine or applied as a plaster, is useful in snake bite. Oral intake of the dust of its wood is said to be fatal.

15. *Murdāsānj* Litharge *Plumbi oxidum*

Nature: Litharge is a burnt form of lead. Sometimes it is made of other materials also. Measures used to improve its quality include: (a) boiling in vinegar or wine, (b) burning once or twice on live-coal and collecting the supernatant, (c) boiling with wheat or barley in water, removing the cereals till they burst open and boiling the rest again with fresh water till the material becomes pure and settles down at the bottom. The procedure is repeated several times followed by cleansing with salt. Sometimes other methods are also adopted for this purpose.

Temperament: According to Galen its temperament inclines towards desiccation but is weak in warming and cooling actions. Some other people, however, consider it to be inclining towards coldness. The litharge, which is treated with water, is, undoubtedly cold.

Properties: It is astringent and desiccant. It is a mildly detergent with astringent, agglutinant and rarefying properties. Both its astringent and detergent properties are, however, of very mild nature. It is used as a base for making ointments. It composes the drugs and reduces the intensity of their dissolution, corrosion and astringency.

Cosmetics: It gives fragrant odour to the body and armpits, prevents the abrasion of thighs and clears freckles, black marks and

hematoma. Treated litharge particularly removes the marks of small pox and stops (excessive) perspiration.

Ulcers: It granulates the ulcers breadthwise. According to Galen, however, it is neither purifying nor polluting, neither granulating nor reducing of flesh but generally serves as a base for making ointments. It is useful in the abrasion of the armpits and thighs.

Eye: The white and treated varieties of litharge are used in collyrium. It clears the eye.

Excretion: Its oral intake, causes dysuria. In our country women give it orally to the children in cases of diarrhoea and intestinal ulcers. They keep it in clay-pots used for storing water to reduce its harmful effects.

Poisons: Litharge is a fatal poison. It stops the urine and inflates the bowels as also areas pertaining to ureters. It whitens the tongue and also causes dyspnea.

16. *Marzanjōsh* Sweet marjoram *Origanum majorana* Linn.

Temperament: Sweet marjoram is hot and dry in the third degree.

Properties: It is attenuant, dissolvent and deobstruent. The potency of its oil is warming, attenuant and sharp.

Cosmetics: Cupping glass is filled with its water. Besides the organ concerned is painted with it after the cupping therapy. This prevents the whiteness which occurs at the time of scarifying after cupping. Painting of its dry powder, mixed with honey, is indicated to remove blackish-grey or green blood spots on the skin, specially under the eyes.

Swellings: It is painted on phlegmatic swellings.

Joints: It is incorporated in a *qairūfi* and painted on tortuosity of the nerves. It is useful in backache and pain in the groin. Similarly it is applied with honey in case of fatigue. Its oil is also anointed on the neck which is bent backward or sideways due to paralysis.

Head: It removes 'obstructions of the brain'. It cures, migraine, headache, cerebral oedema, atrabilery headache and 'thick gases' in the head. As a douche or ear-drops, it is useful in otalgia. When a piece of cotton dipped in its oil is placed in the ear, it helps in opening the passages.

Food: Its decoction is useful in initial stages of dropsy.

Excretion: Its decoction is useful in dysuria and gripes. Its oil warms, attenuates and proves to be useful for treating uterine adhesions, which lead to hysterical complications.

Poisons: It is plastered with vinegar in cases of scorpion bite.

17. *Marqashithā*⁷

Pyrites

Nature: Pyrite is a stone of several varieties: (a) golden pyrite (b) silver pyrite (c) copper pyrite and (d) iron pyrite. Each variety is similarly of the colour of the substance associated with its name. Persians call it ink stone, It is also called *Hajar al-nūr*, because of its usefulness for improving the eye-sight.

Temperament: It is hot in the second and dry in the third degree.

Properties: It has some astringent, warming, maturing, dissolvent and detergent properties. Its potency is strong. Its effects are not manifested unless it is well powdered.

Cosmetics: Its painting with vinegar proves to be useful in leukoderma, pityriasis and freckles. It dissolves oedema. It makes the hair thin and curly.

Swellings: When applied with pine-resin, it proves useful for dissolving hard swellings. It is incorporated in the ointments which dissolve hard swellings because of its maturing and dissolving properties.

Ulcers: If used with pine-resin, it promotes granulation of ulcers. In combination with yellow arsenic it removes excessive growth of flesh.

Joints: It dissolves the harmful matters e.g. pus from being congested in muscular tissues.

Head: It is said that when it is suspended around the neck of a child, he would not suffer from dreadful dreams.

Eye: Application both in burnt or unburnt forms strengthens and cleanses the eyes.

18. *Marmākhūr*

Egyptian origan

Origanum marru Linn.

Nature: *Marmākhūr* is a well known drug. Its flower is dust-coloured with a greenish tinge. It is an aromatic and fragrant drug.

Temperament: According to Damishqi Egyptian origan is warmer and stronger than sweet marjoram. It is hot in the third and dry in the second degree.

Properties: It is rarefying, dissolvent, carminative and deobstruent for the phlegmatic obstructions in any part of the body.

Head: Its administration with wine causes intoxication. Inhalation causes headache but its regular use as an inhalant or fomenting agent dissolves all kinds of gases and cures cold headache. In this respect it is similar to worm wood.

Food: It strengthens the stomach, removes the visceral obstructions and absorbs excessive gastric fluids.

Excretion: Egyptian origan strengthens the intestines.

19. *Marmārād*

A kind of Egyptian origan

Nature: The wood of *marmārād* is white and downy. It is similar to germander but rather wholly downy in structure. Its odour is similar to that of myrtle but is relatively sharp and fragrant.

20. *Marw*

Nature: Indians describe its different varieties. One of its fragrant varieties is called Egyptian origan. It is very hot and dry. Second variety called *samōsā* is less odorous. It is hot and soft. Third variety called *Marw al-abyaḡ* is moderate and has an exhilarant property. I think that the variety, which has exhilarant property is borage. Another variety called *Marmāhūs* is hot, dry and rarefying. Next variety, called *meshbahār* is described to be cold.

Temperament: It is hot and dry in the second degree. Its different varieties, however, differ in temperaments.

Properties: All of its varieties are attributed with carminative, rarefying, anti-flatulent, anti-phlegmatic and deobstruent properties. It removes emboli of any part of the body.

Head : Its instillation with milk relieves the ear-ache. *Meshbahār* is useful in hot headache while all other varieties of this drug are useful in cold head-ache. Its fragrant variety, however, induces head-ache specially when it is inhaled after taking wine.

Food: It dissolves phlegm from the stomach. It is useful and strengthening for the stomach.

Excretion: It strengthens the intestines. Its roasted seeds are useful for treating abrasions and dysentery. In unroasted state, it purges out the phlegm.

21. *Murri*

Garum (a kind of fish sauce)

Temperament: Garum is hot and dry in the third degree. According to Ibn-i-Māswaih the garum prepared from fish is less hot and dry than that from barley but I do not agree with this view.

Properties: It softens and purges thick humours. It is also absorbent. It is astringent and also cleanses the phlegm.

Cosmetics: It imparts a pleasant odour to the body.

Ulcers: It is good in putrid ulcers. Garum, prepared from fish and salted flesh, prevents creeping ulcers.

Joints: It is useful in coxalgia and sciatica.

Eye: Its application in the form of a collyrium in initial stages of small pox prevents lesions in the eye.

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Food: It is useful in cases of excessive fluids in the stomach and removes them from the viscera.

Excretion: It is incorporated in the enema for colic particularly for treating intestinal abrasions and ulcers.

Poisons: It is useful in cases of bite by rabid dogs.

22. *Mizmār al-rā'i* Water plantain *Alisma plantago*

Properties: Water plantain has deterging power.

Swellings: It dissolves hot swellings.

Food: It is also useful in painful conditions of soft and heavy parts of viscera.

Excretion: It is useful in kidney stones. Its decoction breaks the calculi. The roots are useful for treating intestinal ulcers.

23. *Misk* Musk (From deer) *Moschus moschiperus*

Nature: Musk is obtained from the umbilical region of animals e.g. a kind of deer having two canine teeth. The latter are white, crooked internally and resemble the horns.

Choice: The best kind of musk, in respect of the source, (of the animal) is obtained from Tibet. But some other physicians consider the Chinese, Jurjairi and a variety found near the Indian sea to be of good quality. In respect of fodder, the best variety is obtained from animals which graze upon a red and white behman, nard and myrrh. The variety which is apple-like, yellow in colour is considered to be the best.

Temperament: It is hot and dry in the second degree. According to some physicians it inclines towards dryness.

Properties : Musk is a rarefying and tonic drug.

Cosmetics: Its addition in any decoction gives out a pleasant odour.

Head: Sniffing of musk as such or in combination with saffron and a little camphor is useful for treating cold headache owing to its dissolving properties. It is a tonic for a person of average intelligence.

Eye: It strengthens the eye, absorbs excessive secretions and clears the development of a white membranous film in the eyes.

Respiration: It strengthens the heart, acts as an exhilarant and proves to be useful in palpitation and restlessness.

Poisons: Musk is an antidote for poisons specially for aconite.

24. *Mushkṭarāmashī*² Dittany *Dictamnus albus* Linn.

Nature: The branches of dittany resemble sweet basil. The dry drug appears to have no appreciable taste or smell initially

but a little later it produces some bitterness and sharpness. If sheep grazes on this plant, its milk may get transformed into blood. It is a substitute for mint but is comparatively stronger. Dittany is of two kinds: (a) true dittany and (b) the crete variety which is similar in appearance but much weaker in action.

Temperament: It is hot and dry upto the third degree.

Chest: Dittany expels the viscous fluids from the chest and lungs.

Food: Its oral use gives relief in pain and syncope.

Excretion: It promotes discharge of menses and urine and may sometimes cause hematuria. Its oral intake or fumigation or use in the form of a suppository causes abortion. Its oral use helps in clearing post-parturition blood.

25. *Mishmish*

Apricot

Prunus armeniaca Linn.

Choice: The best variety of apricot is the Armenian variety which does not readily decay or become sour. Intake of apricots is recommended in combination with equal quantities of mastic and anise or alternatively with 3.5 to 7.0 gm of wine or *nabīdh* or a little honey.

Temperament: It is cold and moist in the second degree. The oil of its kernels is hot and dry in the second degree.

Properties: The type of humour produced by it is quickly putrefied.

Food: Its infusion quenches thirst. It is comparatively more suitable than peach for stomach ailments. Armenian variety is neither spoilt in the stomach nor becomes instantly sour. The use of anise and mastic with quince syrup or *nabīdh* of raisin removes its harmful effects. Cold-tempered persons should take it with pure honey.

Excretion: The oil of its kernels is useful in piles.

Fevers: It may induce fevers because of its tendency towards rapid putrefaction. The infusion of dried apricots is, however, useful in acute fevers.

26. *Maṣṭakī*

Mastic

Pistacia lentiscus Linn.

Nature: Mastic is of two varieties: (a) Roman white mastic and (b) a slightly black variety called *qibṣī*. Its plant contains some moisture but is rich in earthy substances. It is more rarefying and useful than olibanum.

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Choice: The variety which is white, clean and pure is considered best. It is treated and corrected by dissolving in vinegar and leaving in solution for several days till it dries up.

Temperament: It is hot and dry in the second degree. It is comparatively less warming and desiccant than olibanum. The plant has neither cooling nor highly warming properties. Mastic is more warming than the plant as such.

Properties: Mastic is astringent and dissolvent. The plant and all of its component parts are astringent. It is composed of tepid, watery and earthy substance. Its root and root-bark are similar to acacia and hypocist juice in actions and serve as its substitutes. Its extract and leaves have similar property. The oil, extracted from its fruits, is highly astringent. According to Galen all of its parts and oil are laxative with some astringency. The *qibṭi* variety is blackish in colour and is relatively less astringent and more desiccant. Hence it is more suitable for conditions demanding much dissolution. All the drugs, which are astringent, laxative and desiccant, are effective and harmless. Mastic is very rarefying. It dissolves the phlegm due to its rarefying, laxative and warming properties. In spite of these effects, its pungency and density is less than in all other gums.

Cosmetics: Mastic is incorporated in tooth powders and liniments for beautifying the skin and teeth.

Swellings: Due to its astringent and demulcent actions, it is useful in visceral inflammations. The black *qibṭi* variety is more suitable for internal sclerosis and herpetic swellings.

Ulcers: Mastic extract and decoction of its leaves prevent creeping ulcers. The oil of its plant is useful in scabies. It is effective even for treating this disease in animals and dogs. Pouring of a decoction of its leaves or extract on the ulcers promotes granulation. Similarly it helps in setting the broken bones.

Head: Chewing of mastic absorbs and clears phlegm from head and similarly its mouth-wash strengthens the gums.

Eye: Overturned eye-lashes are restored to their normal position by its use.

Chest: It is beneficial in cough and haemoptysis particularly when used in the form of a decoction of its roots and bark.

Food: Mastic strengthens the stomach and liver, restores appetite, produces 'fragrance' in the stomach; stirs eructation and dissolves phlegm. It gives instant relief in gastric and hepatic inflammations.

Excretion: Mastic strengthens the kidneys and intestines and proves useful in cases of swellings in these organs. A decoction prepared from its roots and bark proves useful for treating diarrhoea,

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Choice: The magnet which is unadulterated and black in colour with a tinge of red, is considered best.

Properties: It is detergent and purifying.

Excretion: It is administered to the patients who have (accidentally) ingested iron dust. The magnet absorbs the iron rust settled in the abdomen and both are eliminated together. It is said that when 2.25 gm of magnet is taken orally with water-mead, it purges out thick and harmful chyme.

31. *Maghntsia* Oxide of iron *Magnesia*

Nature: *Maghntsia* is identical to pyrites in every respect. It is rather better in quality.

32. *Muqul al-yahūd wa al-muqul al-makkī* Jewish and Meccan
bedellium *Balsamoden*
dron mukul, Hook

Nature: Jewish bedellium is of two kinds (a) Slavonian and (b) Arabian which differs from Roman variety. Both of these varieties (of gum) are procured from *daum* plant. But Meccan variety is the fruit of doom palm (*daum* plant).

Choice: Among these two gums, the variety which is blue, pure, bitter in taste, free from wood, easy to dissolve and fragrant, is considered best. Its smoke gives out a smell similar to that of bay tree. On becoming stale, the potency of Jewish bedellium changes from laxative to desiccant effects.

Temperament: Meccan variety is cold and dry while Slavonian variety is hot in the last phase of the first degree. It is also softening. Slavonian and Arabian varieties of bedellium become dry with the passage of time.

Properties: It is dissolvent; even the congealed blood is also dissolved by its use. It is laxative, coctive and carminative. Slavonian variety is very laxative. Arabian variety, except when in fresh state, is very desiccant.

Swellings: It dissolves the hard swellings, particularly when used after kneading it with the saliva of a fasting man. Similarly it dissolves all types of cold swellings. A variety from Mecca which is not the fruit of a doom palm, is termed as Jewish bedellium. It removes the scrofula. Its decoction is taken orally in cases of hard internal swellings.

Ulcers: It is painted with vinegar on favus.

Joints: It is useful in dislocation of muscles, convulsions, stiffness and twisting of the nerves.

Chest: It is useful in painful swellings of the trachea (wind pipe). It is also useful in chronic cough and pleuradynia. Arabian variety gives relief in inflammatory conditions of larynx and throat.

Excretion: Its oral intake, pessary or fumigation is useful for treating piles. It stops bleeding and proves to be useful in cases of renal stones. When incorporated in purgatives, it stops (gastric) abrasions. It promotes the discharge of urine and menses. Meccan variety is thought to be similar in actions. It definitely causes constipation and dissolves the stones. A dose of 9 gm of Arabian bedellium in pure form is powdered and taken orally with honey water to reduce the phlegm. Both the varieties of bedellium (Slavonian and Arabian) subside hydrocele, open *Os uteri*, facilitate downward passage of the foetus, cleanse the uterus and dissolve anal and testicular swellings.

Poisons: It is useful in cases of insect bite.

33. *Milh**Salt**Sodium chloride*

Nature: Salt is a well known substance. It has bitter and astringent properties. Its bitterness resembles to that of borax. It is of several kinds: (a) brittle salt (b) the salt obtained from mines (c) *Darānī* salt resembling a crystal, (d) *Nifī* salt which is black in colour due to its naphtha content. When it is fumigated, naphtha, is evaporated and the remaining part looks like *darānī* salt, (e) Indian salt is black. Its black colour is natural and not due to any naphtha content. (f) Marine salt gets readily dissolved when water is poured over it but (g) Land salt is not soluble in water.

Temperament: Salt is hot and dry in the second degree. The varieties which are more bitter are hotter in temperament.

Properties: It is detergent, depurant, dissolvent, astringent and desiccant due to its potency of dissolution. It is more effective as an astringent agent. It is also a carminative. Salt in burnt form is very desiccant and dissolvent. It is antiputrefactive and useful in ailments associated with thick humours. The ash of salt is more rarefying than the salt as such. The ash and the dust of salt are similar to each other. These are more dissolvent and less astringent than the salt as such. The salt, obtained from mines, is less dissolvent and rarefying except when it has a mild taste resembling the variety procured from al-Kashi. Hence it is astringent and dissolvent. The salt, obtained from mines, if treated with water repeatedly, causes desiccation without any irritation. The brittle salt is most detergent and its addition transforms the nature of cold meals. *Darānī* salt expels the gases. The variety which is more bitter is dissolvent. All varieties of salt dissolve the coagulated humours. The bitter variety is very dissolvent and warming.

parts of the organs. It is applied with wild mint, butter and yeast in cases of phlegmatic testicular swellings. Similarly when applied with mint and honey, it proves to be useful in penile ulcers.

Poisons: Salt is plastered with linseed in cases of scorpion bite. It is applied with wild mint, hyssop and honey in horned snake bite. It is used with vinegar and honey in cases of bites by quadrupeds and wasp. It acts as an antidote against the ill effects of opium and virulent fungi. For this purpose it is used with oxymel.

34. *Mulūkh* Garden orach *Atriplex hortensis* Linn.

Nature: *Mulūkh* is a well known Syrian drug. It is a kind of wood having some black coloured knots.

Joints: A dose of 3.5 gm of this drug given with water mead is useful in muscular splitting.

35. *Mulūkhīā* Country mallow *Malva rotundifolia* Linn.

Nature: *Mulūkhīā* is nothing but the country mallow which has already been discussed under the name of *Khabbāzi*.

Temperament: It is cold in the first and moist in the second degree.

Food: It removes the hepatic obstructions.

36. *Malīḥ* A saltish drug

Nature: *Malīḥ* resembles the desert-thorn. Its leaves are similar to that of olive but are comparatively wider in shape. It is edible like the beans.

Properties: It is an astringent, saltish in taste and possesses some immature moisture which causes flatulence.

Chest: When used with water-mead in a dose of 3.5 gm, it increases milk secretion.

Excretion: A dose of 3.5 gm taken with water-mead relieves gripes.

37. *Man* Manna *Fraxinus ornus* Linn.

Nature: Manna is a kind of dew found fallen on stones or trees. It gets congealed like honey and becomes sweet and dry like the gum *turanjbin* (*Hedysarus alhaji*, Linn.), *shīr khisht* (*Fraxinus-ornus*) and a variety of honey obtained from the mountain of Qaşrān in Ray. We have mentioned each of these drugs under their respective titles. Manna acquires the potency of the substance with which it is mixed. This potency is enhanced by its sweetness and softness.

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38. *Mū* Dog-wood *Cornus muscula* Linn.

Nature: *Mū* consists of wood pieces of different shapes having a colour similar to white agaric. Its powder is somewhat astringent and bitter. It possesses fragrance and causes irritation to the tongue. In fact it is the root of a plant of which only the root is generally used. It grows abundantly in Meccdonia.

Choice: The variety which is pure, white and clean is considered good. It is improved by preserving it in vinegar for a number of days and drying thereafter.

Temperament: It is hot and dry in the third degree. It contains immature and flatulent foreign humour.

Properties: It is rarefying, detergent and deobstruent like nard but it is warmer and more astringent than the latter.

Joints: If taken orally or applied as a paint, it is useful in arthralgia.

Head: Its excessive use causes headache because it is rich in evaporating and coagulant humours.

Food: It is useful for treating cold and gaseous inflation of the liver.

Excretion: It is useful in dysuria both when taken orally or used as a plaster. Similarly it is useful in cystalgia and retention of superfluous matters. It is an emmenagogue and proves useful in uteralgia. Even a sitz-bath in its water brings about similar effects. It is also useful in gripes, borborygmus and flatulence.

39 *Mūrdās̄faram* Wild myrtle *Myrtus communis* Linn.

Nature: The flowers and stalks of wild myrtle are smooth, thin and dusty yellow in colour. According to some physicians its potency is similar to that of white acanthus. There is a variety of this drug which is very white while its yet another kind inclines towards yellow colour. According to Ibn-Mās̄waih the latter is a wild variety of myrtle but some other believe it to be *uqār Rūmī*. Ibn-Mās̄arjawaih considers it to be the same drug as white acanthus. Khūzī says that it is highly astringent and its potency resembles that of an inferior variety of absinth.

Temperament: It is hot and dry in the second degree.

Head: It is useful in epilepsy and congestion of fluids in the brain.

Food: It strengthens the stomach and liver and also is useful for treating visceral injuries caused by fall.

Excretion: It is used as a suppository to remove the anal worms.

40 *Mauz* *Banana* *Musa paradisiaca* Linn.

Nature: Banana is a well known fruit. It has broad and long leaves similar to those of fennel. It grows only in tropical hot countries.

Properties: It is moderately nutritious and softens the bowels. Its excessive use produces obstructions and increases yellow bile and phlegm according to temperament of the user.

Chest: Banana is useful in cases of a feeling of burning in throat and chest.

Food: It is heavy for the stomach. Its excessive use puts strains to the stomach. The hot-tempered persons should take oxymel prepared from seeds while the cold-tempered persons should take honey after its use.

Excretion: It increases the semen, is suitable for use in renal ailments and causes diuresis.

41. *Mūm* *Bees' wax* *Cera alba*

Nature: Pure wax is obtained from honey comb where the bees lay and hatch eggs, and store honey. The black wax contains waste products of hives.

Temperament: Wax is moderate in temperament.

Properties: It is softening but spoils and moistens the wounds indirectly by sticking there and blocking the pores. It forms a base for cooling and warming ointments. It is undoubtedly a mild coctive drug. Its dissolvent power, though of a very mild nature, is more than of honey. The black wax, which is the waste product of hives, absorbs (the matter) from the remote parts of the body. It helps in extracting arrowtips and thorns. It is mildly rarefying and depurative but is highly softening.

Swellings: It softens the hard swellings.

Ulcers: It softens the crust of the wounds but pollutes the ulcers. Black wax helps in extracting arrowtips and thorns.

Joints: It 'softens' (relaxes) the nerves.

Head: Due to its sharp smell, the black wax causes sneezing.

Chest: Application of its paint or oral licking of the wax is useful in conditions associated with roughness of the chest. It is particularly effective when used after diluting with violet oil. It prevents coagulation of milk in the breast of wet nurse. As far as I know Dioscorides advocated oral use of wax in the form of pills of the size of common millet in a dose of ten pills a day.

Excretion: Ten pills of wax are taken with the soup of common millet or rice in cases of intestinal ulcers.

Poisons: It is said that wax absorbs the poisons. Its application as a paint to wounds removes the harmful effects caused by poisonous spear-heads.

42. *Mūmiāi* Mineral pitch *Asphaltum*

Nature: Mineral pitch resembles a combination of the ordinary pitch (*Pix nigra*) and pitch jews (*qafir*) in potency and temperament. However mineral pitch is more useful than the mixed one.

Temperament: Mineral pitch is hot in the second degree.

Properties: It is attenuant and dissolvent.

Swellings: It is useful in phlegmatic swellings.

Joints: It is good in painful conditions associated with dislocation, fracture, injury and fall. It is also useful in paralysis and facial paralysis both when taken orally or applied as a liniment.

Head: Mineral pitch is useful in migraine, cold headache, epilepey, giddiness and vertigo. In these cases a dose of 125 mg is snuffed with the water of sweet marjorum. It is instilled with jasmine (oil) in ear-ache. A suppository prepared from 62 mg of mineral pitch, rose oil and unripe grapes juice is useful in cases of pus in the ear. Oral intake of mineral pitch in a dose of 250 mg with the decoction of Persian origanum is advised in heaviness of the tongue. Cases of helmet headache and chronic headache are treated with a dose of 125 mg taken as a snuff along with 125 mg of castoreum and oil of Persian lilac.

Chest: A dose of 186 mg of mineral pitch taken with *nabidh-jamhūri* (a kind of wine) prevents pulmonary haemotysis. It is a time tested drug for diphtheria. For this purpose it is taken orally in a dose of 250 mg with oxymel. The same quantity taken with the rob of mulberry or the decoction of lentil is useful in throat pain. For treating cough, 60 mg of it is taken with the water of jujub berry, barley water and sibestan for three consecutive days on an empty stomach. Similarly 250 mg of it is taken with cumin, ajowan and caraway in cases of palpitation.

Food: Its oral intake in a dose of 250 mg with the water of cumin, caraway and ajowan strengthens the weak stomach. Similarly cases of phlegmatic nausea and injuries in chest, stomach and liver caused by fall are treated with its oral use in a dose of 250 mg with 12 gms of Armenian clay, 6 gm of saffron in the water of garden nightshade and purging casia. A dose of 125 ml taken with the seeds of celery is useful in hiccough while 250 mg of it is taken with the sugar water in splenic pain.

Excretion: It is good for ulcers of the meatus and bladder. In such cases it is taken orally with milk in a dose of 250 mg. Application of a suppository prepared from a small quantity of mineral pitch together with flour helps in bearing pain caused by the retention of urine

Poisons: It is taken in a dose of 250 mg with the decoction of caltrops and asafoetida in cases of poisoning. A quantity of 250 mg with pure wine or cow's butter is applied on the affected part in cases of scorpion bite.

43. *Maibukhtaj* A kind of wine extracted from the grapes decocted with water.

Nature: *Maibukhtaj* is an extract of decocted grapes.

Chest: It is helpful in expectoration. For this purpose it is mixed with *dayāqūdhā* i.e. wine of poppy seeds.

44. *Mīsam* Nettle tree *Celtis australis* Linn.

Nature: The grain of nettle tree resembles to that of terebinth. It is triangular in shape and yellowish in colour. It is a fragrant drug and is used as an incense. *Mīsam* is a fruit of a tree. It is of several varieties: (a) garden nettle having a trifoliate structure (b) wild nettle and (c) Egyptian nettle which is used to make bread. Apparently it is the same substance which is called leek.

Temperament: Garden nettle is moderate while the wild variety is hot and dry in the second degree.

Properties: Garden nettle, which has a trifoliate structure, is mildly desiccant but the wild variety is more potent.

45. *Mawīzaj* Mountain raisin *Delphinium staphysagria*

Nature: *Mawīzaj* is a kind of mountain raisin. It is a black and wrinkled grain similar to black gram.

Temperament: It is hot and dry in the third degree.

Properties: It is burning, corrosive, sharp and pungent.

Cosmetics: It kills lice specially when used with yellow arsenic. It is painted locally in cases of chronic alopecia.

Ulcers: It is applied on scabies and ichthyosis either as such or in combination with yellow arsenic.

Head: It is chewed to absorb phlegm and 'moisture' (oedema) from the brain. Its decoction with vinegar is used as mouth wash in cases of odontalgia and excessive mucoid secretion from the gum. When used with honey, it cures acute stomatitis.

Food: It is good for 'cold' stomach and liver and is as effective as *nard*.

Substitutes: The substitutes of iron wood tree are: dried ginger of its one fourth quantity, half quantity of pistachio, nut, and one sixth quantity of *nard*.

3. *Nānkhāh*

Ajowān

Carum copticum

Nature: Ajowān contains some bitterness and acidity.

Choice: The most useful part of it is its seed.

Temperament: It is hot and dry in the third degree.

Properties: It removes obstructions and is laxative with some desiccant property.

Cosmetics: Its oral intake or local use as a paint results in yellowish complexion. It is incorporated in the medicine prepared for pityriasis and leukoderma and plastered with honey in cases of all types of echymosis.

Chest: It is useful in removing the pus from the chest as well as in cases of 'inversion' of the heart.

Food: It is useful for removing excess fluids from the stomach and alleviate nausea and vomiting. It is also good for 'cold' liver and stomach.

Excretion: It is a diuretic, removes dysuria and dissolves the calculi if taken with wine. As a whole, it depurates the kidneys and bladder. It is beneficial in gas troubles and gripes. Fumigation with this drug and pine resin cleanses the uterus.

Fevers: Ajowān is useful in chronic fevers.

Poisons: Bathing the affected part with its decoction alleviates the pain caused by scorpion's bite. It is taken orally in cases of insect bite.

4. *Nabaq*

Christ thorn

Zizyphus spina christa

Nature: *Nabaq* is a large thorny tree. Its fruit is red in colour and is similar to hazel nut. It is edible and has delicious taste. Mostly it is available in tropical countries and nearby places. It is known by different names in different languages. Some people call it *Kunār*.

Temperament: *Nabaq* is moist and dry. It is desiccant and rarefying. These qualities are common to all parts of the tree.

Properties: *Nabaq* itself and particularly its flour is astringent. The smoke of christ thorn is highly astringent.

Cosmetics: It prevents the fall of hair. It lengthens, strengthens and softens them. Christ thorn bears a gum. It removes needle-like skin lesions and dandruff and also reddens the hair.

Swellings: The leaves of christ thorn soften and dissolve the swellings.

Head: Washing with the gum of christ thorn removes dandruff. It cleanses the head and makes the hair curly.

Respiration: Its leaves are used in asthma and other diseases of the lungs.

Food: It is a tonic for the stomach.

Excretion: It has a tendency to cause constipation. Christ thorn itself and particularly its flour is useful in haemorrhage, amenorrhoea and intestinal ulcers. It is also useful in diarrhoea caused by gastric weakness. Christ thorn is decocted and used as an enema as well as taken orally in these diseases. It is particularly effective in leucorrhoea. The properties of fresh christ thorn are similar to those of other varieties like quince, azerole, apple and pear but its moderate intake causes constipation. When taken in excess quantity it is not digested or accepted by the system producing a cholera like syndrome.

5. *Najm* Dog tooth grass *Cymodon dactylon* Linn.

Ulcers: *Najm* promotes 'stickiness' in bleeding wounds.

Excretion: Its decoction prevents the formation of calculi while the seeds are diuretic and constipative.

6. *Nuhās* Copper *Cuprum*

Nature: Copper is of several kinds: (a) reddish-yellow copper called *qabrūst* (cyprite) is considered superior (b) pure red copper and (c) reddish-black copper. Another kind of copper is called *ṭāltqūn*. Burnt copper is acrid and astringent. Washed copper is a good drug for cicatrization in soft bodies. Unwashed copper acts similarly in hard bodies.

Choice: The oxide of copper is more attenuant than copper as such.

Temperament: It is hot and dry in the third degree.

Properties: Burnt copper is hot, astringent and healing. There is a false belief that plucking of hair with a tweezer made of *ṭāltqūn*, a variety of copper, prevents the regrowth of hair.

Cosmetics: It blackens the hair.

Ulcers: It heals the malignant and creeping type of ulcers and also prevents their further expansion. It corrodes the excessive flesh. Washed copper heals the wounds. Painting copper with honey is said to improve the condition of hard and burning ulcers in hard parts of the body.

Eye: It strengthens the eye-sight and proves useful in the hardness of the eye-lids.

Excretion: Its oral intake with honey wine purges out yellow water (dropsical water). When rubbed on the palate, it causes vomiting. Its dose is 7.75 gm. It expels excessive fluids without any ill effects.

Poisons: Keeping salty, bitter, sour, sweet and fatty substances e.g. meat and oils in copper containers should be avoided. Similarly drinking water from copper utensils should also be avoided because these utensils invariably liberate basic copper acetate which is known to be a poison.

7. *Nuhām*

Flamingo

Phoenocopterus roseus

Nature: Some physicians have praised its meat very much.

Temperament: According to some physicians its meat is hot and fatty. It is delicious and strengthening for the body. When digested, it proves to be beneficial. It is, however, indigestible, thick and unhealthy.

Excretion: It increases the sexual desire.

8. *Nukhālah*

Wheat bran

Temperament: Wheat bran is hot and dry in the first degree.

Properties: It is detergent, softening and very depurant. These properties, however, do not reach the level present in peas. It dissolves the gases and phlegm.

Swellings: Wheat bran is applied with strong vinegar to acute swelling in initial stages. It is soaked with wine and plastered on hot swelling of the breast. Besides it dissolves the swellings caused by phelgm and gases.

Ulcers: It is also applied with strong vinegar in the form of a hot plaster in cases of ulcerated scabies.

Chest: It softens the chest due to its deterging properties; particularly when used as a soup with sugar and almond oil. When applied after soaking it in the wine, it proves useful for treating swellings of the breast.

Excretion: It promotes the intestinal movement facilitating expulsion of the bowel contents. Sipping of its soup relaxes the bowels.

Poisons: When applied as a plaster, it proves useful in cases of scorpion and snake bites,

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9. *Nakhl* Date or palm tree *Phoenix dactylifera* Linn.

Nature: *Nakhl* is the well known tree of date. All of its parts are astringent. We have already discussed it.

10. *Narthis* A herb like colocynth _____

Nature: *Narthis* is a very sharp drug containing green pulp which is highly astringent. Its use with olive oil causes perspiration.

Head: Its powder is instilled into the nostrils to stop heamorrhinia.

Chest: Its pulp is moist in nature and removes the blood congested in the chest.

Excretion: Its pulp cures chronic diarrhoea.

Poisons: When painted with wine, it proves useful in snake bite.

11. *Narjis* Narcissus *Narcissus tazetta* Linn.

Nature: Narcissus is a well known drug.

Properties: The root of narcissus is dug out of the depths of earth. It is detergent, cleansing and desiccant. Its oil resembles that of jasmine but is comparatively weaker in action.

Cosmetics: The root helps in removing thorns and spines out of the body specially when used with the flour of tars darnel and honey. The drug, particularly the root, is used with vinegar to remove freckles and pityriasis. The root is also useful in alopecia.

Swellings: Application of the powdered root, kneaded with honey and peas, opens the cold abscesses which resist maturation. Its plaster is also useful for treating swollen nerves.

Ulcers: It dries up the wounds and makes them so adhesive that even the broken tendon is joined. It is also applied in powdered form with honey to burns, nervine wounds and deep ulcers. When applied along with peas, it removes the dirt from ulcers.

Joints: Its oil is useful for the nerves. The roots are plastered on nervine swellings, knots and arthralgia.

Head: It removes cerebral obstructions, proves useful for treating moist and melancholic headache. Its oil possesses similar properties but is relatively more effective. In 'hot headed' persons, however, the drug induces headache.

Chest: Application of the oil on the chest dissolves hard and cold swellings.

Food: The roots, when taken as such, aggravate vomiting. Its decoction too has the same property.

Excretion: Narcissus is useful in uteralgia and cystalgia. When taken orally in a dose of 14 gm with honey water, it causes expulsion of live or dead foetus. Its oil removes uterine adhesions and proves useful in painful conditions of this organ.

12. *Narsiān dārū* Knot weed *Polygonum aviculare*, Linn.

Nature: I think the Arabs pronounce this word wrongly; the correct pronunciation is *barshiān dārū* beginning with the alphabet *bā* and not with *nūn*. It is the same drug which is called knot weed.

13. *Nasrīn* Dog rose *Rosa canina*

Nature: Dog rose is similar to jasmine in potency but is comparatively weaker in action. It also resembles narcissus. Its oil is close to the oil of jasmine in potency but somewhat weaker than the latter.

Temperament: It is hot and dry in the third degree.

Properties: All kinds of dog rose, specially their flowers, are depurant and attenuant.

Joints: It is useful in nervous break down.

Head: It kills the ear-worms. It proves useful in tinnitus, throbbing of the ear and odontalgia. Application of wild dog rose on the forehead relieves the headache. All kinds of dog rose remove the nasal obstructions.

Chest: It is useful in pharyngitis and tonsillitis.

Food: When taken in a dose of 14 gm, it stops vomiting and hiccough. The wild variety is particularly effective in such a case.

14. *Nashā* Starch _____

Temperament: Starch is cold and dry in the first degree.

Properties: It has strengthening and laxative properties. One part of the drug should be decocted with three parts of water.

Cosmetics: When applied with saffron, it removes the freckles.

Ulcers: It checks the infiltration of infectious matters towards eye.

Chest: It softens roughness of the chest. Its flour prevents catarrhal congestion of the chest.

Excretion: Oral use of starch alone or in combination with lentil, causes constipation and stops bilious diarrhoea.

Substitute: The substitute of starch is the dust of grinding stone.

15. *Nushārah* Filings _____

Temperament: The temperament of filings depends on the tree to which they belong.

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Properties: The filings of decaying tree are depurant, dissolvent and desiccant particularly when present within the (cavities of) tree trunk.

Wounds: The filings of decaying tree heal the wounds; specially when they are obtained from trees with astringent properties like some species of thorns. Such filings are acquired and burnt with equal quantity of anise in wine. Sprinkling of the powder so obtained proves useful in herpetic wounds. Similarly it depurates and clears (excessive) flesh from the ulcers.

16. *Naṭrūn* Sodium nitrate *Natron*

Nature: Sodium nitrate is the same drug as Armenian borax which has already been discussed under the letter 'Bā'.

17. *Na^cnā^c* Mint *Mentha arvensis* Linn.

Temperament: Mint is hot and dry in the second degree with some superfluous moistness.

Properties: Its potency is warming and astringent. Among the edible vegetables, its substance is most rarefying. Addition of a few bunches of mint, prevents curdling of milk. Oral intake of its extract with vinegar stops the internal bleeding.

Swellings: It is plastered with roasted flour on abscesses. It differs from pennyroyal (*Mentha pulegium* Linn.) because the latter has no acidity. On the other hand, it is dissolvent, desiccant and highly warming making its application rather painful.

Head: It is plastered on the forehead, specially with the roasted barley flour, in cases of headache. Local application of mint removes roughness of the tongue. Its extract, together with water mead, is instilled into the aching ear.

Chest: Mint stops hematemeses and bleeding. Its plaster prevents the coagulation of blood in the breast and relieves mastitis.

Food: It strengthens and warms the stomach, relieves hiccough and promotes digestion. It stops vomiting of blood and phlegm and proves useful in cases of jaundice. Mint water is particularly effective in this respect.

Excretion: It is helpful in increasing the sexual desire. This is attributed to the flatulent and moist properties of its garden variety which are not found in pennyroyal. It strengthens the seminal tract, but kills the sperms. Its pre-coital use as a suppository prevents pregnancy. When a few bunches of mint, together with pomegranate seeds, are taken orally, the patient feels relief in cholera and vomiting.

Poisons: The drug, specially its seeds, are useful in cases of bite by a rabid dog.

18. *Nift*

A kind of bitumen

Naphtha

Nature: The white variety of bitumen is a well known substance. Properties of the black variety are similar to that of Babilonian liquid pitch.

Temperament: It is hot and dry upto fourth degree.

Properties: The bitumen, particularly its white variety, is attenuant, dissolvent, melting and deobstruent.

Joints: The drug, specially its white variety, is useful in coxalgia and arthralgia.

Head: Blue bitumen is useful in cold otitis.

Eye: Both white and black varieties are useful for the opacity of the cornea and cataract.

Chest: It is also useful in asthma and chronic cough. For treating such cases it is taken in a small dose with hot water.

Excretion: It removes gases and alleviates gripes. The drug, particularly its black variety, is used as a suppository to kill worms. All of its varieties are diuretic and emmenagogue. It removes cystic gases and relieves 'coldness' (atony) of the uterus.

Poisons: Its paint proves useful in insect bites.

19. *Nammām al-malik*

Sweet basil

Ocimum basilicam Linn.

Nature: Sweet basil is synonymous for common thyme.

Temperament: It is hot and dry in the third degree. It counteracts putrefactions and is very pungent in taste.

Cosmetics: It kills the lice.

Swellings: It is useful in cold swellings and severe type of hard phlegmon.

Head: When decocted in vinegar and applied with rose oil to the head, it proves useful in amnesia, mental confusion, lithargia, phrenitis and headache. Similarly plastering the head and forehead with the leaves of its wild variety is useful in headache.

Food: Its intake with wine is useful in hiccough. Its seeds are stronger and more useful in cold swellings of the liver.

Excretions: It is useful in treating worms and ringworm. Sweet basil and its rocky variety help in expelling the dead foetus, menstrual discharge and diuresis. Its wild variety when taken with any kind of wine, prevents strangury, removes calculi and proves useful in gripes.

Poisons: It is useful in bites in general and as a plaster in cases

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of the wasp bite. The dose used in cases of bites is 7 gm which is to be taken orally with oxymel.

20. *Namir* Leopard *Panthera pardus*

Nature: Leopard is a well known animal.

Joints: According to Khūzī its fat is very useful in paralysis.

Poisons: Its bile results in instant death.

21. *Naurah* Quick lime *Calx*

Nature: By quick lime we mean the material which is acquired by burning some earthen body or stone.

Temperament: The lime, which is not treated by water, is hot and caustic but the treated one is hot and dry. If it is slaked and left for two or three days, the intensity of its caustic effect is reduced. Now it acts only as a warming drug. Lime treated with water is moderately dry

Properties: It stops bleeding Water treated lime is desiccant without being irritant When boiled in oils, it acquires maturative properties.

Ulcers: It corrodes excessive flesh The treated lime is healing and proves very useful in burns.

22. *Naushādar* Sal-ammoniac *Ammonium chloride*

Choice: *Paikānī* variety of *naushādar*, is good, pure and neat like the glass.

Temperament: It is hot and dry in the last phase of the third degree.

Properties: It is an attenuant and dissolvent drug.

Eye: It is useful in cases of corneal opacity.

Chest: It restores the level of lowered uvula and proves useful in diphtheria.

23. *Nawa al-tamr* Kernel of ripened dates *Endocarp*

Properties: Date-kernel is astringent and agglutinant.

Ulcers: Burnt kernel is useful in malignant ulcers.

Eye: It is incorporated in collyrium as a substitute for copper sulphate. For this purpose it is incinerated, slaked, extinguished and treated with water. Its use in this form beautifies the eye-lashes. When used alongwith nard it promotes the growth of eye lashes. It

is a good drug for treating ulcers of the eye. It facilitates the growth of hair on the eyelids.

24. *Nīṭāfulūn*

Please refer to *Bantāfulūn* under the letter 'Bā';

25. *Nil* True indigo *Indigo fera tinctorius* Linn.

Nature: True indigo is of two kinds: (a) garden indigo and (b) wild indigo with similar actions.

Temperament: It is hot in the first and dry in the second degree.

Properties: It stops bleeding because of its astringent property. The garden variety is strongly desiccant without causing any irritation. The wild variety has a sharp taste. It is also very desiccant. It absorbs pus from deep parts of the body.

Cosmetics: It removes freckles, pityriasis and also proves useful in cases of alopecia.

Swellings: True indigo reduces oedema and is useful in spoilt wounds in 'hard' organs. In short it proves useful for treating all kinds of inflammatory conditions in their initial stages and also in herpes and erysipelas. In such cases it is used in combination with barley flour.

Ulcers: It heals the ulcers of hard bodies due to its desiccant property. This property, however, is exclusively present in the garden variety. Wild variety is sharp and good in putrefactive ulcers with remarkable efficacy. The garden variety is good for the treatment of ulcers due to its mild nature. Its use with honey gives relief in chronic ulcers. Its powdered form is used in burns and nervine wounds. It helps in the extraction of thorns specially when used with the flour of tars darnel.

Chest: It is useful in children suffering from severe cough with vomiting. Its extract is also useful in lung ulcers and melanotic pleurisy.

Food: True indigo specially its wild variety, is useful in splenitis.

26. *Nīlōfar* Water lily *Nymphaea lotus* Linn.

Nature: According to Galen it is sometimes referred to as sea-kale and its seeds as cubeb. This is, however, a controversial statement. Actually the root of Indian blue water lily is belladonna.

Choice: The water lily having white roots is considered the best. It is also stronger than the variety having black roots. The seeds elicit stronger actions than the grains.

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Temperament: The flowers are cold and moist in the second degree. Its syrup possesses strong thirst-quenching potency. The temperament of Indian variety of blue water lily is similar to that of belladonna.

Properties: Its syrup is highly attenuant.

Cosmetics: Its root particularly that of black variety, when applied with water, proves useful in pityriasis and with pitch in alopecia.

Swellings: Its root is useful in hot swellings and splenitis.

Ulcers: Its seeds and roots are applied to the ulcers.

Head: It is soporific and sedative for treating hot and bilious types of headache but causes weakness in such cases.

Chest: Its syrup is good in cough and pleurisy.

Food: If its roots are taken orally or applied as a plaster, they are useful in splenitis.

Excretion: When taken orally in a dose of 3.5 gm with wine of poppy seeds, it prevents nocturnal emissions and reduces sexual power. The drug, particularly its root, has the property of coagulating semen. The root is also useful in chronic diarrhoea and intestinal ulcers. When plastered, it is beneficial in cases of cystalgia. The seeds are stronger than its other parts and so are helpful in stopping excessive menstrual bleeding. Repeated doses of the yellow roots and seeds of water lily, taken with milk, are useful in chronic leucorrhoea and also soften the bowels.

Fevers: Oral intake of its syrup brings down the temperature in acute fevers.

Letter Wāw

1. *Waj* Sweet scented flag *Acorus calamus* Linn.

Nature: *Waj* is the root of a plant resembling papyrus. It is mostly found growing near the tanks and ponds. These roots bear white knots and have unpleasant odours alongwith some fragrance. It is sharp and pungent. According to Galen, only the root is used as a drug. Its potency resembles that of Indian-birth wort and orris root. According to Dioscorides its leaves are similar to those of orris tree but are relatively longer and thinner in appearance. The roots of sweet scented flag are not very dissimilar to those of orris. However they are inter-woven, not straight but crooked in shape. The upper surface of roots bears some knots of white colour. They are pungent and not much malodorous. The person who procured such type of drugs from Khalqis which is also called Qinnisirīn (a town in Syria) states that one Yusuf al-Andalūsi informed him about the

existence of another kind of sweet scented flag called *arghālāḡia*. The latter is procured from Spain.

Choice: The kind which is thicker, compact and more fragrant is considered good. Dioscorides, however, believed the thick, white, compact, uncorroded variety without flaccidity and having a fragrant odour to be of best quality.

Temperament: It is hot and dry in the first part of the middle phase of the second degree.

Properties: It is carminative, attenuant, detergent without being irritant, deobstruent and antifatulent. According to Galen its odour is not very unpleasant but my senses find it to be unpleasant.

Cosmetics: It improves the complexion and proves useful in pityriasis and leukoderma.

Joints: It is useful in convulsions and rupture of muscles. Its oral intake or use as a douche of its decoction also acts in a similar manner.

Head: It is also useful in cases of odontalgia and heaviness of the tongue.

Eye: It is useful for treating corneal thickness and opacity. Its extract is particularly good for removing dark-sightedness.

Chest: Its decoction is good for pleurisy and chest pain.

Food: It is advised in cold hepatalgia and also strengthens the liver. It is useful in stomach diseases and splenic hardness. It reduces the size of spleen and depurates the stomach.

Excretion: It is useful in gripes and hernia. Its decoction gives relief in uteralgia and acts as a diuretic and an emmenagogue. According to some people it is also useful in strangury. It acts as a stimulant and increases libido. It is useful in intestinal pain and abrasions caused by cold.

Poisons: It is useful in insect bites.

Substitutes: Equal parts of cumin with 1/3 part of Himalayan rhubarb act as substitute for sweet scented flag for following effects: expelling gases and being useful in liver and splenic diseases.

2. *Wada'*

Sea shell

Cyprea moneta

Nature: *Wada'* and *ṣadaf* (pearl shell) are of the same origin.

Properties: It helps in extracting arrow tips and thorns.

Cosmetics: Its powder is useful for removing both fixed and suspended warts.

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3. *Ward*

Rose

Rosa damascena Mill.

Nature: Rose has a composite potency of aqueous and earthy substances. It contains some pungent, astringent, bitter and a mildly sweet taste. Its moisture content reduces its heat and this makes it sweet and bitter. Its rarefying potency removes its astringency. Mostly it causes coryza. Fresh rose contains bitter principles. When it dries up, the bitterness is reduced. Due to this property, oral intake of fresh flowers in dose of 35 gm elicits purgative action. Foul smelling variety of rose is hot and its roots resemble burnt pellitory.

Temperament: Galen opined that the rose is not very cold in relation to the human body. It may be cold in the first degree. I consider the rose, particularly in its dried state, to be cold in the first phase of the second degree.

Properties: The desiccant property of rose is stronger than its astringency because it is more bitter than astringent in taste. It is deobstruent and detergent. The dry flowers are more astringent. It controls the 'movement' of yellow bile. The seeds elicit stronger astringent effects than all of its other parts. Similarly the plumules located in the middle of the flower, strengthen the internal organs. Its astringency does not exceed its dissolving property. The dried flowers are relatively more astringent and cold. It is claimed to be capable of extracting the arrowtips and thorns. Good quality extract of rose is obtained from the white coloured petals, dried in shade.

Cosmetics: When used in bath, it removes the foul odour due to perspiration. For preparing a lotion, the roses, which are not moist, are collected and left till they are withered. Forty *mithqāl* (180 gm) of such flowers are mixed up with 22.5 gm of nard and 31.5 gm of myrrh. This material is used to make small pills. Sometimes 7 gm each of costus and blue lily are also added. Often women use roses as garlands around their necks and also for removing the 'greasiness' due to perspiration.

Swellings: According to some people pulverized roses help in extracting all type of warts. Application of a plaster prepared from a decoction of powdered flowers without squeezing, dissolves hot inflammations and proves useful in erysipelas.

Ulcers: It is useful for treating ulcers. It promotes granulation in chronic ulcers and relieves abrasions particularly those affected parts between the thighs and armpits. Some people state that its powder helps to expel arrow tips and thorns.

Head: The fresh rose and its decoction relieves headache. Inhaling of rose oil induces sneezing. Some people attribute this to its gas retaining property. This is probably because the rose possesses two contradictory potencies: (a) deterring and (b) resisting. The

latter affects the brain and helps in retaining fine superfluous matters. The rose elicits errhine actions in persons having 'hot' brain. Its seeds and soup strengthen the gums and are also useful in otalgia.

Eye: Rose gives relief to ocular pain which is attributed to heat. Collyrium prepared from a decoction of dry roses is good in thickening eye-lashes. Its extract and oil also act similarly. It is useful in conjunctivitis particularly when the white pollens are removed from the flowers.

Respiration: Sipping of rose-water is beneficial in cases of syncope. Both the extract of flowers and the juice from branches are good for treating haemoptysis. Its buds also have the same property.

Food: Roses are good for the liver and stomach. Its preserve in honey is called *julanjibin*. The latter strengthens the stomach. It also helps in digestion. Both the flowers and their juice are useful in the 'wetness' of the stomach. Rose oil relieves feeling of burning in the stomach. Similar benefit is achieved when it is painted on the abdomen. Rose syrup is useful for treating persons suffering from gastric paralysis.

Excretion: Local application using a feather relieves gastralgia and uteralgia attributed to heat. A decoction of dry roses acts similarly and is also useful in rectal pain. An enema with its decoction is useful in cases of intestinal ulcers. The syrup is also used in such cases. Sleeping on a bed of roses reduces the sexual desire. Fresh flowers taken in a dose of 10 *dirham* (35 gm) act as a purgative resulting in ten motions. The dry flowers elicit no such action. Rose oil relaxes the bowels.

4. *Wars* Ceylon cornel tree *Memecylon tinctorium*
Pseudo saffron

Nature: *Wars* is a dark red substance resembling the powder of saffron. It is procured from Yemen. It is said to be a kind of saw dust obtained from ceylon cornel tree.

Temperament: It is hot and dry in the second degree.

Properties: It is an astringent drug.

Cosmetics: It is useful for treating black and red freckles.

Oral intake of the drug proves useful in *pityriasis alba*.

Pimples: It is useful in pimples and pustules.

Ulcers: It is useful in scabies, itching, favus and ringworm.

- 5 *Warshān* Wild dove _____

Eye: The blood of wild dove is good for treating eye wounds.

Food: Its flesh is difficult to digest.

Excretion: Its flesh also causes constipation.

6. *Waral* Monitor lizard *Varanus niloticus*

Nature: Monitor lizard is bigger in size than Gecko and Newt lizards. It has a long tail and small head. It differs from mastigure which is seldom found in places other than forests. Its head, tail and body do not resemble those of the monitor lizard but are nearer to it in temperament.

Temperament: The meat of monitor lizard is considered very hot in temperament.

Cosmetics: Its excreta is useful in freckles and red spots of the body. Oral intake of its fat and meat fattens the women who are accustomed to eat it.

Properties: It helps in extracting arrow tips and thorns.

Swellings: Its excreta in powdered form removes the warts.

Eye: Its excreta, like that of mastigure, is useful in opacity of the cornea.

7. *Wasakh* Dirt *Greme*

Temperament: The dirt of furnace is warming in the last phase of the second degree. Green coloured dirt is considered better. The dirt, found on the walls of bath houses, is moderately warming and it is similar to that obtained from wrestlers' bodies. In this way there are two kinds of dirt. One is obtained from the human (wrestlers') bodies which is normally mixed up with oil and dust. The second variety is collected from the walls of wrestling ground which is accumulated there due to contact with the perspiration or vapours emanating from the wrestlers' bodies.

Properties: Both kinds of dirt are dissolving and moderately flatulent. Furnace dirt is moderately detergent and highly absorbent. All kinds of dirt help in extraction of arrow tips and thorns.

Cosmetics: Ear wax is useful in whitlow. It is also painted on the cracking lips.

Swellings: It dissolves the abscesses. The dirt from wrestlers' bodies is good in mastitis while that from bath-houses is useful in cases of blisters.

Ulcers: The dirt obtained from the walls of wrestling places is useful for treating immature ulcers in elderly patients and also in cases of fracture of the skull. Furnace dirt is highly detergent for ringworm.

Joints: Application of warm dirt from wrestlers' bodies, in the form of an ointment, is useful in sciatica and phalangeal concretions.

8. *Wasmah* Indigo leaf

Nature: *Wasmah* is the leaf of indigo plant.

Choice: Its khurasanian variety is considered better.

Temperament: It is hot in the last phase of the first degree and dry in the second degree.

Properties: It possesses astringent and detergent properties.

Cosmetics: It is used as a hair dye.

The letter Hā'

1. *Hurṭamān* Oats *Avena sativa* Linn.

Nature: Oats are similar to the barley grain in potency. It is midway between wheat and barley in size. Oat flour and porridge are more astringent than similar preparations of barley.

Temperament: It is moderately inclining towards moistness.

Properties: It is desiccant without causing any irritation and also it has dissolving and astringent properties.

Substitute: The extract of *Acacia arabica* acts as a substitute for oats.

2. *Harqalūs* Cow parsnip *Avena sterilis* Linn

Nature: It is a kind of wild vegetable. According to Ḥunain it is *Ḵhasal-ḥimār* i.e. dyer's bugloss (*Onosma echioïdes* Linn) which has already been described under the letter *Khā'*.

Temperament: It is cold and moist in temperament along with some desiccation and a little warmth.

Properties: It is believed to have some astringency.

3. *Harnawah* Fruit of agallochum tree

Nature: *Harnawah* resembles the pepper except that it is somewhat yellow in colour. It is like aloe wood in fragrance. It is brought from slavonia.

Temperament: It is moderate.

Food: It strengthens stomach and digestion and increases appetite.

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4. *Hazār jashān* White bryoni *Bryonia alba* Tamus.

Nature: Its fruit resembles a bunch of grapes. It is used by the tanners. What is used by druggists consists of dried peach like pieces of wood. When chewed it gives an insipid taste initially which latter turns to be somewhat bitter. We have discussed this drug in details under the caption 'Fāshra'.

5. *Hasht dahān* Eagle wood

Nature: It is also known as 'Ūd-i Hindī.

Joints: Its main property is to cure gout.

Ulcers: It heals various kinds of muscular ulcers in the head region. Another variety of this drug is not suitable for ulcers but it is applied as a plaster for treating swellings.

6. *Halīlaj* Chebulic myrobalan *Terminalia chebula* Retz.

Nature: Chebulic myrobalan is of various kinds (a) Unripe yellow coloured variety, (b) Indian black variety which is fully ripe and more compact, (c) Kābulī variety which is relatively bigger in size and (d) Chinese variety which is thin and light.

Choice: The variety which is dark yellow in colour with a tinge of green, compact, stuffy and hard is considered better. Samples of the kābulī variety which are redish in colour, more dense, heavy and which settles down when put in water, are superior. Among the Chinese variety samples bearing a beak like structure are said to be better.

Temperament: Yellow coloured drug is said to be hotter in temperament as compared to the black variety. Indian variety is less cold than the kābulī variety. All types of chebulic myrobalans are cold in the first and dry in the second degree.

Properties: All of its kinds mitigate 'hotness' of bile and prove useful for such ailments.

Cosmetics: Black variety improves the complexion.

Swellings: All kinds of myrobalan are useful in leprosy.

Head: The kābulī variety is beneficial for the sense organs, memory and intellect. It is also useful in headache.

Eye: A collyrium prepared from the yellow variety is useful in paralysis of the eyes. It prevents infiltration of harmful matters towards the eyes.

Respiration: Its oral intake is useful for treating cases of palpitation and melancholy.

Food: Chebulic myrobalan is useful in splenalgia and disorders of the gastro-intestinal tract. Both varieties of black chebulic myrobalan are used as a preserve to strengthen the stomach. It digests the food and strengthens the gastric follicles by virtue of its expellent depurative and absorbent properties. Both the yellow and black varieties enhance the 'cooking capacity' (digestive action) of the stomach. Chinese variety is weaker than the kābuli variety. The latter is depurant and useful in dropsy.

Excretion: The kābuli and Indian varieties when used after frying it in olive oil, cause constipation. Yellow variety evacuates the yellow bile and also phlegm to some extent. Black variety evacuates the black bile and proves useful in piles. Kābuli variety evacuates both the black bile and the phlegm. It is said that kābuli variety is useful for treating colic. Oral dose of soaked kābuli variety for a purgative effect is 17.5 to 38.5 gm while its dose in unsoaked form is 7 gm. In my opinion, however, the dose should be more than the above mentioned quantity. Yellow variety is powdered, dissolved in water and taken orally in doses upto 35 gm or more.

Fevers: Kābuli variety is useful in chronic fevers.

Substitutes: I believe that the peels of pomegranate act as substitute for yellow myrobalan.

7. *Hilyūn* Common asparagus *Asparagus officinalis* Linn.

Nature: Asparagus is a well known drug. According to Dioscorides it is variously called as *miyān*, *asfārāghas* and *mawāqtinūs*. Some people think that asparagus grows at places where broken horn pieces from a male sheep get mixed up with the earth.

Temperament: According to Galen it is moderate in temperament i.e. neither hot nor cold. This does not, however, apply to the variety of asparagus that grows on rocks. In my opinion it is not far from being hot in its effect. After it is taken the drug begins to harden and it gains its hot effect. Later a milk like substance appears on its surface which is very irritant.

Properties: It is detergent, removes all kinds of visceral obstructions, specially those of the liver and kidney. Asparagus, particularly its rocky variety has dissolving property.

Joints: Its decoction is taken orally in cases of dorsalgia and sciatica.

Head: In the form of a decoction with vinegar, it is useful for treating ailments of the head. Similarly its seeds and roots are good for molar pain.

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Food: It removes hepatic obstructions and proves useful in jaundice but causes nausea.

Excretion: According to Rhupos, it causes constipation. This is probably due to its diuretic property. Some physicians state that boiled asparagus causes relaxation of the bowels. Perhaps they mean to indicate its utility for treating phlegmatic and gaseous colic. Its root is diuretic. It increases the quantity of semen and also improves libido. It is also useful in cases of difficulties in conception. Similarly a suppository of its seeds, promotes the discharge of menses and removes the kidney-stones.

Poisons: It is decocted with wine to be used in cases of tarantula bite. A decoction of asparagus is said to kill the dogs.

8. *Hindabā*² Endive *Cichorium intybus* Linn.

Nature: Endive is of two kinds: (a) wild endive and (b) cultivated endive. Both the varieties bear broad and thin leaves. Endive acts like lettuce but, according to some people, endive is less effective. In my opinion it is more effective than lettuce as a deobstruent in hepatic obstructions. It is, however, less effective for reducing hotness and producing nutrition.

Choice: Bitter endive is considered more useful for the liver.

Temperament: Endive is cold in the last phase of the first degree. Its dry part is dry in the first degree and moist part is moist in the last phase of the first degree. Cultivated variety is relatively more cold and moist. Its bitterness gets intensified and inclines towards heat in summer season. Endive has nothing to do with such changes therapeutically. Wild endive, which is also called *ṭarakhshaqūq*, is less moist.

Properties: It removes the visceral, hepatic and vascular obstruction. It is a good but not very strong astringent. Application of a paint prepared from its juice with white lead and vinegar elicits a remarkable cooling effect on the organs.

Joints: It is used as plaster in case of gout.

Eye: It is useful in chronic conjunctivitis. The latex of the wild variety removes opacity of the cornea.

Chest: It is plastered on the chest with barley flour in cases of palpitation. It strengthens the heart. Purging cassia is dissolved in its juice and used as gargle in pharyngitis.

Food: It relieves nausea and counteracts the ill effects of excessive yellow bile. It also strengthens the heart. It is one of the best drugs for the stomach having a hot temperament. The wild endive is better than the cultivated variety for stomach diseases. Endive is said to

be suitable for all kinds of temperament of the liver. The drug is particularly suitable for hot tempered livers. However it is not harmful to cold tempered organs unlike some cold vegetables.

Excretion: Oral intake of endive, specially of its wild variety alongwith vinegar, causes constipation.

Fevers: Endive is useful in quarton fever and also in fevers attributed to cold exposure.

Poisons: A plaster of the roots of endive, as well as its roasted flour, is beneficial against the bites of scorpion, insects, wasps, snakes and newts.

9. *Hil bawwā* Small cardamom *Elettaria cardomomum* Linn.
Hāl bawwā

Nature: Small cardamom is also called *khair bawwā*. It is more rarefying than the large variety of cardamom.

Temperament: It is hot in the first and dry in the second degree.

Properties: It is a rarefying drug.

Food: It strengthens the 'cold' liver and stomach and helps in digestion.

Substitutes: Cubeb is the substitute for small cardamom.

10. *Hiōfāriqūn* Hypericon *Hypericon perforatum* Linn.

(Arabs call it as 'arn and Syrians as 'inab al-ḥayyah)

Nature: The branches and flowers of hypericon have a withered look. Its grains are yellow but inclining towards redness. It resembles sumach in shape but it is not red in colour.

Choice: According to Galen not only its seeds but the fruits as a whole are used orally.

Temperament: It is hot in the second degree and dry in the last phase of the second degree.

Properties: Hypericon is rarefying, deobstruent, diluent and dissolvent.

Swellings: Hypericon is useful for treating large, cold and hard swellings.

Ulcers: A plaster of its leaves is useful for healing burns, large wounds and malignant ulcers. Sprinkling over putrefactive and soft ulcers as a dusting powder proves very useful.

Joints: Hypericon is useful in coxalgia and sciatica. Regular oral intake of its decoction with wine for forty days cures sciatica.

Excretion: It is a good diuretic drug and its chief property is to promote the discharge of menses. Its fruits purge out black bile.

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Substitutes: Equal quantities of bog rushes and the roots of caper are substitutes for hypericon.

11. *Hiāfasīdās* Hypocist juice *Cystinus hypocistis* Linn.

Nature: *Hiāfasīdās* is the extract of a plant called salsify. This extract is cold and astringent. It has already been discussed under the caption *lahya al-tais*.

Temperament: It is cold and slightly dry.

Letter Yā

1. *Yāsmīn* Jasmine *Jasminum grandiflorum* Linn.

Temperament: White jasmine is warmer than its yellow variety. The latter is warmer than the purple variety. Jasmine as a whole, is hot and dry in the second degree.

Properties: It rarefies the fluids. Its oil is useful for old people.

Cosmetics: Jasmine, both in fresh and dry states, removes freckles. For this purpose, it is powdered and used as a bath for washing the face. Excessive inhalation of jasmine flowers causes jaundice.

Joints: Its oil is useful for treating nervine diseases particularly in the elderly patients.

Head: Its odour causes headache but paradoxically its inhalation removes headache attributed to viscous phlegm. Smelling of pure jasmine oil causes epistaxis in persons having hot temperament.

2. *Yabrūj** Belladonna *Atropa belladonna* Linn.

Nature: It is the root of wild mandrake. The roots of large species of mandrake resemble the human body. Therefore these are called *yabrūj*. The latter is the name of a natural idol. This means that the plant is similar to man in appearance. It does not matter whether the original connotation of the name exists or not. There are many names which do not indicate any prevalent meanings. The root of belladonna, available these days, is a dust coloured wood, which is large, brittle and resembles a cauliflower in size.

Temperament: It is cold in the third degree with some dryness. According to some physicians it is somewhat hot in temperament. The root is strongly desiccant but the root-bark is weak in potency. Its leaves, both in fresh and dry states, are therapeutically useful. Whole plant of belladonna is considered moist.

* Other copies of *Al-Qanoon* describe three major varieties of belladonna differing in size and colour but these varieties are not described here.

Properties: Belladonna roots are anaesthetizing. A kind of exudation comes out of these roots. Its extract is considered stronger than its exudation. Its oral intake in a dose of 2.5 gm with wine is given to patients who are to undergo amputation of any part of the body as it would induce them to sleep. It is said that if the ivory is decocted with the roots of belladonna for six hours, it would become flexible and manageable.

Cosmetics: Rubbing of the fresh leaves for one week, removes the freckles without causing any ulceration. The latex of belladonna helps to remove freckles and reddish spots without untoward effects like irritation and burning.

Swellings: It is suitable to be used in hard swellings, abscesses and scrofula. Similarly, application of the powder of soft roots with vinegar, serves as a remedy for erysipelas and associated pustules.

Joints: Its roots, mixed with the flour (of wheat or barley), are applied as a plaster to arthralgia and also to cure elephantiasis.

Head: Belladonna is soporific and hypnotic. When administered with wine, it becomes more intoxicating. Its anal suppository also serves as a somniferous agent. Inhalation also elicits somniferous effects. This property is found in male belladonna which bears white stalkless leaves. The excessive use or smell of belladonna particularly that of its white leaves, causes apoplexy. It is used in curing coma and insomnia. Sometimes a syrup is made for treating insomnia by soaking 1.464 kg of its root-bark in one *matrīfūsh* of sweet wine. It is then used in a dose of 270 gm. The root bark is decocted in wine till the latter acquires the properties of the root-bark. It is then taken orally mostly in cases of coma and occasionally for inducing sleep. Some physicians make the comatose to sit in cold water till they regain their senses. I think their purpose to adopt this practice may be to normalise heat of the body. It makes the senses dull. It is given orally in patients who have to undergo cauterization, circumcision or require incision of some parts of the body. This enables them not to feel any pain or discomfort because of loss of sensation and coma.

If the roots of the third variety of belladonna are taken orally in a dose of 4.5 gm or used with flour, bread and some decoctions, it would cause mental confusion and coma instantly. This condition will continue for three or four hours with the patient having total loss of sensation and understanding.

Belladonna is given to patients who are to undergo an amputation operation. It is administered to the patient after the following preparation: The syrup is prepared out of its peels without applying fire (heat). A quantity of 1.464 kg of the cold infusion is mixed with

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some sweet wine by pouring the latter over it. A dose of 270 gm is given to the above mentioned patients. Moreover, one, who inhales it, is affected by coma-vigil. Similar action is elicited by its extract.

Eye: Belladonna sap forms an ingredient of the ocular medicines indicated for relief from severe pain. The leaves are also used as a plaster in such cases.

Food: If 30 gm of its sap is taken together with water mead, it causes vomiting of bile and phlegm in a manner similar to that with hellebore. Its excessive intake would be fatal.

Excretion: A suppository made from its sap promotes the discharge of menses and expels the foetus. The leaves, when taken orally depurate the uterus. A suppository prepared by mixing it with sulphur without placing on fire stops excessive bleeding from the uterus. Its sap purges out phlegm and bile. Accidental ingestion of belladonna by a child would induce vomiting and diarrhoea. Sometimes it may also cause death.

Poisons: Belladonna is applied with honey and olive oil at the site of insects bite. The variety which has white leaves, is said to have similar effects. But the leaves chosen should be small in size to serve as an antidote for poisoning due to fatal garden night shade. Death by its intake is preceded by hysteria, redness of the cheeks and protrusion oculi. It also causes facial congestion giving the patient the looks of an intoxicated person. In such cases the intake of 'ghee' (clarified butter) and honey is recommended. Vomiting is helpful in treating such patients.

3. *Yatū*^c Latex bearing plants, spurge *Euphorbia officinarum*

Nature: The plants which secrete a milky juice (latex) having sharp, purgative, erosive and caustic properties are called *yatū*^c. Seven types of *Yatū*^c are well-known: (a) madar (b) spurge (c) great mullein (d) cyclamen (e) croton (f) mazerion and (g) *banṭāfalyūn* or the five-leaved grass. All these plants are considered fatal poisons but their latex is also used in drugs. Apart from the above types, there are some other varieties of *Yatū*^c e.g. certain kinds of mouse-ear, lablab and purslane etc. The milky juice generally used is that from great mullein. It seems that it is the same substance which is also referred to by the names *farāwī* and *būshanjī* antidote. Some physicians describe additional seven categories of *Yatū*^c. The male variety also called *ḥarāqayās* is most pungent. The rest are female varieties. The strongest one resembles myrtle and is named as *morstīs*. The other varieties in order of merit are: (1) The *sijzī* variety found between the

rocks, (2) a broad leaved variety resembling *nūṣīr*, (3) *qūryās* or *sarwī* which is similar to cucumber (4) *al-tūs-al-sāḥīlī*, the sea variety is named so because it is found near the sea, and (5) a variety called *qūqabīs*. Male *yatū^c* and its root is considered strongest in action. Its red branches measure more than a yard in length and are full of milky juice. These are similar to those of olive. These branches contain a milky white juice with a pungent taste. The leaves on these branches resemble those of olive but they are comparatively larger and thinner. The hilly variety grows in rugged, rough and hilly place. The female variety, also called *al-jauzī*, is similar to the bay tree but it is larger and stronger than the former. The ends of the leaves are thorny. The branches measure a hand-span in length and emerge from the root. Its fruits are biennial and cause irritation to the tongue like the walnuts. Their emetic potency is less than that in the male variety. However its place of growth is similar to that of the latter.

The sea variety is also called *khashkhāshī* (poppy seed like). Its branches are one hand-span long, straight, somewhat red in colour and bear five or six small, thin and long leaves. Its fruits, like peas, resemble the leaves of flax and have double tips which are round in shape while the flowers are white in colour. Another kind of *Yatū^c* called *al-mushammash*, is similar to purslane but its leaves are larger, thinner and more round. About four or five branches shoot out from the root. They are red in colour and full of milky juice. The branches are similar to such dill plants in size which bear fruits. It grows mostly in deserted places at the outskirts of towns.

There is another variety of *Yatū^c* called *Sarwī*. Its branches are somewhat larger than a hand-span in length are. Its leaves are similar to those of cypress and pine but are relatively thinner and more moist. The rocky variety, also called *sijzī*, has leaves similar to those of small myrtle and male *Yatū^c*. Its uppermost portion is moist and quite voluminous. Another of its variety is similar to cucumber. Its leaves and roots purge out all kinds of (superfluous) fluids.

Choice: The potency of the plant is of the following order: latex, seeds, roots and leaves. The term 'juicy milk' is generally applied to the juicy milk of *lā'rah*.

Temperament: The latex of *Yatū^c* plants is hot and dry in fourth degree. Its other parts are also dry from the second to the third degree.

Properties: It is ulcerating and fatal. If it is put in to a tank, all the fishes therein would perish and float on the surface of the water.

Cosmetics: It removes sty, scrofula, warts, freckles and excessive flesh on the sides of the nails. Its application on the head, specially in the sun, removes the hair. Whatever hair growth occurs thereafter, would be weak. When this treatment is repeated the hair would ulti-

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mately cease to grow. To remove its harmful effects, it is mixed up with olive oil. It is also used for depilatory purposes.

Ulcers: Its roots are mixed up with vinegar and massaged around the piles to remove their hardness. It removes ringworm. Its *qairūṭī* proves suitable in putrefactive and corrosive ulcers, melanotic scabies, eczema, rodent ulcers and gangrene.

Head: When its juice is applied to decaying teeth, they are broken into pieces and fall off. Very often it is used with cedar tree resin to reduce the intensity of its action. As a measure of precaution the healthy teeth should be covered with wax before applying the latex to the aching teeth. If the decoction of its roots is mixed up with vinegar and taken as a mouth wash, it alleviates odontalgia.

Eye: Its milky juice removes pterygium.

Excretion: It removes piles; purges out phlegm and (superfluous) fluids. Two or three drops of this juice are put on fig, barley or wheat flour or bread and the mixture is left to dry. Oral use of this preparation serves as a perfect purgative. Pure milky-juice should be taken with wax or honey as a precautionary measure to avoid ulceration of the mouth and throat. It may also be taken as a *qairūṭī*. Sometimes the fresh branches of *Yatū'* are fried slowly on the hot pieces of earthen pot and powdered. About two gm of this powder mixed up with flour is taken with some water. Its dry branches are poor in action.

The variety, called *karfiyūn*, serves as a painless purgative. For this purpose its dry branches are further dried in shade. Nine gm of its peels are then soaked in an old wine for a day and night, sifted and taken orally in tepid state.

Substitutes: Its three times of orris root and two third of *saganum* act as substitutes for *Yatū'* in respect of its purging action on intestinal fluids and the phlegm found in the organs.

4. *Yanbūt* Nabatean carob *Ceratonia siliqua* Linn.

Nature: Nabatean carob is the same drug which is called *kharnūb Nabīlī*. It has already been discussed under the letter '*khā*'.

Temperament: It is a slightly cold, hot and dry in the second degree.

Properties: It is an emetic drug without causing any irritation.

Excretion: It stops diarrhoea.

Poisons: Its decoction kills fleas.

5. *Yanbūn* Wild rue *Ruta sylvestris* Mill.

Nature: *Yanbūn* is also called *thāfithiā* which is the gum of wild rue.

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