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ALI IBN RABBAN AṬ-ṬABARĪ, A NINTH CENTURY ARAB PHYSICIAN, ON  
THE ĀYURVEDA

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‘Ali ibn Rabban aṬ-Ṭabarī is an important Arab physician of the 9th Century A.D. Stray information on the Ayurveda are found scattered in the Arabic medical works of that period but aṬ-Ṭabarī was the first Arab physician of Unani medicine who presented a comprehensive and documented account of the Ayurveda in his *Firdaws al-Hikmah*. I have attempted in this paper to give a brief outline of the life and times of aṬ-Ṭabarī, his works, sources of the above book and specially of the Indian sources of the discourse on the Ayurveda which is under consideration. An attempt has also been made to present a summary of the main contents of this discourse which comprises thirty-seven chapters. An improved Arabic text based on an important Arabic Ms. preserved in the British Library, London, with full English translation will be published shortly in which his discussion on the Ayurvedic system of medicine will be examined in the light of classical Sanskrit medical texts.

INTRODUCTION

Some Muslim physicians practising Greco-Arab (Ūnānī) medicine took interest in the Indian system of medicine or Āyurveda quite early in their history. Literary evidence is on record to show that the Caliph Hārūn ar-Rashīd (786-809 A.D.) was cured of a chronic illness by an Indian physician called Manka whom he had specially invited to Baghdad for the purpose, when his personal physicians had failed to treat him successfully<sup>1</sup>. Many Vaids were invited to Baghdad in the early Abbasid period and several Ayurvedic works were translated into Arabic by order of the Caliphs, and students and practitioners of Ūnānī medicine were acquainted with them. As a result, ‘Alī bin Rabban aṬ-Ṭabarī included a summary of Indian system of medicine in the 4th and last discourse of the 7th part of this *Firdaws at-Hikmah*<sup>2</sup> (*Paradise of Wisdom*) adding also an Indian materia medica with compound preparations. After aṬ-Ṭabarī other Arab writers wrote on Indian medicine and recorded names of Indian physicians who visited Baghdad and worked there<sup>3</sup>. A critical text of this discourse on the Ayurveda with an English translation, commentary and assessment are presented here.

## LIFE AND TIMES

Although this introduction is concerned with aṭ-Ṭabarī's knowledge of the Āyurveda, it seems desirable to recapitulate and record the main events of his life briefly and provide information concerning his extant and non-extant works. Like Ibn Sīnā and Ibn Khaldūn, he did not write an autobiography. However, information about his life and times are available in the Arabic works of medieval writers. Some of these are the *Kitāb al-Fihrist* of Ibn an-Nadīm<sup>4</sup> (d. ca 388/998); *Ta'rikh Ḥukamā' al-Islām* by Ṣāḥir ad-Dīn Alī al-Bayhaqī<sup>5</sup> (d. 566/1170); *Mu'jam al-Udabā'* of Yāqūt al-Ḥamawī (d. 627/1229); the *Ta'rikh al-Ḥukamā'* of al-Qiftī<sup>7</sup> (d. 646/1248), the '*Uyūn al-Anbā'* of Ibn Abī Uṣaybi'ah (d. 669/1270) and others.

The exact date of his birth is not known but according to modern research Abu'l-Hasan 'Alī bin Sahl Rabban aṭ-Ṭabarī was born in a learned and respectable family at Merv in the region of *Khurasan* (near modern Tehran) around 195/810 at a time when the glorious period of the Abbasid history was coming to an end. Al-Bayhaqī records that his father Sāhl was a Syrian Christian Secretary of Merv having expertise in the Bible, philosophy, astronomy and medicine.<sup>9</sup> Aṭ-Ṭabarī lived with him mostly in Tabaristan and studied medicine, philosophy, mathematics and the Bible under his guidance.<sup>10</sup> Persian was his mother tongue but he learnt Arabic, Syriac and Hebrew from him. He took service under Māzyār bin Qārīn of Tabaristan as his Secretary in 214/830. However, Māzyār was killed by Caliph Mu'tasim in 224/838 A.D. It can be stated that at the invitation of this Caliph, he migrated to Baghdad in 226/840 and acted as his Secretary.<sup>11</sup> He continued in the service of his successor al-Mutawakkil (847-861 A.D.). It was at this time that he embraced Islam and defended it against other religions.<sup>12</sup> The Caliph bestowed on him the title of Maulā Amīr al-Mu'minīn (Client of the Commander of the Faithful) and appointed him his boon companion (nadīm). It is recorded that he lived at Rayy for sometime before migrating to Baghdad.

There is a controversy as to whether he was originally a Jew or a Christian. Two Arab authors state that he was a Jew but the generally accepted view now is that he was a Syrian Christian<sup>13</sup>. An evidence in support of this statement is that he was given 130 long quotations from the Bible in his book *kitāb ad-Dīn wad-Dawlah* (*Book of Religion and State*) which he had completed in 241/855.<sup>14</sup> Moreover, the well-known historian Abū Ja'far Md. bin Jarīr at-Ṭabarī (cd. 311/923) calls him Alī bin Rabban an-Naṣrānī or 'Alī bin Rabban, the Christian.<sup>15</sup>

Most probably he was a student of Ḥunayn bin Ishāq (ca. 808-873 A.D.) the well-known Ṭabīb (physician) and translator of Greek Medical Works and studied the Ūnānī system of medicine under him.

There is a difference about the exact date of his death. It has been recorded that he died after 241/855.<sup>16</sup> But in a recent study his date of death is stated to be about 247/861<sup>17</sup>. Therefore, it is an incorrect statement that Abū Bakr Moḥammad bin

Zakariyah ar-Rāzī (250-320/864-932) studied medicine under him at Rayy which was visited by at-Ṭabarī.<sup>18</sup>

### WORKS

There is a difference of opinion also about the works of at-Ṭabarī. An examination of available sources indicates that thirteen works have been attributed to him of which only three are available and the others do not seem to be extant. It is stated in the *Firdaws al-Ḥikmah* that he had also translated it into Syriac. Only two of his books, the *Firdaws al-Ḥikmah* and the *Kitāb ad-Dīn wad-Dawlah*<sup>19</sup> (*Book of Religion and State*) have already been published which were both dedicated to his patron the Caliph al-Mutawakkil. The manuscript of the third book (*Kitāb Ḥifz aṣ-Ṣiḥḥah* (*Book for Preservation of Health*)) is available at the Bodleian Library, Oxford.<sup>20</sup>

### THE FIRDAWS AL-HIKMAH

Among the three works, without doubt, the *Firdaws al-Ḥikmah* is the most important. The book is divided into several discourses and each discourse has been divided into sections and chapters. Only five manuscripts of this work is known to this writer although it was quite popular in the medieval times among those who practised Ūnānī medicine. Its critical edition was published by M.Z. Siddiqi at the Sonne Press of Berlin in 1928<sup>21</sup>. It is stated by the editor that he has used five manuscripts for preparing the text of this edition—one each from Berlin<sup>22</sup>, London<sup>23</sup> Gotna<sup>24</sup> and two from India. Of the Indian manuscripts one is preserved at the Raza Library, Rampur<sup>25</sup> (U.P.) and the other belonged to Ḥakīm Khwājah Kamāluddīn of Lucknow. Sami Hamarneh states that besides these manuscripts others have been discovered but he gives no details.<sup>26</sup>

A comparison and collection of these manuscripts will establish that their contents are not similar and complete in every respect and the arrangement of folios is also not correct. The last discourse on the Ayurveda is not found in the Berlin manuscript but it is available in a complete form in the Lucknow and British Library, London manuscript. For this reason and also for the fact that the edition was published more than sixty years ago and a large number of important texts bearing on Ūnānī system of medicine and Ayurveda have been published during this period, it is desirable to prepare and publish a more complete and critical edition specially when it is claimed that new manuscripts of the book have been discovered recently. This is considered necessary due to the fact that the text contains several errors which will be corrected in the revised new edition.

The editors have provided an Arabic introduction covering thirty-two pages which gives much useful information about at-Ṭabarī, his life and times and the *Firdaws al-Ḥikmah*. It also discusses the written sources used by At-Ṭabarī and comments on the merits and demerits of the book. Over and above these, he has also specified the Greek, Syriac and Indian sources of the book in Appendix 2 in English. He has

attempted to identify the sources of several statements of the discourse under study in Caraka and Suśruta's works.<sup>27</sup>

#### SOURCES OF THE BOOK

Keeping in view the fact that the editor has already discussed the main sources of this book, it would not be necessary to give all the details on the subject. Suffice it to state that at-Ṭabarī has made use of the best Greek and Indian sources available to him. As the works of Galen and Hippocrates were most popular among the Greek physicians the works of Dioscorides Oribasius, Rufus of Ephesus, Democritus, Paul of Aegina, Magnus of Emessa were his sources of information. Over and above Plato, Aristotle and Ptolemy, the editor has mentioned the names of several other Greek physicians, philosophers and scientists whose works were used by at-Ṭabarī.<sup>28</sup> Since a large number of Greek texts were translated into Arabic, it is sometimes difficult to make a statement with any degree of certainty about the sources of this book written in the middle of the ninth century A.D. The author has mentioned the titles of only five books as his sources. He records the opinions of the Chaldeans, the Egyptians and Indians without specifically mentioning any particular author (physician) or his book.

#### SOURCES OF THIS DISCOURSE

It is now desirable to discuss the sources of this discourse some of which are mentioned in its beginning. They are the *Samhitā* of the famous physician Caraka, the *Samhitā* of the celebrated surgeon Susruta, the *Nidāna* a well-known work on pathology by Mādhvakara and the *Aṣṭāṅgahr̥daya* of Vāgbhata. In Arabic they are mentioned as *Jarak*, *Susrud*, *Nidān* and *Ashtankar*<sup>29</sup>. In fact he mentions the *Samhitas* of Caraka and Suśruta and *Nidāna* twice in each case and *Aṣṭāṅgahr̥daya* once only.<sup>30</sup> He uses the vague term *Qālū* (or they said) in several places but does not specify names of physicians. He records *Kutubun Imr'at Hindiyah*, *Books of an Indian Lady doctor* but her name and the titles of her books are not specifically stated, and it is almost impossible to identify her. Ibn an-Nadīm and Ibn Abī Uṣaybi'a<sup>31</sup> mention a book of the lady doctor Rūsā al-Hindiyah on the treatment of female diseases and they seem to be the one and the same person.

In the chapter discussing moral principles, he states that he had taken them from books of Indians but does not mention their names or titles of their works.<sup>32</sup>

Literary evidence is available to establish that three out of four books on the Āyurveda mentioned as sources of this discourse were actually translated into Arabic.

Ibn an-Nadīm records the names of ten astronomers and physicians of India whose works had reached him.<sup>33</sup> At another place he mentioned the names of twelve Indian Vaidas and titles of their works which were available in Arabic translation under a sub-section entitled: "Titles of Indian books on medicine translated into Arabic"<sup>34</sup>. It gives the information that the book of Susruta or *Susrud* was in ten discourses which

was translated by Manka, the Indian, at the order of Yaḥyā bin Khālid the Bermakide<sup>35</sup>; the *Ashtankar* or *Aṣṭāṅgahr̥daya*, a compendium of medical science, was translated by Ibn Dhan, the *Superintendent* of the Baghdad hospital. He adds that the book of Caraka or Jarak was translated by ‘Abdullāh bin ‘Alī from Persian into Arabic because he had already translated it from Sanskrit into Persian.<sup>36</sup> But it cannot be stated for certain when and by whom *Nidāna* was translated into Arabic.

#### BRIEF ACCOUNT OF ITS CONTENTS

The remarks made by aṭ-Ṭabarī at the beginning of the discourse show his impariality and catholicity of mind. He states that he considers it desirable to include an account of the Indian system of medicine at the end of his book because the Indian medical works, theories and medicines are excellent. At-Ṭabarī adds that the Greco-Arab and Indian systems of medicine disagree on many points and his intention was to highlight them. Refraining from giving a value judgement he leaves the choice of preference to his readers — who may accept or reject the line of treatment proposed by either of the two systems.<sup>37</sup>

Regarding the beginning of the Āyurveda, it records two different versions. It is stated that jealousy, greed, anxiety, hatred, deceit, falsehood and ignorance entered the world causing disturbance in the five elements leading to physical and mental diseases. Under these circumstances, their learned and pious men paid a visit to God Indra and requested Him to teach them Āyurveda. So they ascended the peak of a mountain, cried and prayed to God for a long time and begged him to bestow his blessings on his creatures. So God taught them the science of medicine as stated by Caraka.

According to another version recorded by Suśruta, it is stated that Dhanvantari learnt the medical science from a Brahman who received it from God through revelation (Chapter I).

At-Ṭabarī states that medical science is divided into eight branches. In the works of Caraka and Suśruta it is also divided into eight branches but the subject matter of these branches as recorded by aṭ-Ṭabarī agrees with those in the works of Caraka and Suśruta. According to aṭ-Ṭabarī they are:

- 1) Treatment of the diseases of children, mother and others.
- 2) Treatment of the eye-diseases.
- 3) Treatment of the diseases of the whole body.
- 4) Blood-letting and application of ointments, etc.
- 5) Treatment of poisons and bites of deadly poisonous animals with antedotes and charms.
- 6) Treatment of sexual diseases and medicines to increase the virile power.
- 7) Methods of safeguarding the youth and its strength.
- 8) Procedures to drive away Demons, Devils or Evil spirits by charms (Chapter II).

As regards medical education, at-Ṭabarī discusses mainly the essential qualities of a medical student stating that he should be handsome, intelligent, clever, respectful, kind generous, lean and thin, patient at the time of hardship, free from passion and jealousy, self-praise, mischief, lying, anger, laziness and back-biting. He should be clean, virtuous and friendly having full control on himself with good manners (Chapter III).

It has been stated by at-Ṭabarī that according to the Ayurveda, there are three humours or *Tridoṣa* viz. *Balgham*, *Kapha* or *phelgam*, or phelgm, *ar-Riḥ* or *vāyu* or *vāta* or air and *al-Murra* or *pitta* or bile. He adds that man is created with five basic elements which are *al-Arḍ* or *Ṙṭhṡvī* or earth; *al-Mā'* or *āpas* or water, *an-Nār* or *tejas* or fire, *al-Riḥ* or *Vāyu* (merut) or air; and *al-Hawā'* or *ākāśa* or ether. They are actually the *Pañcamahābhūta*. (Chapter V).

He states that according to *Nidāna* the body exists and is sustained by three humours called *Dus* or *Dosa*, seven body constituents called *Dhātū* or *Dhātu* and three waste products or *Mul* or *Malas*. Three *Doṣas* have been mentioned above and the seven *Dhātus* or elementary substances connected with digestion. They are *al-Ghīdhā'* or *Rāsa* (food), *ad-Dam* or *Rakta* (blood) *al-Lahm* or *Mānsa* (flesh) *ash-Shāhm* or *Medas* (fāt), *al-Azam* or *Asthi* or bones *al-Makh* or *Majjā* or marrow, and *az-Zara'* or *Śukra* or semen. The *Malas* or waste products are *ar-Raji* or faeces; *al-Bawl* or urine, *al-Irq* or sweat, *al-Makhat* or mucus; *ar-Riq* or saliva and the like (Chapter VI).

A long chapter is devoted to general principles of health and hygiene with daily routine from early in the morning till late at night which includes the brushing of teeth with a dentifrice, application of collorium to the eyes and hot oil through the nose; use of scent, meeting with religious and elderly people, working to earn ones livelihood, physical exercise, cold bath in summer and hot bath in winter, eating when one is actually hungry (Chapter VIII).

In this connection, a short chapter discusses fourteen superfluous matters and natural urges which should not be suppressed and discusses the harm caused by their retention. They are urine, excreta, nasty faltus, sneezing, belching, desire for eating and drinking, sleep, cough, vomiting, ejaculation, perspiration and what is sent down from the head (Chapter IX).

In this discourse there is a chapter explaining signs indicating long life and early death of a patient and the definition of disease (Chapter XXXII). There are seven chapters which deal with solid and liquid food specifically mentioning their quality and quantity to be taken. There are six variety of tastes: sweet or *Madhura*; sour or *Amla*; salty or *Lavana*; pungent or *Kaṭu*; bitter of *Tikta* and astringent or *Kaṣāya*. Of all these, sweet is the most useful for the body (Chapter XII).

A short chapter discusses the causes of thirst and adds that it is generally caused by heat (Chap XXVIII). One chapter explains the various harm caused to a healthy person

when he takes different kinds of food and drink in excess. It is added that when this is done, food and water become poison (Chapter X). One short chapter discusses the priorities in taking the different kinds of food (Chapter XIII).

There is a chapter on water where a difference is made between river water and sea water i. e., sweet and saline water. It is added that if the rain originated from river water, it is the best. An advice is given that water should be boiled for drinking purpose and one should not take too hot or too cold water. Patients suffering from the enlargement of spleen, jaundice, dropsy, abdominal pain or abscess should avoid drinking cold water. Drinking of cold water while taking food soothes the soul, makes the body healthy and helps in digestion (Chapter XI).

It is stated that at the time of drinking wine, the particular season is to be taken into consideration. Advice is given as to what drink should be taken before or after meals, and what should be eaten with different drinks. The benefit and harm caused by drinking wine are then discussed and moderation is recommended. According to Āyurveda, a pious man, physician, a ruler of a kingdom and one who suffers from consumption and a hungry man should not drink wine. The harm caused by drinking wine is equal to its benefit. The drinking of wine causes damage when a person drinks without any limit and does not possess sufficient strength to stand its effect (Chapters XIV and XV).

In the chapter on different variety of milk, it is stated that cow's milk is the best of all and buffalo's milk is cold and contains all the benefits of cow's milk. The latter is beneficial for the patients of Consumption, Astham, Gout and Chronic Fever. Then the merits and demerits of sheep and camel's milk are discussed (Chapter VII).

In a rather lengthy chapter aṭ-Ṭabarī discusses the steps to be taken for the preservation of health in the different seasons throughout the year. Two months make one season and there are six seasons discussed. He adds that they say that good health will be preserved if the cold season is very cold and summer season is very hot, if the spring is milding cold and the autumn is dry, otherwise diseases will appear. He has also discussed the seasons the twelve signs of the Zodiac and names the two specific planets which dominate each season (Chapter XVII).

Under physiology and embryology the origin of man, birth of animals, the embryo and its different parts are discussed. It is stated that according to their birth, animals may be divided into 4 kinds — birth by Womb, by Egg, by Seed and by Sweat (dirt) which correspond exactly with Jariyuja (born of womb), *Aṇḍaja* (born of eggs), *Udbhijja* (born of seeds) and *Svedaja* (born of sweat and dirt) which agree with the statement of *Caraka Saṃhitā* (Chapter V).

Man is stated to be created from five fundamental elements stated above and his body is made of phlegm, bile and wind. The food eaten is turned into blood, from blood

flesh (muscle) is made, from muscle fat is prepared, out of fat bone is made which is turned into marrow and from marrow semen and germ cell are formed (Chapter VI)

In five chapters, aṭ-Ṭabarī discusses the etiological factors of the diseases of the body. It is stated that anger, hatred and jealousy are the main causes of every disease.

Another important cause of ill-health, according to the knowledge of disease and their treatment revealed by God, is the imbalance (disproportion) of the three humours of the body.

Aṭ-Ṭabarī states that according to the book *Nidāana*, there are seven different causes of diseases. The first is hereditary as in Leprosy and Piles; the second is congenital, as the excess or deficiency in (number or size of) limbs; diseases also originate from the deficiency of the humours. Mental diseases appear due to psychological causes such as sorrow, anger and love. Excess of heat or cold of the season also cause diseases. Fatigue, unbearable worries or fear are causes of diseases. Epidemics like small-pox and plague appear as a punishment by God (lit. Heaven). But the one cause decreed (by God) which cannot be escaped is the old age leading to death. There is another cause external in nature, such as contact with devil, evil spirit and demon and injury and burns caused by fire. There are two kinds of death — one is sudden although people might have safeguarded themselves from all injurious and harmful agents. Injury and death are caused to people from quarters which they cannot conceive. The second is that which originate from external factors such as a stone thrown from an unknown place or a (wild) animal piercing (lit. spearing) someone and other like causes. Other causes of diseases and death as explained by Caraka are also discussed (Chapter XIX).

One chapter is devoted to a discussion of the stages (prognosis) of the disease. It is stated that diseases are of four categories, those that are cured quickly, those that take a long time to cure, those that are not affected by medicine but remain static and those that are not cured at all except by the will of God. The patient who desires to be cured quickly obeys the physician and likes him, one who is young and not very old and is not a glutton and his disease is neither communicative nor chronic and the humour by which the disease is caused is not agreeable with the temperament and season of the country.

The condition of a patient can be known by three methods, namely, by examination, by touching the body and by questioning. The meaning of examination of a patient is to see the colour (of his body), testing his senses, feeling his pulse (*nabḍ* or *nāḍī*) and by other signs of the disease which are visible, touching the body means to feel its heat or cold (temperature) its softness or stiffness. Questioning the patient means to ascertain the causes (etiology) of the disease, the time of its commotion, learn his weakness and strength and to know what diet and drink suit him and to ascertain what precautionary measures are to be taken and what would go against him. When these are known, treatment should be started to neutralize the particular humour which



causes imbalance. Over and above these, it is necessary to know that (climatic) conditions of country (in which the patient lives) (Chapter XXI).

There is a discussion of the diseases caused by the excitation of the wind and the times in which they occur. It is explained that the causes of flatulence are eating dry food which cause constipation, under-feeding, too much talking, anger retention of excreta, eating of grain with husk, too much drinking of water, continuous study of books, excessive coitus, late taking of dinner (night) and too much weeping.

The time of the excitation of the other two humours phlegm and bile, and the harm caused by them are also explained. The causes of such flatulence and the different kinds of solid and liquid diet which causes them are also mentioned. The different seasons and the time of day or night in which such excitation by one of the humours takes place are also stated.

One chapter discusses the effects of the excess (predominance) of a particular humour. If the wind is increased and becomes predominant, it causes leanness and black colour of the body, palpitation, excess of grief, sleeplessness and fear. Yellow color of the body, weakness of the heart, desire for cold articles, bitterness of the mouth, consumption, insomnia, obstinacy and heat are indications of the increase of bile. The symptoms of the excess of phlegm and its predominance are white colour (of the body), coolness, heaviness, non-functioning of the sense, the disorders of the functions of the body, excess of sleep, cough, asthma and retching. Redness of the body laughing too much and happiness signify the excess of blood Chapters XXII and XXIII).

Several chapters are concerned with the therapeutics of different diseases. In a chapter at the beginning of the discourse it is advised that the treatment (of a patient) should not be started in haste. One should not undertake the treatment unless one is well-experienced (in medical science) and possesses full knowledge of the medicaments because medicine in the hands of an ignorant person is like deadly poison. If he gives it more than the required dose or does not use it at the right time it will act as a killer. On the other hand, even poison becomes the life-saver (lit. elixir of life) in the hands of an experienced physician. If he makes the bark of a stem into powder or mixes it with a herb which modifies it, it would result in complete cure (Chapter IV).

The etiology of a number of diseases are discussed in different chapters. For example, hiccough, cough, diarrhoea, phthisis, fevers, diseases of women, their signs and symptoms are discussed in detail along with their treatment.

In discussing the modes of treatment at-Ṭabarī makes a difference between the diseases of the body and those of the soul. The object of treatment of the diseases of the soul is to bring peace and happiness to it and relieve it of grief and fear by sweet conversation helpful for the patient and by charms (which are uttered) as well as by (written) amulets which strengthens his soul and brings him hope.

As for the diseases affecting the body they should be treated with medicinal herbs and by proper dieting. Every treatment is of two kinds. The one is purification (removal of impurities) and the other is the use of sedatives. The purificatory treatment is of four kinds, namely vomiting, purgation, enema and use of snuff-medicine to draw them out. The sedative treatment is of seven kinds; increasing the abdomen heat, keeping the patient hungry or thirsty, making him tired (by hard work) or give him rest according to the requirement or making him sit in sunshine or at a place with sweet smell or at a cold place. If the disease is caused by wind or environmental pollution or by the wickedness of the spirit, the best treatment is continuous prayer (to God) and distribution of alms to the needy, sympathy shown to people, abstention from such sensual acts which are forbidden by God and the use of charm or spell (Chapter XXIV).

Two separate chapters explain the symptoms of cough and hicough their signs and symptoms and their treatment. It is stated that the cause of cough is (the excitation of wind) bile, phlegm and the dislocation of a bone. Then the causes of the excitation of the three humours and the three different sets of symptoms caused by them are discussed. The causes of the dislocation of bone and muscle are due to injury, epilepsy, the carrying of excessive weight which one does not have the strength to carry, excessive reading or excessive coitus. The general recommendation for treatment is that such drugs are to be used which are opposite in temperament to the etiological factors of the disease (Chapter XXVI).

In connection with the treatment of hicough it is recommended that the bone of a (domestic) quadruped and the thorn of a hedgehog or the feather of a peacock should be burnt and eaten mixed with honey. Another treatment is that giner water mixed with juice of the sugarcane be drunk and one mouthful of hot goat's milk is to be taken alternately. (Chapter XXV).

In a separate chapter the causes and symptoms of diarrhoea and phtthis have been explained. The symptom of loose motion are weakness of the body, pain in the umbilicus and the abdomen, indigestion and sometimes it may be dur to grief and fear. The symptoms of phtthis are seeing birds and monkeys in the dream and seeing dried fish while the patient is awake. Among other causes of phtthis are excessive coitus, grief, hard labour, fighting and poverty. They cause to sever some of the veins of the heart and thereby create a cavity. (Chapter XXVIII).

Two chapters are devoted to different fevers, their symptoms and their treatment. The causes of fever are wind, bile, phlegm, exhaustion, anger, fear, love, voluptuousness, witchcraft (lit. magic), curse of parents and saintly people and sunstroke (lit. hot wind). Different symptoms of fevers due to different causes are clearly defined. The symptoms of quartan fever are the back-ache and muscular pain, pricking (pain) in the flanks and the heart, disturbance in the ear and the rigidity of hands. Sometimes the temperature of the body is high and sometimes it is low. The symptoms of different kinds of fever caused by the three humours are also explained (Chapter XXIX).

It is recommended that every fever is to be treated by such diets and medicaments (lit. advice) which have opposite temperament than those of the factors causing the fevers. The fever caused by bile is to be treated by bitter drugs (lit. things) and the fever caused by phlegm is treated by biting things. In this way, at-Ṭabarī records the different treatment recorded by Indian physicians for different kinds of fever due to different causes. The treatment for the Quartan fever is to worship God the Exalted, to show kindness to parents, to meet the elderly and holy people, to recite from the book revealed by God, giving alms to the needy and the use of holy medicine. The treatment of fever caused by witchcraft and magic (lit. curse) should be by charm, recitation from revealed book and supplication and prayer to God. Two compound prescriptions are given — one for treatment of fever, one is to take equal quantity of red orpiment, Lahori salt and pepper powder very fine, mix with oil and make them into an ointment and the other is to take an equal quantity of asafotida and the fat of lion with some Lahori salt powdered very fine like collyrium and applied to the eyes of patients suffering from fever (Chapter XXX).

Several simple and compound drugs in regular prescriptions are recorded in a chapter entitled medicines for curing diarrhoea, vomiting and the treatment of fevers (Chapter XXXIV).

One short chapter is devoted to blood-letting and when it is done how to stop the flow of blood (Chapter XXXI).

The treatment for the disease of entrance of the uterus and cleaning of the face are discussed in some detail. Regarding the disease of the entrance of the womb, the following is recommended. Branches of the ligrus should be taken, dried, thinly powdered and mixed with old or fresh pure butter of the cow and used as a drink for several nights; or some green Ferengemeshk (Ram Tulsi) should be pounded with Shhsafram and its juice should be mixed with four tolas (Ar. eight *mithqāls*) of fresh sugar and a quantity of pure water should be added and then drunk early in the morning for three days before food.

Specific simple and compound medicines are recommended for treatment of (blood) discharge from womb and for women who have given birth to children, so that they might become like vergins again. Different kinds of drugs are prescribed in order to cure other diseases of the womb and remove its offensive smell. It is stated that scents with good smell are to be used for taking away a woman's aversion for coitus and make their husbands love them. Some drugs are suggested which will help a woman to become pregnant and have two children (twins) at a time.

Some medicines are recommended which purify colour of the face (of a woman) and makes it look like a moon or like the flame of fire. These medicaments are recommended on the basis of a book by an Indian lady doctor who could not yet be identified (Chapter XXXV).

One chapter discusses the signs and symptoms of long life and early death and the definition of disease. After recording the physical signs of a man indicating long life at-Ṭabarī adds.... if he is devoted to generosity, chastity truth equality and (works for) the welfare of the people then he will live longer than other men of the same age.

Among the signs of approaching death are the changes in the general condition, character and external appearance of the patient especially deformity of the parts of the body (organs). (Chapter XXXII).

A chapter discusses the moral principles and wise counsels which people should follow for maintaining good health. They have been summarised from books of the Indian physicians at first listing all acts which are prohibited. It is stated that an intelligent person should not eat, sleep or have sexual intercourse at the time of sun-rise and he should pray at the time of sun-rise and sun-set. He should not live in a country where the following four things are not found: a just king, an experienced physician, medicine and running water. One should not earn his livelihood by dishonest (lit. unworthy) and questionable means.

It is stated that the root cause of all the sins are ten acts which are committed by hand, tongue and the mind (lit. heart). Those that are committed by hand are murder and theft; those that are committed by the tongue are the backbiting, lying, laughing at others, abusing and giving false evidence and those that are committed by the mind are, unbelief in God, the Exalted, jealousy, enmity and evil thoughts. One should guard himself from all these things and he should keep aloof from those who are apt to commit them (Chapter XVIII).

A chapter deals with evil spirits such as devils and demons who are the main cause of many diseases. They are found in lonely and dark places or in a ruined place of worship or in a tomb of the grave-yard. They overpower the people during full moon (night) or in (night) before it. The signs of an evil spirit possessing some one (adult) or child are discussed and different kinds of medicines are prescribed for getting rid of these demons and devils. Insects are also identified as demons and devils and ways and means have been laid down to drive them away. The author adds that he does not believe in some statements made on the subject. (Chap. XXXIII).

The last chapter is the longest devoted entirely to pharmacopea about the compound medicines and their modes of preparation. The author gives the names of many Indian drugs and chess-board like tables on the composition of these remedies. The object of the first compound prescription is to restore youth and virile power in which there are eleven different medicines. Then the advantages of the medicine (*Brahmi Rasayan*) are explained. Its preparation with other drugs will make an old man young who will put on fat. This is followed by a discussion of *Salājeet* and how it has to be cleaned. Different varieties of preparation with *Salājeet* are recorded. It is explained as to how steel, gold and silver are to be converted into burnt ashed (*Bhashma*). A compound preparation called *Mehdiana* or *Anwasdara* is explained

with its different ingredients which gives pleasure and strength to the heart (Chapter XXXVII).<sup>38</sup>

#### NOTES AND REFERENCES

- <sup>1</sup>See Ibn Abī Uṣaybia', '*Uyūn al-Anbā' fī Ṭabaqāt al-Aṭibbā'* chapter entitled *Aṭibbā' al-Hind* (Physicians of India), Beirut reprint by Nizār Rada (1965) pp. 792 at pp. 473-477. Studied by M.S. Khan, "An Arabic Source for the History of Ancient Indian Medicine" *Indian Journal of History of Science*, Vol. XVI/1, pp. 47-56 (New Delhi, May 1978)
- <sup>2</sup>See *Firdaus al-Ḥikmat' or Paradise of Wisdom* of 'Alī b. Rabban aṭ-Ṭabarī, Edited by M.Z. Siddiqi, (Berlin, Sonne Press, 1928) pp XI + 624 × Alif to Kal. This discourse on the *Āyurveda* covers pp. 557 to 624 of this edition.
- <sup>3</sup>The quotations from the classical *Āyurvedic* works and reference to them in *al-Hāwī* the first encyclopedia of Medical Science of which 24 Vols. have been published so far and in the well-known *al-Qānūn fit-Tibb* of Abū 'Alī ibn Sīnā (d. 430/1037) and in order works of Ūnānī medicine have to be collected and studied. Regarding the Barmacides specially Yahyā ibn Khālid al-Barmakī (d. ca 190/805-806) inviting the Pandits from India to Baghdad see Ibn an-Nadīm p. 345 *Kitāb al-Fihrist* ed. by Gustav Flügel (Leipzig 1872; Beirut reprint n.d.). See also M.Z. Siddiqui *Arabic & Persian Medical Literature* (Calcutta, 1958 Chapter IV pp. 30-45.
- <sup>4</sup>*Op. cit.* Vol. I, p. 296 where he is mentioned as 'Alī ibn "Zayl" which is the corrupt form of "Rabban". F. Wu'stenfeld also read "Zayn" for "Rabban"; see his edition of the *Mu'jam al-Budldān* by Yāqūt al-Hamawī, Vol. II, 608, Vol. III (Leipzig, 1868) p. 507.
- <sup>5</sup>Edited by Md. Kurd Ali (Damascus, 1365/1946) pp. 22-23. The editor states (Page 22 foot-note 1) on the authority to *Nakt al-Himyān fī Nukat al-'Umayyān* by Khālīl ibn Aybak aṣ-Ṣafādī (d. 745/1345) that at-Ṭabarī had become blind like ar-Rāzī narrating a story for the cause of his blindness.
- <sup>6</sup>*Irshād ar-Arīb* ed. by D.S. Margoliouth, 7 Vols, GMS. VI (1907-1927); Vol. II, 279; Vol. VI, p. 429. In both places the editor has read "Zayn" in place of "Rabban".
- <sup>7</sup>*Ta'rikh al-Ḥukamā*, ed. by Julius Lippert (Leipzig 1320/1903) p. 231.
- <sup>8</sup>Edition cited in note 1 above. See p. 414. His correct name is recorded and the short biography is borrowed from Ibn an-Nadīm.
- <sup>9</sup>For the times in which Sahl and his illustrious son 'Alī lived see *Ta'rikh-i-Ṭabaristān* by Bahā' ad-Dīn Ibn Isfandiyyār ed. by 'Abbas Iqbāl (Tehran, 1328 A.H. Shamsi) Vol. I, pp.72,90-91, 206-207; 238-243.
- <sup>10</sup>See *Firdaws al-Ḥikmah* p. 1 where at-Ṭabarī states that his father was interested in philosophy and his father and forefathers practised medicine.
- <sup>11</sup>Ibn Isfandiyyār, *op.cit.* p. 130.
- <sup>12</sup>Ibn an-Nadīm (*loc.cit.*) records that he embraced Islam at the hands of Caliph al-Mu'ṭaṣim which is repeated by ibn al-Qiftī. The life and times of at-Ṭabarī have been discussed thoroughly by Md. Zubayr Siddiqui, see *op. cit.* pp. 46-54. See also Maḥmūd Najmābādī, *Ta'rikh-i-Ṭibb dar Īrān Pas az Islām* (Tehran: 1353 A.H. Shamsi) pp. 316-324. See his *Kitāb ad-Dīn wad-Dawlah*, Text edited by Alphonse Mingana from an apparently unique MS in the John Ryland's Library, Manchester, (Cairo: Muqtataf Press, 1342/1923) pp. 144, See Alphonse Mingana, *The Book of Religion and Empire: A Semi Official Defence and Exposition of Islam written by order at the court and with the assistance of the Caliph Mutawakkil (847-861 A.D.)* by 'Alī aṭ-Ṭabarī (Manchester: University Press, 1922) pp. 174. and *Ibid Remarks on Ṭabarī's Semi official Defence of Islam* (Aberdeen, 1925).
- <sup>13</sup>Ibn al-Qiftī, *loc. cit.*, Sami K. Hamarneh, "At-Ṭabarī, Abu'l-Ḥasan 'Alī ibn Sahl Rabban" in the *Dictionary of Scientific Biography*, Chief Editor, Charles Coulstor Gillispie (New York, 1980), Vol. XIV pp. 230-31.
- <sup>14</sup>See note 12 above. This book contains extensive quotations from the Bible, the Quran and authentic Ḥadith collections.
- <sup>15</sup>See *Ta'rikhar-Rusul wa'l-Mulūk*, ed. M.J. De Goeje and others, 15 Vols. (Leiden, 1879-1901), 3rd series p. 1276. Ibn al-Qiftī (*loc. cit.*) states that his father Sahl was a learned Jew which is incorrect.
- <sup>16</sup>See the Arabic Introduction to the *Firdaws al-Ḥikmah* ed. cited p. Toi (b) where it is stated that he died after

850 A.D. because at-Ṭabarī had himself stated that he completed the writing of the *Firdaws al-Hikmah* in the third year of Caliph al-Mutawakkil's reign.

<sup>17</sup>Sami K. Hemerneh, *loc. cit.* above. See also Khayr ad-Dīn Zirekli, *Al-A'lām, Qāmūs at-Tarajim*, 3rd ed. (Beirut, 1390/1970), Vol. V, p. 99

<sup>18</sup>Ibn al-Qifṭī (*loc-cit*) and other medieval writers have committed this error. Without doubt, ar-Rāzī was born after the death of at-Ṭabarī. The editor makes this erroneous statement in the Arabic introduction (see p. Toi (b) Max Meyerhof has also stated that ar-Razi could not have studied under at-Ṭabarī. See "'Alī ibn Rabban at-Ṭabarī ein persischer Arzt des 9 Jahrhunderts n. chr. *ZDMG*, New Series, Vol. X (no. 95) (Leipzig, 1931) pp. 38.68.

<sup>19</sup>See note 12 above.

<sup>20</sup>See Uri's Catalogue of Aratic Mss at the Bodleian Library, Oxford, Vol. I, p. 578. MS No. Marshman 413.

<sup>21</sup>See note 2 above.

<sup>22</sup>It is entitled *Kitāb al-Kunnāsh wa Firdaws al-Hikmah li-Ṭibb*, serial no. 6257 Landberg no. 266. See W. Ko'niglichen Bibliothek zu Berlin, Vol V (Berlin, 1893) pp. 513-515.

<sup>23</sup>See the Catalogue of Arabic MSS at the British Museum now Library; (London) pp. 217-221; MS No. Arundel Or. 41. See 256 verso to 276 recto.

<sup>24</sup>See Wilhelm Pertsch, *Die Arabischen Handschriften Der Bibliothek zu Gotha* (Gotha, 1881), Vol. III, pp. 456-57, Serial No. 1910 Catalogue no. Arabe 755.

<sup>25</sup>Hakīm Md. Ajmal Khān, *Fihrist Kutub 'Arabī Kitābkhāna-i Riyāsat Rāmpūr* (Rāmpūr, 1902) p. 489 MS No. 171. The details of these are not given by the editor. This writer is trying but could not yet succeed in locating the MS belonging to the late Hakim Khwaja Kamaluddin.

<sup>26</sup>See his article cited in note 13 above, p.231. Hamarneh competely ignores the Gotha and Indian MSS.

<sup>27</sup>See Appendix 2 pp. X-XI. In the commentary, an attempt will be made to identify the sources of this discourse in the classical *Ayurvedic* works.

<sup>28</sup>See the Arabic introduction pp. yad-yah. He also mentions those physicians and authors flourishing after at-Ṭabarī who knew the *Firdaws al-Hikmah* or borrowed information from it. The editor raises the question as to how there from it. The editor raises the question as to how there can be similarity in several passages in the *Firdaws al-Hikmah* compiled around 850 A.D. and Ibn al-Wahshiyah's *al-Falahat an-Nabatiyah* which was written in 904 A.D. The most reasonable explanation for this obvious anomaly is either Ibn al-Wahshiyah borrowed from at-Ṭabarī or they both used a common source which is not available now.

<sup>29</sup>*Firdaws al-Hikmah*, p. 557

<sup>30</sup>See *Ibid*, pp. 557, 558, 562, 563, 565, 578.

<sup>31</sup>*Ibid*, p. 591; Ibn Abi Usaybia, *loc. cit.* Ibn an-Nadim, *op. cit.* I, 303.

<sup>32</sup>*Firdaws al-Hikmah*, Chap XVIII, pp. 576-578.

<sup>33</sup>*Op. cit* p. 271. These names have become so corrupt in Arabic transcription that it is difficult to identify them in classical *Ayurvedic* sources. Ibn an-Nadim records the names of three other Indian scientists also.

<sup>34</sup>Ibn an-Nadim, *op. cit.* p. 303, Ibn Abi Usaybia borrowed these names and titles. See not 1 above.

<sup>35</sup>See D. Sourdél, "al-Baramika" in the *Enc. of Islam*, New ed. (1960), Vol I, pp. 1033-1036.

<sup>36</sup>Ibn an-Nadim *Loc. cit.*

<sup>37</sup>*Firdaws al-Hikmah*, Edition cited, 557.

<sup>38</sup>Summary of thirty-six chapters covering pp. 557-600.