

# History of Medicine in Iran

## The Oldest Known Medical Treatise in the Persian Language

(‘Hedayat al-Motaallem in fi-Tebb’ by Abubakr Rabi-ibn Ahmad Akhawayni Bukhari)

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### ABSTRACT

In this article, we describe some features of a rediscovered medical text written in old Persian (Farsi Dari) over one thousand years ago and discuss some of its significant attributes in relation to the historical background of the Iranian scientific and literary renaissance of that era.

### KEYWORDS

History of medicine; Language; Iran

### INTRODUCTION

In 1879 the scholar of oriental studies, Charles Rieu (1820-1902) mentioned the ‘Hedayat al-Motaallem in fi-Tebb’ (the Students’ Guide in Medicine) written by Abubakr Rabi-ibn Ahmad Akhawayni Bukhari in his ‘Catalogue of the Persian Medical Manuscripts of the British Museum’. In recent times, this acknowledgement seems to mark the rediscovery of an old medical text written in Persian which had remained obscure for many centuries. In 1910 Adolf Fonahn, a German Orientalist, discovered a copy of the same text in the Fateh Library, Istanbul, Turkey dated 520 AH/1128 CE.<sup>1</sup> Currently, only three copies of this book are known to exist; the oldest in the Bodleian Library of Oxford (Ms. No. 37) which is dated 478 AH/1085 CE (Figure 1), the second in the Fateh Library in Istanbul (written in 520 AH/1128EC)

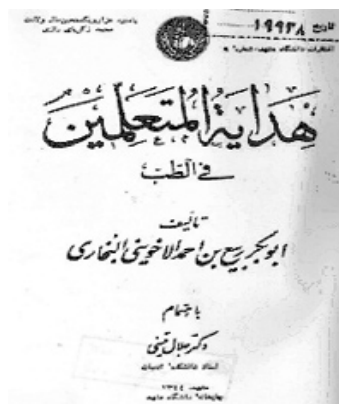
and the third manuscript in the Malek Library in Tehran, Iran.<sup>2</sup>



**Fig. 1:** The first and last page of the Bodleian Library's manuscript of Hedayat al-Motaallem in which was written in 478 AH/ 1085 CE.<sup>2</sup>

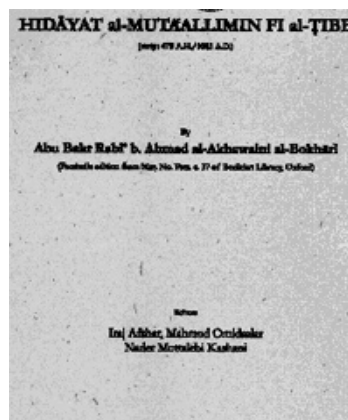
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In 1965, the *Hedayat al-Motaallem* was published and edited by J. Matini, a professor of literature at Ferdowsi University, Mashhad, Iran. Matini's edition was based on the Bodleian Library's manuscript and the text was checked with the manuscripts of the Fateh Library of Istanbul as well as with that of the Malek Library in Tehran (Figure 2).<sup>3</sup>



**Fig. 2:** The front cover of the 'Hedayat al-Motaallem fi Tebb' edited by J. Matini, first edition, Ferdowsi University, Mashhad, Iran, 1965.

In 2008, a facsimile edition of the Bodleian manuscript was published in Tehran by I. Afshar, M. Omidshar and N. Mottalebi-Kashani which contained a codicological commentary by I. Afshar as well as a bibliography (Figure 3).<sup>1</sup>



**Fig. 3:** The facsimile edition of the Bodleian manuscript published in Tehran in 2008 by I. Afshar, M. Omidshar and N. Mottalebi-Kashani.

### The author

Little is known of the life and career of Abubakr Rabi-ibn Ahmad Akhawayni Bukhari except what can be gleaned from the pages of his own book. It seems that he practiced medicine for about twenty-three years and was referred to as a 'physician to the insane' (old Persian: Bejeshk-e Divanehgan) due to his adeptness in treating melancholy. He studied medicine under Abul-Qasem Maqanei who was a student of Zakarya Razi (865-925 CE), known in the west as Rhazes.<sup>4</sup> He also mentioned that he has written a pharmacopoeia (Qarabadyn=Pharmacopoeia) as well as a treatise on the pulse (Nabz) and another on dissection (Tashrih) which are no longer available. His date of birth and death are not known but it has been estimated that he wrote *Hedayat al-Motaallem* towards the end of his life, circa 373AH/983-4 CE, and from his name it is assumed that he lived in Bukhara, Transoxiana, part of the Samanid Empire (874-999 CE), located in present day Uzbekistan.<sup>3</sup>

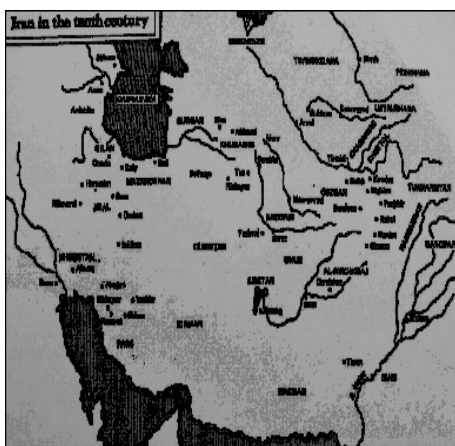
### Historical background

In order to appreciate the significance of the writing of scientific or medical texts in Persian, as opposed to Arabic in the Islamic world, a brief historical background may be useful. After the Arab invasion of Iran (644 CE) and particularly during the Umayyad Caliphate in Damascus (661-750 CE), many Iranians fled to Transoxiana (called Fararud in Persian and Mawara'un-Nahr in Arabic, located in Central Asia) in order to escape from the Arabs and their rule. They took with them the old language (Farsi Dari) of the Sassanian Court, which later spread to become the lingua franca of that region, displacing local languages such as Sogdian<sup>5</sup> (Sogdiana or Sogdia was a part of the ancient Iranian Empire). Within this eastern part of the pre-Islamic Sassanid empire (226-652 CE) more than 250 years after the Arab invasion, a native Iranian dynasty,

the Samanids, established a new empire that lasted around 128 years (874-999 CE) in Central Asia and Greater Khorassan. Although the Samanid converted to Islam, they maintained the Iranian language, customs and social mores, and in fact, during this period there was a renaissance of Iranian culture and science. The major cities of this Eastern Empire were Samarkand and Bukhara (Uzbekistan), Balkh (Afghanistan) and Neishapur of greater Khorassan (Iran), Merv (Turkmenistan) as well as Shahr-e-Rey (Rhagae in Latin, near Tehran) and Isfahan (central Iran) (Figure 4: A & B).



**Fig. 4: A.** Territory of the Samanid dynasty (874-999 CE). (Source: <http://en.wikipedia.org>)



**Fig. 5: B.** Map of Iran in the tenth century CE. (Source: *The Golden Age of Persia*. By R Frye, Weidenfeld and Nicolson, London 1975)

During this period of renaissance, several Iranian scholars of world reknown emerged

from this eastern Samanid empire including physicians such as: Ali ibn Sahl-e Rabbān Tabarī (ca. 838–870 CE), Zakaryā Rāzī (865–925 CE) or Rhazes, Ali ibn Abbas Majoosi Ahwazi (died 982 or 994 CE) known in the west as Haly Abbas and Abu Ali Sina (980–1037 CE) the reknown Avicenna in Europe, as well as the mathematician Khwarizmi (780–850 CE), the polymath Abu Rayhan Biruni (973–1048 CE), and the astronomer/mathematician Omar Khayyam (1048–1122 CE) who is widely known for his poetry (written in Persian) through Fitzgerald's translation of his quatrains.

Nearly all of these scholars wrote their most important works in Arabic which was the lingua franca of the far-reaching Islamic empire, extending from the Indus valley in the east through North Africa to Andalusia in Spain. Although during the Samanid era, the poets wrote their works in old Persian, yet very few physicians or scientists wrote their treatises in Persian and those physicians, such as Jorjani and the polymath Biruni who did write some of their works in Persian, were chided by their peers for having done so. Thus they were forced to translate some of their works into Arabic in order to reach a wider readership.<sup>6</sup>

### Some significant features of the book

It is within this historical background that 'Hedayat al-Motaallemin fi Tebb' of Akhawayni Bukhari, written in old Persian, shines as a beacon of significance. Unlike the books written in Arabic at that time by the Iranian scholars and physicians, this book was never translated into Latin and therefore was obscure in the west but remained a significant medical text in Iran for several centuries.

Although not one of the great encyclopedic medical texts like 'Al Hawi' of Razi or the 'Cannon' of Avicenna, yet Hedayat al-Motaallemin has several points of significance in medical literature.

In the first instance, it is a brief yet comprehensive text written as a guide for medical students and in this respect it may be the first student's manual in the history of medical writings. Its contents are practical and pragmatic rather than theoretical or philosophical like those of Galen or Avicenna. Rather like Razi's 'Al Hawi', he states what other physicians before him have recommended and then adds his own observations and experiences in treatment of diseases as well as his failures with modesty. Nezami Aruzi (1110-1161 CE), an Iranian poet and prose writer, in the section on medicine in his book, 'Chahar Maqaleh' (Four Discourses), describes the Hedayat of Abubakr-e-Akhwayni as a medium text, small in volume such that it could be easily carried by any physician when visiting his patients and used as a reference manual, "as memory cannot be trusted on all occasions".<sup>7</sup> A further point of interest is the literary prose style which exemplifies the Farsi of the Samanid period as well as the medical terminology which Akhwayni Bukhari innovated or translated from Arabic, thus setting a precedent for his followers. To give but one example is his use of the word 'pormiz' for diabetes mellitus which is a compound Persian word consisting of por- meaning 'poly' and miz- for urination which indicates the polyuria in diabetic patients.<sup>1</sup>

The book itself consists of three major parts and 183 subsections<sup>8</sup> wherein the author describes the views of his predecessors such as Hippocrates (460-377 BCE), Galen (130-199 CE) and Hunayan-ibn-Ishaq (808-873 CE) known as Johannitus in the West (who was an active translator of Galen's medical works into Arabic),<sup>9</sup> and Akhwayni who has described his own clinical views and experiences, much in the style of Razi before him. Akhwayni's writings are not didactic but practical and mainly based on his own experience, yet steeped in ancient Zoroastrian as well as Greek medical practices.

### Excerpts

In order to understand the flavor of his method of writing the following excerpts may be illustrative:

- Addressing his son for whom he has written the book he says: "For you, my son, who requested me to write a book on medicine that would be light and simple so that it shall remain for you as a memento from me and also useful to others, I have written this book."<sup>2</sup>
- And again to his son he writes: "All that I have written in this book are what I have experienced myself unless I write so-and-so has said such which means that I had no personal experience of it and that you must judge for yourself."<sup>2</sup>
- He emphasizes that medicine is the art of maintaining a healthy body and once it has been disturbed by illness, to return it again to health.<sup>2</sup>
- There is a section of Hedayat al-Motaallemin devoted to the beneficial effects of exercise and sports for both young men and girls including traditional physical games.<sup>2</sup>
- In the section on insanity, he describes examples of those who profess supernatural powers or pretend to be prophets or great rulers or kings and those who believe to be a particular animal and behave like one. He also quotes Galen as describing those who fear that the sky shall fall down and thus walk around with their hands above their heads to protect themselves.<sup>2</sup>
- In the section on 'Sarsam' (meningitis), he describes the clinical findings of fever, headache and loss of consciousness and mentions its cause as inflammation of the covering of the brain (meninges).<sup>2</sup>
- There is very little regarding surgical operations in the book, but amongst the few examples is cutting of the abnormally short frenum of the tongue which restricts its movement.<sup>2</sup>



**Conclusion**

We have briefly described a rare and recently rediscovered text, written over one thousand years ago, in old Persian (Farsi Dari) as a manual and guide for medical students. We have also mentioned its literary value as an early example of an old Persian manuscript relating to the revival of the Iranian language during the Samanid era of Iran. These characteristics define 'Hedayat al-Motaallemin fi Tebb' as an important early medical document in the transition of Iranian medical texts from Arabic into Persian.

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**CONFLICT OF INTEREST**

The authors declare no conflict of interest related to this work.

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