

ORIGINAL ARTICLE

Ali Ibn Abbas / Haly Abbas and the Transmission of Perso-Islamic Medicine to the West

Abstract

Iranian physicians stood at the forefront of medical innovation during the Islamic Golden Age of Medicine (9-11 CE). They played a pivotal role in the development and prosperity of medicine within the Muslim empire through their extensive contributions to written masterpieces, significantly enriching the medical knowledge of the era. Furthermore, they helped Western medical traditions flourish by translating these works into Latin. 'Alī ibn al-'Abbās al-Majūsī al-Arrajānī, known in the West as "Haly Abbas," was one of the Iranian physicians of the era. His only work, *Kitāb Kāmil al-ṣinā'ah al-tibbīyah* or *al-Malakī* (The Royal Book), was a great medical encyclopedia that delved into both theoretical and practical aspects of medicine – which was considered the most comprehensive book on Persian Medicine before Avicenna's *al-Qānūn*. *Al-Malakī* played a pivotal role in medical education across the Muslim world and Europe. This study is based on a library research method, drawing from a thorough review and analysis of relevant sources.

Key words: Haly Abbas, Persian Medicine, Islamic Golden Age of Medicine, *al-Malakī*, History of medicine, Islam, Physicians

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Introduction

The golden era of Perso-Islamic medical knowledge – from the 9th to the 11th AD – marked a period of exceptional progress in medicine. Prior to this era, non-Muslim scholars largely dominated medical practice. Nevertheless, Muslim physicians, mostly Iranians, rose to prominence from this time on. As a result, scholars like ‘Alī ibn Rabban al-Tabarī, Abū Bakr Muḥammad ibn Zakarīyā al-Rāzī (Rhazes), ‘Alī ibn al-‘Abbās al-Majūsī al-Arrajānī (Haly Abbās), and Ḥosayn ibn Abdullah ibn Sīnā (Avicenna), regarded as the four pillars of Muslim medicine (Browne, 1921, pp. 33-64), were all Iranian, representing Iranian culture and thought. This study addresses the life and work of Haly Abbās, an illustrious Iranian physician from the 9th and 10th centuries who played a significant role in the golden era of medical science.

The life of Haly Abbās

Little information about the life and status of Haly Abbas is available in historical sources. We have found the most substantial details in the preface of his seminal work, *Kitāb Kāmil al-ṣinā‘ah al-ṭibbīyah* (lit. *Complete Book of the Medical Art*), also known as *al-Malakī* (*The Royal Book*). After initial salutations, Haly Abbas introduces himself in the text, writing, “This is the first essay of the first section of the *Kāmil al-ṣinā‘ah al-ṭibbīyah*, known as *al-Malakī* (*The Royal Book*) written by Haly Abbās, a physician and the pupil of Abū Māhir Mūsā ibn Sayyār al-Majūsī.” (Majūsī Ahvāzī, 2009, Vol. 1, p. 1) Haly Abbās, contemporary with ‘Azod-al-dawla, Abū Šojā’ Panāh Ḳosrow (949-983 AD), the greatest Buyid monarch and the most powerful ruler in the Islamic East in the last years of his life (Bürgel, and Mottahedeh, 1989, pp. 265-269; Faqīhī, 1968), dedicated his work *al-Malakī* to the ruler’s scriptorium in Shīrāz. Following the customary greetings to the Prophet of Islam and his household, Haly Abbas praises ‘Adud al-Dawla in his book (Majūsī Ahvāzī, 2009, Vol. 1, pp. 2-3). During the reign of ‘Adud al-Dawla, the Buyid dynasty reached its zenith in terms of political influence and cultural development (Bürgel, and Mottahedeh, 1989, pp. 265-269; Busse, 1975, pp. 272-273). A patron of science and knowledge, ‘Adud al-Dawla took pride in studying under the most outstanding scholars of his time. (Bürgel, and Mottahedeh, 1989, p. 287) His palace had a specially designed hall where scientists could engage in intellectual debates. The scholars received salaries and accolades, and many prominent figures gathered at his court to produce scholarly works under his patronage (Faqīhī, 1999, pp. 46-47). The ruler invested significant resources in promoting cultural activities, constructing libraries and hospitals, and providing stipends for scholars and men of letters. (Faqīhī, 1999, pp. 46-47)

Historical sources and biographies of physicians do not provide a specific birth date for Haly Abbās. However, since he was the physician of ‘Azod-al-dawla, Abū Šojā’ Panāh Ḳosrow (372-338 AH/ 949-983 CE), he must have lived circa the end of the third century or the beginning of the fourth century of the hegira. Information regarding his date of death is scarce, but it is surmised that he passed away after 384 AH/ 994 CE, possibly in Baqdād or Shirāz. (Najm-Abādī, 1974, pp. 444-445, 456)

In *Tārīkh al-Ḥukamā’*, Ibn al-Qifṭī (1167-1248 AD) reports:



Haly Abbās was a learned and accomplished physician from Fārs (Persis). Under the tutelage of Šaykh Abū Māhir, also from Fārs, Haly Abbas diligently studied the works of ancient scholars. He penned al-Malakī, a valuable book containing theoretical and practical knowledge in good order, and dedicated it to ‘Azod-al-dawla. The book was highly regarded and widely read during his era until Avicenna’s al-Qānūn emerged as a prominent text in the field. (Ibn al-Qiftī, 1999, p. 232)

Ebn Al-‘Ebrī, Abū’l-Faraj (Syr. Bar ‘Ebrāyā, Lat. Bar Hebraeus) (122-1286 AD), the great Christian scholar and historian, writes about al-Majūsī:

Haly Abbās, an erudite and accomplished individual, was from Persia. Under the instruction of the Persian sage, Abū Māhir, Haly Abbas assiduously studied and wrote the medical book al-Malakī, which he presented to ‘Azod-al-dawla ibn Būya. The book gained recognition as a valuable and scholarly medical encyclopedia known as konnāš. However, as mentioned by Ibn al-‘Ebrī, while al-Malakī was widely read and taught initially, its prominence diminished upon the introduction of Avicenna’s al-Qānūn.

Ebn al-‘Ebrī also states that *al-Malakī* focused on the practical aspects of medicine, whereas *al-Qānūn* dealt more with theoretical aspects. (Ebn al-‘Ebrī, 1994, pp. 304-305)

In a brief account of Haly Abbas and his work, Ibn Abī Oṣaybe‘a (1204-1270 AD) notes:

Alī ibn al-‘Abbās al-Majūsī, originating from Ahvāz, was a great physician renowned for his knowledge and art of medicine. His well-known book, al-Malakī, was dedicated to the King of Kings ‘Azod-al-dawla Panāh Ḳosrow, ibn Rokn-al-dawla Ḥasan ibn Būya Daylami. It is an invaluable book in clinical [practical] and theoretical medical knowledge. He learnt medicine from Abū Māhir Mūsā ibn Sayyār. The book al-Malakī [or Kāmil] consists of twenty chapters. (Ibn Abī Oṣaybe‘a, 1971, p. 455)

The 12th-century author, Niẓāmī ‘Arūzī, in his *Čahār maqāla*, refers to the *al-Malakī* as an essential and comprehensive medical text that every physician should seek out and study. He also refers to other brief, medium, and elaborated books within medical literature. Niẓāmī shares an anecdote about the treatments provided by the anonymous “author of *al-Malakī*,” referring to him as “the physician of ‘Adud al-Dawla in Pārs, Shīrāz” and “a great physician” without explicitly mentioning his name (Neẓāmī, 1990, pp. 109-110, 124-125)



The birthplace of Haly Abbās: Ahvāz or Arrajān

There are two manuscripts of Haly Abbas's work; one is preserved in Astān-e Quds Library in Mashhad, Iran (dated 22 Muḥarram, 869 / 22 September 1464) and another in Malik Library, Tehran, Iran (dated 28 Ramaḍān, 1051 / 31 December 1641), along with another manuscript whose first and second parts are dated Ramaḍān, 941 (April 1535) and 944 (1538), respectively. These manuscripts refer to the author as Abi al-Ḥasan 'Ali ibn al-'Abbās al-Majūsī al-Arrajānī (Ahvāzī, 2008, pp. 25-46). Given this, Arrajān, the ruins of which are near present-day Bihbahān, in Kūzestān province (Gaube, 1986, pp. 519-520), is assumed to be the birthplace of Haly Abbas. While some sources, such as Ibn al-Qiftī, claim that Haly Abbas was "originally from Fārs" and a student of "a šaykh from Fārs" (Ibn al-Qiftī, 1999, p. 232; Ebn al-'Ebrī, 1994, pp. 304-305), others like Ibn Abī Oṣaybe'a attribute him to the city of Ahvāz (Ibn Abī Oṣaybe'a, 1971, p. 455). Most studies on the history of medicine in Persia and the Muslim world support the assertion that Haly Abbas was born in Ahvāz (Sezgin, 1970, p. 320; Nasr, 2001, p. 208; Ullmann, 1997, p. 44). Regarding the epithet "Ahvāzī," which suggests a connection to Ahvāz, it should be noted that in the post-Islamic era, the entire region of Kūzestān was frequently referred to as Ahvāz in various historical and geographical accounts. In these sources, the city of Ahvāz itself was often named Ahvāz or Sowq al-Ahvāz (al-Tabarī, 1999, pp. 11-12; Al-Ya'qūbī, 1883, Vol. 1, pp. 179, 198, 201; Vol. 2, pp. 180, 277, 328, 332; Bal'amī, 2001, Vol. 1, pp. 251, 461, 475, 498, 602; Vol. 2, pp. 760, 768, 850, 876)—the designation Kūzestān was still used alongside "Ahvāz," however. (Ibn al-Balkhī, 1921, pp. 60-64, 147-162; Mustawfī of Qazwīn, 1915, pp. 109-112) During the Muslim era, the label Ahvāzī did not signify that the person was born in the city of Ahvāz. Instead, it occasionally indicated that the person was born in a town in the realm of Kūzestān. Consequently, Ibn Abī Oṣaybe'a's reference to Haly Abbas as being from Ahvāz does not definitively confirm his birthplace as the city of Ahvāz itself. Several copies of the *al-Malakī* are testimony to the fact that the kunya or teknonym of Haly Abbās was al-Majūsī al-Arrajānī (Majūsī Ahvāzī, 2009, Vol. 1, pp. 25-46). This teknonym gives a clear indication of the fact that he was born in Arrajān, which, during certain periods, was separated from Fārs and joined Kūzestān during the Sasanian and early Muslim era. However, Arrajān was still considered one of the five key areas of the Fārs Province (Gaube, 1986, pp. 519-520). Thus, the title "Ahvāzī" associated with Haly Abbas more likely refers to his birthplace being within the region of Kūzestān, specifically the city of Arrajān, rather than the city of Ahvāz itself.

The religion of Haly Abbās; Islam or Zoroastrianism

In the preface to his book, as well as at the beginning and end of some of his essays, he explicitly calls himself 'Alī ibn 'Abbās al-Majūsī (Majūsī Ahvāzī, 2009, Vol. 1, pp. 1-3), which indicates his religion: Zoroastrianism (Majūsī meaning "Zoroastrian"). This provides an essential clue to his religious identity. As was shown before, some other historical accounts called him al-Majūsī ("Zoroastrian"). (Ibn al-Qiftī, 1999, pp. 304-305). Consequently, some researchers consider him Zoroastrian



despite his and his father's Arabic name and Muslim associations. (Sezgin, 1970, p. 320; Ullmann, 1997, p. 44; Farshād, 1987, p. 690; Tāj-bakhsh, 2002, p. 441) Nevertheless, the use of the phrase "*bismillā-he al-rahmān-e al-rahīm wa ṣalla-allāhū 'alā siyedanā Muḥammad wa āli-hī wa ṣahbi-hī wa-sallam*" (in the Name of God, the Merciful, the Compassionate, May God bless our Prophet Muhammad and his family and companions) in the preface to the *al-Malak* signifies that the author was Muslim. (Majūsī Ahvāzī, 2009, Vol. 1, p. 1) "The tenth discourse of the first part of the book, the *al-Malakī*, known as *Malakī*, written by Haly Abbās, the pupil of Abū Māhir Mūsā ibn Sayyār," writes al-Majūsī at the end of the first part of the book, "*God, the merciful and compassionate, may bless him for the sake of Seyyed al-Mursalīn* [i.e., the Prophet of Islam], *Amen!*". (Majūsī Ahvāzī, 2009, Vol. 3, p. 409) These passages appear to indicate that Haly Abbas had a Muslim faith.

Haly Abbas's dedication in praise of Panāh Khusraw 'Aẓod-al-dawla (949-983 AD), a Shi'ite ruler, reads "*As 'adallāh, 'Aẓod-al-dawla, bimā khassat-allāh bih, min al-dīn ahsanah*" (May God make 'Aẓod-al-dawla happy with the best religion He has created for him) (Majūsī Ahvāzī, 2009, Vol. 1, p. 9). This passage suggests that Haly Abbas was a Muslim, as he acknowledges Allah and refers to the religion of 'Aẓod-al-dawla as the best. Consequently, the appellation "Majūsī" might indicate that he was born into a Zoroastrian family but later converted to Islam, leaving behind his family's religion (Mieli, 1966, p. 120; Nasr, 2001, p. 208; Richter-Bernburg, 1985, pp. 837-838). This religious shift may have led Ibn al-Qifṭī to describe Haly Abbas in Tārīkh al-Ḥukamā' as "Alī ibn 'Abbās Majūsī, a learned, omniscient physician from Fārs," and to add "Known as Ibn Majūsī" as a supplemental note (Ibn al-Qifṭī, 1992, p. 321).

Contributions and achievements in medical sciences

At various points in his book, Haly Abbas deems himself as the pupil of "Abū Māhir Mūsā ibn Sayyār Majūsī" (Majūsī Ahvāzī, 2009, Vol. 1, p.1; Vol. 3, p. 80) or "Abū Māhir Mūsā ibn Sayyār." (Majūsī Ahvāzī, Vol. 1, pp. 25-26; Vol. 2, p. 261; Vol. 3, p. 409) In a copy of the *al-Malakī* - at the end of Discourse X, Part I - Haly Abbas describes himself as "*tilmīz al-ra'īs al-Fazil, Abū Māhir Mūsā ibn Sayyār al-Ṭabīb, al-marūf bi ṭabīb 'Aẓod-al-dawla*" (lit. the student of an erudite teacher, Abū Māhir Mūsā ibn Sayyār al-Ṭabīb, also known as, the physician of 'Aẓod-al-dawla). (Majūsī Ahvāzī, 2009, Vol. 3, p. 409)

Haly Abbas, in the realm of neurology, provided comprehensive descriptions of brain and spinal cord disorders and covered conditions such as headaches, trauma, epilepsy, and paralysis. (Belen, and Aciduman, 2006, pp. 381-383) He also differentiated between different types of paralysis and described the layers covering the nerves exiting the brain. (Zargarān, 2013, pp. 2196-2197) Additionally, Haly Abbas associated stroke with symptoms and proposed the involvement of blood and black bile contributed to its causes. Furthermore, he discussed management methods for skull and spinal fractures and transposed relevant Greek terms into Arabic. (Aciduman, 2010, pp. 1466-1474; Aciduman, et al., 2014, pp. 791-796)



***Kāmil al-ṣinā‘ah al-ṭibbīyah* or “Complete Book of the Medical Art” (*al-Malakī*)**

At the beginning or end of some of his discourses, Haly Abbas registers his book’s title as *Kāmil al-ṣinā‘ah al-ṭibbīyah*. (Majūsī Ahvāzī, 2009, Vol. 1, pp. 1, 106-107, 186, 295, 350; Vol. 2, pp. 159-160, 261, 263; Vol. 3, pp. 1, 80, 298-299, 409) In the preface, he dedicates the book to “The great king, ‘Azod-al-dawla,” calling it *al-Malakī*, associated with kings or the royal family. Haly Abbas further explains that the book is titled *Kāmil al-ṣinā‘ah al-ṭibbīyah*, or “Complete Book of the Medical Art,” due to its comprehensive coverage of essential medical knowledge for practitioners (Majūsī Ahvāzī, 2009, Vol. 1, p. 20).

Although the manuscript by Fuat Sezgin amply refers to these two titles, it refers to it as *Konnāš ‘Azudī* at the beginning of Discourse IX. (Majūsī Ahvāzī, 2009, Vol. 3, p. 81) This medical tour de force is known as *al-Malakī*, *Konnāš al-Malakī*, *Kāmil al-ṣinā‘ah*, and *Ṭibb-i al-Malakī* in the history of Persian Medicine. (Ibn al-Qiftī, 1992, pp. 304-305; Ebn al-‘Ebrī, 1994, pp. 304-305; Ibn Abī Oṣaybe‘a, 1971, p. 455; Neẓāmī, 1990, pp. 109-110, 124-125; Richter, 1985, pp. 837-838; Jalilian, 2016, pp. 64-100) The book contains twenty essays, ten of which are on the practice and the other ten on the theory of medicine. Well before the publication of *al-Qānūn* penned by Avicenna, the *al-Malakī* had the status of the most thorough medical composition in the Muslim world. It maintained its status as a crucial educational resource for medical practitioners in both Europe and the Muslim world for an extended period. Notably, the *al-Malakī* is the first organized and categorically structured text within the Perso-Islamic medical tradition.

The book is, furthermore, the first medical text to meticulously evaluate the perspectives of past prominent physicians, namely Hippocrates, Galen, and Rhazes. A great physician, aware of the opinions and writing of his predecessors, Haly Abbās, was familiar with the principles of writing a valuable medical book. He set aside previous works authored by notable physicians and filled the gap by authoring the *al-Malakī*, a comprehensive book addressing both theoretical and practical facets of medicine for pedagogical purposes. Also, the *al-Malakī* is not hampered by the shortcomings and disorganization the previous books suffered. It is an enormous medical encyclopedia, praised as one of the most distinguished medical books. Notably, the *al-Malakī* surpasses even the *al-Qānūn* in terms of practical application, standing as a testament to thoroughness and clarity in medical knowledge. (Jalilian, 2016, pp. 100-103)

Haly Abbās in the West

‘Alī ibn al-‘Abbās is known in the West as “Haly Abbas” - as the first physician of the Muslim world known in the West. As a masterpiece in medical science, the *al-Malakī* soon reached the recognition enjoyed by al-Ḥāwī by Rhazes and was translated by Constantinus Africanus (1010-1087 AD) into Latin. The *al-Malakī* became the manual for physicians in the Salerno Medical School and then in other medical centers of the West, serving as the inaugural medical contribution from the Muslim world to gain such acclaim. It was through the translations of the *al-Malakī* that



medical centers of the West flourished and reached other European universities. It was translated under the title *Liber pantegni*, but surprisingly enough, he did not mention any name of Haly Abbās, billing himself as the author. Nevertheless, through this very translator, the medical knowledge of the Muslim world permeated Medieval Europe, reinvigorating and revolutionizing its medical practices. Later, stephanus from Pisa, Italy, who had lived in Antioch, Syria, for a long time, coming to be known as Stephanus of Antioch, retranslated in 1127 AD the *al-Malakī* into Latin, referring to Haly Abbās as the writer. Upon examining the book attributed to Constantinus, Stephanus doubted the credibility of Constantinus' authorship, given his known capabilities. He thus strived to lay his hand on the original version from which Constantinus had translated. He criticized the previous translator and became the first author in the West to have introduced the real author of the *al-Malakī*. (Najm-Abādī, 1974, pp. 458-465; Jalilian, 2016, pp. 64-100) Brockelmann believes that a medical manuscript kept in Gotha belongs to Haly Abbās. (Browne, 1921, p. 54) Also, another book on medicine authored in three sections - health, diseases, and surgery - kept in Gottingen is thought to have been written by Haly Abbās. (Campbell, 1926, p. 75)

During the Islamic Golden Age, spanning the 9th to 11th centuries AD, a significant number of renowned physicians hailed from Iran, including 'Alī ibn al-'Abbās al-Majūsī al-Arrajānī (Haly Abbas). Haly Abbas authored the seminal work "*Kāmil al-ṣinā'ah al-ṭibbīyah*" (*al-Malakī*).

The *al-Malakī* was a major medical encyclopedia widely recognized as one of the most outstanding medical books of its time. It served as the most comprehensive educational resource for medical students until the publication of Avicenna's *al-Qānūn*. In terms of practical application, it was even considered superior to *al-Qānūn*.

Conclusion

During the Islamic Golden Age, from the 9th to 11th centuries AD, a significant number of renowned physicians originated from Iran, including 'Alī ibn al-'Abbās al-Majūsī al-Arrajānī (Haly Abbas). Haly Abbas authored the seminal work "*Kāmil al-ṣinā'ah al-ṭibbīyah*" (*al-Malakī*).

From the manuscripts of this book, it appears that he was born in the city of Arrajan in Khuzestan (a province in Iran) in a family that was initially "Majūsī" (= "Zoroastrian"), and he later converted to Islam. He was contemporary with 'Azod-al-dawla, Abū Šojā' Panāh Ḳosrow (949-983 AD), one of the most prominent and wise rulers of Iran in the 10th century AD. Haly Abbas dedicated the *al-Malakī* to this ruler and his library, leading to its alternative title, "*al-Malakī*" (Royal). This book is known as "*al-Malakī*" (= *Shahi/Royal*). *al-Malakī* was a major medical encyclopedia and has always been hailed as one of the most outstanding medical books. This book was the most complete teaching and educational resource for those interested in medical knowledge until the publication of Avicenna's *al-Qānūn*. It was even considered superior to *al-Qānūn* in terms of practical application. Ali bin Abbas is known as Haly Abbas in the Western world. Constantine the African translated this book, "*al-Malakī*," under the title "*Liber pantegni*" (= *royal book*) into Latin. However, he did not credit



Haly Abbas as the original author and introduced himself as the original author. Finally, Stephanus from the city of Pisa, known as Stephanus Antiuchenus in 1127 AD, translated *al-Malakī*'s book into Latin and published it under the name of its author, 'Alī ibn al-'Abbās al-Majūsī (Haly Abbas).

Authors' Contribution

The authors confirm their contribution to the paper as follows: conceptualization. Supervision, Validation, Writing- Reviewing: Shahram Jalilian. Writing- Reviewing and Editing, Resources: Mahnaz Sadat Mortazavi.

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Conflict of Interest

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