

Muhammad Ibn Zakariya Ar-Razi: An Incredible Physician of Medicine Saga

Sidra^{1*}, Sultana Anjum², Sheema³, Sabiha Rasulsab Arjunagi⁴, Kubra Anam Farooqui⁵

^{1,4,5}PG Scholar, Department of Mahiyatul Amraz (Pathology), National Institute of Unani Medicine, Bengaluru-560091, India

^{2,3}PG Scholar, Department of Amraze Jildwa Tazeeniyat (Skin & Cosmetology), National Institute of Unani Medicine, Bengaluru-560091, India

Abstract: Whenever we hear Muhammad Ibn Zakariya Ar-Razi (Razi), expeditiously, we think of a prominent practitioner who meticulously differentiated measles from smallpox. This manuscript conserves the medical achievements and manuscripts, his personality and position. His persona was unique in its own way. He was also known as Rhazes in the Latin West and often referred to as “the Galen of the Arabs. This imminent medieval physician has been praised as “the greatest physician of Islam and the Medieval Ages” and even “the greatest clinician of all times”. Numerous “firsts” in medical research and clinical care are attributed to him, and his writings alone set him apart.

Keywords: Al-Razi, Kitabal-Hawi, Liber Continens, Kitabal-Mansuri, Unani medicine

1. Introduction

Abu Bakr Muhammad Ibn Zakariya Ar-Razi was born in Ray, Iran in 864 AD. ^[1] From an early age he had a taste for rational sciences and literature. He gained the knowledge of medicine when he grew up. In his early life, he also had a passion for music. He spent the early part of his life in Baghdad. After leaving his job in his last years, he returned to his homeland and took up the independent profession of medicine here. Alchemy in the Arab world states that Razi traveled to Iraq, Syria, Egypt, Andalusia and other Arab countries to seek knowledge. He contracted conjunctivitis in his youth and became blind in the latter part of his life. ^[2] He was a student of Ali ibn Sahlbin Rabban Tabari Sahib author of *Firdous Al-Hikmat*.

2. Material Methods

The authors searched for all the relevant material required for this article from the Central Library of National Institute of Unani Medicine, Bengaluru. Available literature was extracted from Scopus, Google scholar, Pubmed and Science Direct databases and Persian publications.

3. Personality And Position

Razi had the best human qualities. He is “one of the greatest physicians Islam has ever produced”. ^[1] His favorite subjects were generosity, benevolence, and passion for science and art, philosophy, astronomy, physics and theology (*Figure 1*). Under the guidance of his father, a goldsmith, he became more involved in the study of alchemy and chemistry, to which he added philosophy, logic, mathematics, and physics. He is thought to have pioneered the methods of differential diagnosis and clinical observations due to which he was able to differentiate between measles and smallpox. Extensive study and observation, treatment and writings were his only area of interest. He studied Greek and Israeli as well as Hindi medicine in depth. In medicine he has the status of Imam. In medical sciences he was superior to Ibn Sina. ^[2]

4. Medical Achievements

His achievements in alchemy, medicine, theology and physics are unforgettable. In the supervision of hospitals, care and management of patients, he is impeccable. The history of the disease and the current patient-related regulations are largely due to his innovative mind and this strategy became a beacon for generations to come. He was the first person to built a hospital, and selected the area by hanging the pieces of meat in different places of the city at the same time and observed the changes in the meat for the colour, smell, and taste, and ultimately found the suitable location for hospital which he named “*Bimaristan*”. To diagnose the disease, he divided the physicians into different stages, the last of which was handed over to Razi and this method is applicable to the hospitals till now. The “first aid” technique was firstly adopted by him. His experiments with herbs and herbal remedies are exemplary. He emphasised on proper nutrition in conjunction with appropriate treatment. ^[2] A translation of one of his writings states that “If a physician can treat a patient through nutrition rather than medicine, he has done the best thing”. ^[1] His greatest achievement in the field of medicine is how thoroughly he differentiated between measles and smallpox. He invented the surgical instrument *Nishtar* (Scalpel). ^[2] In addition to all these feats, he restructured the art of medicine and left behind a number of valuable manuscripts.

5. His Medical treatises

Razi is known primarily for the heritage he left in the way of medical textbooks, for he was a bounteous writer. He wrote more than 224 books on various subjects and many of his writing remained untranslated. ^[3] Some of his most famous books are described here;

- 1) *Kitab-al-Hawifi't-Tibb* (*Figure 2*), also known as *Liber Continens* in Latin, is translated as ‘The Comprehensive Book on Medicine’ which is composed of 23 volumes. ^[4] His topmost medical work and maybe the “utmost extensive ever written by a medical man”.



Figure 1: Portrait of Zakariya Razi (Rhazes)



Figure 2: Kitab-al-Hawifi't-Tibb (Liber Continens), 23 volumes

- 2) *Kitab-al-Mansurifi't-Tib* (Figure 3) also known as *Liber Medicinalis ad Almansorem* is the second most notorious medieval Arabic medical treatise. As apparent in the title of the book, this work is devoted to the governor of the province of Ray (in present day Iran and the motherland of al-Razi) Al-Mansur ibn Ishāq. [2] This text is a well-known medical encyclopedia in 10 chapters, covering diseases of various organs and their treatment as well as a description of anatomy and physiology, temperaments, food and simple medicine, the means of preserving the health, skin diseases and cosmetics, diet of a person while on a journey, surgery, poisons, the treatment of diseases of all parts of the body, and fevers. [5]



Figure 3: Kitab-al-Mansuri



Figure 4: Kitab-al-Judriwahasbah



Figure 5: Kitab-al-Asrar

- 3) *Kitab fi al-Jadariwa-al-Hasabah*, (Figure 4) translated as *De variolis et morbillis commentarius*, is the most original work by Rhazes. As mentioned over, Rhazes explains the etiologic agent of smallpox which is due to fermentation in the blood that leads to skin eruption. He noted that this complaint occurs more frequently in children and was more prevalent during the spring and autumn. [6]
- 4) *Kitab-al-Asrar* (Figure 5), translated as *Book of Secret of Secrets*, deals with the preparation of chemical materials and their application. [10]

- 5) *Kitab al-Murshid* (Figure 6) translated as The Guide, is a short introduction to basic medical principles that were intended as a lecture to students. ^[10]



Figure 6: Kitab-al-Murshid



Figure 7: Kitab-al-Fakhir

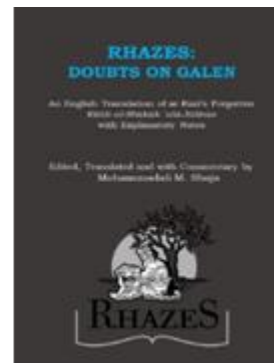


Figure 8: Kitab-al-Shakookala Jalinoos

- 6) *Kitab-al-Fakhir* (Figure 7), translated as The Glorious Compendium, mentioned advanced clinical judgment his differential diagnosis for kidney calculi. ^[11]
- 7) *Kitab-al-Shakookala Jalinoos* (Figure 8), translated as The Doubt on Galen. In this book he criticized some of Galen's theories, particularly the four separate "humors" (liquid substances, including blood, phlegm, yellow bile and dark bile), whose balance were thought to be the key to health and a natural body-temperature. He reported that Galen's descriptions did not agree with his own clinical observations. ^[10]

He has been regarded the competent, most compassionate and utmost distinguished physician of his period, a perfect master of the art of mending, skilful in its practice and completely informed as to its principles and rules. ^[8]

6. Conclusion

Razi was the first man to initiate the experimental science in medicine and the foremost physician who bestowed the differential diagnosis of diseases based only on clinical examinations. His career benefitted future generations of physicians because he documented his observations that he had compiled throughout his practice. *His treatise Al-Hawi, Kitabal-Mansuri, and Al-Judriwa Hasbah* are well known and recommended manuscripts till age. Modern surgical instruments are purely his blessings. There is much more to be discussed about the contributions of this great Muslim scholar to philosophy, chemistry and medicine. He has been referred to as "the Physician par excellence of the Muslims" and the "Learned Master (*Allamah*) of the Sciences of the Ancients. ^[9] We cannot give him justice in a short article. The more we learn about his contributions and life dedicated to medicine, the more we value our Islamic cultural and scientific heritage. He died in Al Ray on October 27, 925 at the age of 60 years. His legacy is still alive in the Islamic world, even after thousand years of his death. ^[7]

7. Acknowledgement

The authors hereby acknowledge the librarians of Central Library of National Institute of Unani Medicine, Bengaluru for providing necessary literature materials. Authors also

acknowledge the immense help received from the scholars whose articles are cited and included in references of this manuscript.

Source of funding: Nil

Conflict of Interest: Nil

References

- [1] Ligon B. Rhazes: His Career and His Writings, *Seminars in Pediatric Infectious Diseases* 2001; 12 (3)
- [2] Razi Z. *Kitab al-Mansuri*. (Urdu translation by CCRUM), Dept. of AYUSH, Ministry of Health and Family Welfare, Govt. of India, New Delhi.1991; 10 (174-177)
- [3] Sadi LM. The millennium of Ar-Razi (Rhazes, 850-932 AD?), *Ann Med History* 1935, 7: 62-72
- [4] *Kitab al-Hawi*, 2021. <https://en.wikipedia.org/wiki>
- [5] Muhammad IbnZakariya al-Razi, 2021. <https://en.wikipedia.org>
- [6] Raouf M, Abedtash H, Mohagheghzadeh A. Razi's innovations in medical sciences, *Trends in Pharmaceutical Sciences* 2021; 7 (1)
- [7] Keys TE, Wakim KG. Contributions of the Arabs to medicine. *Proc Staff Meet Mayo Clinic* 1953, 23: 423
- [8] Holmlund H. Rhazes. A Pioneer in Clinical Observation. *Journal of Historical Studies*. YNM.20: 16-29
- [9] Angrini M. (2016) An Insight into al-Razi's Extraordinary Theoretical and Practical Contributions for Developing Arthrology. In: Winterbottom A., Tesfaye F. (eds) *Histories of Medicine and Healing in the Indian Ocean World*. Palgrave Series in Indian Ocean World Studies. Palgrave Macmillan, New York. https://doi.org/10.1057/9781137567574_2
- [10] Samir S. Amr, MD* AbdulghaniTbakhi, MD. Abu Bakr Muhammad IbnZakariya Al Razi (Rhazes): Philosopher, Physician and Alchemist. *Ann Saudi Med* 2007; 27 (4): 305-307
- [11] Saeed Changizi Ashtiyani, Ali Cyrus. Rhazes, a Genius Physician in Diagnosis and Treatment of Kidney Calculi in Medical History. *Iranian Journal of Kidney Diseases* · April 2010