

Medical Scientists in the Umayyad and Abbasid Periods

Dahmoun Mouna ¹

¹University of MEDEA, Faculty of Human and Social Sciences (Algeria).

Email Author: dahmoun.mouna@univ-medea.dz

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Abstract:

The flourishing of Arab culture during the Umayyad and Abbasid eras was attributed to the awareness of Muslims, following their interactions with other cultures such as the Persian and Roman, regarding the need to transfer the scientific treasures of these nations. Muslims were interested in translating various ancient sciences, such as medicine and chemistry, from Greek, Persian, and Indian into Arabic. They found their opportunity in the schools prevalent between the Tigris and Euphrates and neighboring lands. Based on the foregoing, this article aims to present the most important Muslim physicians who emerged in the second Hijri century and attempt to portray the role of physicians and their innovations during that period.

Keywords: Medicine, Hospital, Bakhtishu', Ibn Masawayh.

INTRODUCTION

Islam was able to unify and bring together the Arabs, instilling in them a scientific and literary spirit that made them an intelligent, alert, and precise nation. This spirit enhanced their creativity after interacting with other peoples, understanding their thoughts, and studying them, granting them the advantage of broadening their knowledge, depth, and dissemination, benefiting both themselves and those who came after them. The approach to dealing with various branches of knowledge, particularly sciences, known to the Greeks, represents the period that allowed the Arabs to tap into the sources of knowledge. Medical sciences, in particular, were influenced by the need for advancement and the Arab human's necessity. The evolution of these sciences did not occur in one stride but rather constituted multiple stages, with the scientific aspect becoming clearer as focus and depth in understanding what should be known increased.

1. Medicine in the Umayyad Era

Muslim interest in medicine began early due to the emphasis on knowledge in Islam. During the Umayyad period, the Arabs had control over half of the world, extending their dominion from Samarkand to the farthest corners of Andalusia, with Damascus as their hub. At the beginning of the Umayyad era, the practice of medicine was influenced by Greek principles. Muawiya¹ had two Christian physicians from Damascus: Ibn Aṭāl, an expert in drugs and poisons, and Abū al-Ḥakam al-Dimashqī. The former was used by Muawiya to poison his political adversaries, betraying scientific ethics (Hammadah, 1987, p. 63). Many notable people and Muslim princes died due to poisoning during his tenure (Ibn Abi Usayyah, 1965, p. 171). The latter excelled in medicine and was trusted for treatment by Muawiya and his family (Faruq, 1987, p. 72). This era was marked by noteworthy innovation—the Caliph al-Walīd ibn ‘Abd al-Malik² established isolation for leprosy patients (Reisner, 1993, p. 195). He built the first specialized hospital, a bimaristan³, in Islam in 88 AH/707 CE, where he segregated and provided for leprosy patients (Majdhūmīn)⁴ to prevent the spread of the disease among the population. This was the first recorded instance of isolation in Islam and predated the construction of the Hospital of Qanṣūh al-Ghāmī around seven hundred years (Muhammad, 1987, p. 60), making it the first hospital in Arab history (Reisner, 1993, p. 199). Historically, it is known that Baḍr al-Afs, a physician, extracted an abscess without anesthesia (Hammadah, 1987, p. 66). In the governorate of Ziyād ibn Abīh, female dogs became abundant in Basra, prompting Ziyād to write a note and place it on the main mosque's door to inform the public. It is recounted that Saḳīnah bint al-Husayn had a tumor (Sul‘ah)⁵ beneath her eye that started growing. Dr. Baḍr al-Afs incised her face, scraped it until the tumor's core was exposed, removed it, and sutured the veins. Saḳīnah's face returned to its previous state, bearing only traces of the wound (Faruq, 1987, p. 275). In general, the physician examined the patient's face, eyes, nails, tongue, and urine, and

1- He is the founder of the Umayyad state with its capital in Damascus. He previously served as its governor appointed by the caliphs and later became the caliph after the death of Ali ibn Abi Talib

2- The Umayyad caliph, during his reign, witnessed the zenith of the Arab empire, and his conquests extended to places such as Sfax, Morocco, Sicily, Spain, Njarrā, and Samarkand, reaching the borders of China.

3- "Bimaristan": A Persian word composed of "bimar," meaning sick, and "stan," meaning place, signifying a place for the sick. In usage, it was shortened to "maristan."

4- "Majdhūmīn": Plural of "majdhūm," referring to a person afflicted with leprosy (a disease causing tissue degeneration and subsequent loss).

5- "Sul‘ah": referring to a gland or abscess.

measured the pulse, indicating the progress of medicine during this era (Hammadah, 1987, p. 67). Caliph 'Umar ibn 'Abd al-'Azīz used to send a sample of urine to the physician (Faruq, 1987, p. 275). He sponsored medical translations during his reign, elevating the importance of medicine among the Arabs (Hammadah, 1987, p. 67). The Muslims showed great interest in this field, resulting in an increase in medical students and enthusiasts. Throughout Islamic eras, the Muslims greatly valued this science. The number of Arab physicians, specialists, and authors multiplied over time. Ibn Abī Uṣaybi'ah devoted an entire volume in his book "'Uyūn al-Anbā' fī Ṭabaqāt al-Ṭibbā'" (The Sources of Information on the Classes of Physicians) to them, providing a comprehensive overview of the roles, innovations, and efforts of the physicians in their significant intellectual and scientific contributions.

1.1 Physicians in the Umayyad Era

A significant number of physicians and early translators of medical texts into Arabic were well-known for their service to the Umayyad caliphs, most of whom were Christians and Jews (Nasser, 1968, pp. 208-209).

A. Abd al-Malik ibn Abjar al-Kanani

Belonging to the Banu Abjar lineage of the Kanana (Al-Badri, 1978, p. 42), he was a skilled physician who converted to Islam under the influence of Umar ibn Abd al-Aziz. At that time, he was a prince before attaining the caliphate. He was relied upon for medical knowledge and prescriptions. Sufyan reported from Ibn Abjar that he said: "The stomach is the body's reservoir, and the veins are connected to it. Whatever is healthy in it results in health, and whatever is unhealthy results in illness" (Ibn Abi Usayiah, 1965, p. 171).

B. Ibn Athal

An exceptional physician from Damascus (Al-Badri, 1978, p. 42), he was a Christian by faith. Muawiya chose him for his own medical care when he ruled over Damascus. He was highly sought after and consulted day and night. He was an expert in various medications, both simple and compound, including poisons. He passed away during Muawiya's reign, and a group of prominent Muslims and princes died due to poison (Reisner, 1993, p. 62).

C. Abu al-Hakam

A Christian physician well-versed in treatment methods and medications, he was chosen for medical treatment by Muawiya ibn Abi Sufyan and was relied upon for compounding medications. It is reported that he lived a long life, surpassing a hundred years. He passed away during the rule of Walid ibn Abd al-Malik, and he did not leave behind any medical writings (Muhammad, 1987, p. 61).

D. Hakam al-Dimashqi:

He followed in his father's footsteps in learning about medical treatments and practices and was based in Damascus (Al-Shatti, 1957, p. 18). He lived a long life of a hundred and fifty years without any decline in his mental faculties or professional abilities (Al-Shatti, 1957, p. 19). He witnessed the rule of the Abbasids and passed away in 805 AH/1210 CE during the caliphate of al-Ma'mun, leaving no written medical works (Muhammad, 1987, p. 61).

E. Isa ibn Hakam al-Dimashqi

He is famously known as Maseeh, the owner of the great "Kanash" attributed to him (Ibn Abi Usayiah, 1965, p. 177). He was the grandson of this family and lived during the Abbasid era, passing away around 225 AH/839 CE. Some consider him among the physicians of the Abbasid era due to his impact from the Umayyad period. One of his notable works is the "Kanash al-Kabeer" and a book titled "Manafi' al-Hayawan" (Benefits of Animals) (Muhammad, 1987, p. 62).

F. Tayadhuq

He was an excellent physician known for his exceptional medical skills and well-chosen expressions in the field of medicine. He gained prominence during the early Umayyad period and was highly esteemed for his medical knowledge. He also served Hajjaj ibn Yusuf al-Thaqafi. An anecdote goes that one day he visited Hajjaj⁶, who asked him, "Is there a remedy for the craving for eating clay?" Tayadhuq replied, "Determination, just like yours, O Amir." Hajjaj then threw the clay away and never indulged in it again (Ibn Abi Usayiah, 1965, p. 180). When

6- He was born in Ta'if in 661 CE and was appointed by Abd al-Malik ibn Marwan to oversee the Hijaz. He besieged Mecca and killed Mus'ab ibn Zubayr. Later, he took charge of Iraq, suppressing the unrest with his authority and strength, and he was known for his famous speeches. He passed away in 714 CE.

Tayadhuq was nearing the end of his life, he requested that the kings heed his advice to avoid the deterioration of health throughout their lives. He advised the king with the following ten principles ([Ibn Abi Usayiah, 1965, p. 180](#)):

- Do not eat while you still have food in your stomach.
- Do not consume food that your teeth cannot chew well, as it weakens your digestion.
- Do not drink water with food until two hours have passed. Overeating causes illness, and drinking water with food contributes to overeating.
- Enter the bathroom every two days at least once, as it removes from your body what cannot be cured by medicine.
- Pay close attention to the balance of blood in your body.
- Use vomit-inducing and laxative substances in every season.
- Do not hold back urination, even if you are riding.
- Present yourself to the bathroom before going to bed.
- Do not engage in excessive sexual activity, as it either shortens or prolongs life.
- Do not engage in relations with an elderly woman, as it may suddenly bring about death.

He authored books, including a significant one written for his son, covering topics like changing and preparing medicines, explaining their names and properties ([Muhammad, 1987, p. 62](#)).

G. Zaynab, Physician from the Banu Awad

Known for her medical knowledge and expertise in treating eye ailments and surgeries ([Reisner, 1993, p. 86](#)), she belonged to the Awad or Bahila al-Adnaniyah clan ([Muhammad, 1987, p. 63](#)). It is reported that Al-Razi, one of the prominent Muslim physicians, relied on her works in the field of ophthalmology ([Bourget, 1967](#)).

H. Ahmad ibn Ibrahim

During the second century of the Islamic calendar, he was a physician for the caliph Yazid ibn Abd al-Malik. He authored a book titled "Asul al-Tibb" (The Principles of Medicine) and a treatise on plants used in medicine (Al-Shatti, 1957, p. 22).

I. Ibn Abi Zaher

He wrote about plants around the year 742 CE (Al-Shatti, 1957, p. 22).

J. Abu Bakr ibn Sirin

Renowned for his knowledge of Hadith (Prophetic traditions) and dream interpretation, he passed away in the year 110 AH/739 CE (Al-Shatti, 1957, p. 22).

K. Frat ibn Shahanata

Of Jewish origin and a notable student of Tayadhuq, he also served Hajjaj and lived until the caliphate of Abu Ja'far al-Mansur (Muhammad, 1987, p. 62).

L. Masar Jawayh al-Basri

A Syriac Jewish physician from Basra, he authored books such as "Quwat al-At'ima wa Manafi'aha" (The Properties of Foods and Their Benefits) (Al-Badri, 1978, p. 42), and "Quwat al-'Aqaqir wa Manafi'aha" (The Properties of Drugs and Their Benefits). It is believed that Masar studied medicine in Gondishapur and later settled in Basra, where he practiced during the Umayyad caliphate. He was proficient in Syriac and Arabic, and during the time of Caliph Marwan ibn al-Hakam, he translated the works of Kanna Shahrnun into Arabic. This translation was preserved in the state archives during the reign of Caliph Umar ibn Abd al-Aziz. Masar passed away in the year 101 AH/810 CE, and his explanation of the translated works was authorized for the benefit of the people. One of his notable works is "Al-Kanash," which Al-Razi used as a reference in his book "Al-Hawi," referring to him as "the Jew." He also authored a book titled "Ibdal al-Adwiya" (The Substitution of Medicines) (Muhammad, 1987, p. 63).

2. Medicine during the Abbasid Era (132 AH/218 CE)

The sciences, in all their diversity, are not the creation of a single nation or specific people. The flourishing of medicine among the Abbasids was the result of successive civilizations over the ages. If the Abbasids claimed to be the possessors

of knowledge and deprived others of it, they would have misrepresented the truth and reality.

During this era, extravagance prevailed, diets diversified, and bodies were exposed to civilized diseases, prompting the Arabs to turn to medicine. At the beginning of this era, medicine did not differ significantly from what it was during the Umayyad era.

During this era, medical writings were translated, and this science had two main sources: Greek and Indian. Many schools, including those in Alexandria, Antioch, Harran, and Gondishapur, were tasked with translating medical works. Some Syriac and Persian physicians were tasked with translating portions of their books during the reigns of Al-Rashid and Al-Ma'mun ([Al-Khattabi, 1988, p. 67](#)).

The translation movement began in a precise and organized manner during the Abbasid era. Ancient medical knowledge seeped strongly into the Islamic world through translations. The most significant translation was the translation of the medical works of Galen, undertaken by Haneen ibn Ishaq ([Mohammed, 1992, p. 92](#)).

Those practicing medicine during this era were called "Hakim" (wise). They believed that a physician should be a philosopher, yet they referred to scholars as those preoccupied with philosophy ([Bon, 1969, p. 161](#)).

The Arabs, under the banner of Islam, opened half the world within a century. Their aim was to enlighten and encourage people towards knowledge. Before the ninth century was complete, according to Leclerc, the Arabs had acquired all the knowledge of the Greeks. Baghdad became the center of scientific activity worldwide ([Reisner, 1993, p. 30](#)), as the Muslims absorbed and utilized the discoveries and scientific experiments of both preceding and contemporary nations. It is mentioned that if the Arabs and Muslims had not been interested in transmitting and explaining sciences and knowledge, time would have erased them ([Muhammad, 1987, p. 03](#)). These connections were facilitated through Gondishapur and the Nestorians, who spoke Syriac. Gondishapur was rich with the luminaries of Greek medicine during the reigns of Abu Ja'far Al-Mansur (135 AH/755 CE), 158 AH/785 CE, and his grandson Harun Al-Rashid.

During the reign of Al-Mansur, Greek medicine entered Baghdad, as he summoned Georgios ibn Jibra'il al-Bakhtishu'i to treat him for chronic stomach issues (Reisner, 1993, p. 96). The direct influence of Gondishapur on the Muslims is said to have begun in 148 AH/765 CE. Al-Mansur was impressed and appointed him as his personal physician (Nasser, 1968, p. 209). The Abbasids took great interest in sciences during this era. Several caliphs devoted themselves to sciences and worked to popularize them. Scholars engaged in understanding and comprehending books, paving the way for a later era of creativity.

Before delving into the layers of physicians who emerged at the beginning of the Abbasid era, it is worth mentioning the manuscript "Tasreef Liman 'Ajaza 'An Al-Taleef" (Facilitation for Those Unable to Compose⁷) (Image 01 and 02) authored by Khaleef ibn Al-'Abbas Al-Zahrawi Al-Andalusi, who passed away in 1013 CE. The book remains significant due to its medical classifications, especially the section discussing surgery. It is considered the first work that distinguished surgery from other medical topics. The manuscript also includes a presentation of medical tools with illustrative figures, descriptions, and explanations of their forms and purposes (Image 03, 04 and 05). This book represents the pinnacle of innovative efforts in Arab medicine, demonstrating significant advancements over previous stages. In general, Al-Zahrawi's sources confirm the direction of Arab medical knowledge from the Eastern and Western Arab world to Al-Andalus (The Rise of Al-Hamarnah, 1990, p. 9).

2.1 Layers of Physicians at the Beginning of the Abbasid Era

Despite the difficulty of pinpointing the location of each physician dating back to the emergence of the Abbasid Caliphate, we have attempted to categorize them with the help of references, especially the book "Ayoun al-Anba'a fi Tabaqat al-Atibba'" by Ibn Abi Asaybi'a.

A. Georgios ibn Jibra'il

He was the founder of the Bakhtishu family and the head of the hospital in Gondishapur (Muhammad, 1987, p. 63). He was summoned by the Abbasid Caliph

7- The manuscript is preserved in the National Museum of Damascus, and it is the only original copy that is difficult for researchers to access and browse its contents. With great effort, we managed to obtain photographic copies of parts related to the subject.

Al-Mansur⁸ in 148 AH to treat him for an illness that had weakened him. Georgios fell seriously ill in 152 AH, and the Caliph's servants were sent to him to inquire about his condition. As his illness worsened, Georgios tearfully requested the Caliph to allow him to return to his hometown to see his family. If he were to die, he wished to be buried with his ancestors and parents. The Caliph granted his request, providing him with ten thousand dinars and a servant ([Ibn Abi Usayiah, 1965, p. 170](#)).

Among his works is "Al-Kanash," which was the first medical book translated into Arabic in Baghdad. It was translated by Haneen ibn Ishaq. He also authored a book titled "Al-Akhlaq" (The Virtues) ([Muhammad, 1987, p. 66](#)).

B. Jibra'il ibn Georgios

He succeeded his father as the head of the hospital in Gondishapur and was summoned by Al-Rashid⁹ to be his personal physician. He was appointed the head of physicians in Baghdad and was generously rewarded by the Caliph ([Al-Shatti, 1957, p. 30](#)). He passed away in 182 AH and authored a small book called "Al-Tadhkira fi al-Tibb" (A Memoir on Medicine) ([Muhammad, 1987, p. 60](#)).

C. Jibra'il ibn Bakhtishu'

He was the grandson of Georgios the First. Jibra'il Ja'far ibn Yahya ibn Khalid ibn Burmuk practiced medicine. He passed away in 213 AH, and his funeral was conducted like those of princes. He was buried in a monastery in Al-Mada'in in accordance with his will. Jibra'il ibn Bakhtishu' served Al-Rashid for twenty-three years. He authored a treatise on food and a medical book (Image 06 and 07) ([Muhammad, 1987, p. 66](#)).

D. Isa, known as Abu Qurays

He was a distinguished and righteous man known for his knowledge of medicine. It is said that the wife of Al-Mahdi sent her urine to him, and he correctly deduced that she was pregnant with a boy. He also correctly predicted the birth of Musa after some time. Al-Mahdi was informed that he was a physician, and Abu

8- Abu Ja'far Al-Mansur, the true founder of the Abbasid state, his most important work was the construction of Baghdad the Round.

9- Harun al-Rashid: The Abbasid state reached its peak during his reign, and there was no other state on Earth that could rival it in the magnitude of authority, vast wealth, and the promotion of knowledge and culture. He was known for his strong adherence to his religion, piety, and skill in leading armies.

Qurays was summoned to confirm the accuracy of the prediction. After the birth of Harun Al-Rashid and Musa, Abu Qurays was appointed as their physician and was honored by Al-Rashid, who referred to him as "Abu Quraysh," signifying the father of the Arabs. Abu Qurays was considered on par with Georgios ibn Jibra'il and even surpassed him in rank ([Al-Shatti, 1957, p. 33](#)).

E. Abdullah al-Tayfur

He was an eminent and skilled physician known as al-Tayfur due to being a physician to Tayfur, a servant of Al-Khezuran, the mother of Al-Hadi and Al-Rashid. He was highly regarded by Al-Hadi ([Ibn Abi Usayiah, 1965, p. 190](#)).

F. Musa al-Kufi

A physician from Kufa, he served Abu Ishaq Ibrahim ibn Al-Mahdi. However, according to historical records, he had limited knowledge of medicine compared to the physicians of his time. He was born in 129 AH and passed away in 222 AH. He was known for his kindness ([Al-Shatti, 1957, p. 37](#)).

G. Masuiah Abu Yuhanna

He was a student at the Gondishapur hospital for thirty years and is considered the founder of the Masuiah family ([Al-Shatti, 1957, p. 38](#)). It is mentioned that he hailed from Khuzestan and prepared medicines in his pharmacy under the patronage of Jibra'il ibn Bakhtishu'. He moved to Baghdad and became a physician for Al-Fadl ibn al-Rabi' and later in the court of Al-Rashid ([Muhammad, 1987, p. 66](#)). It is said that Al-Rashid complained of an eye ailment, and Al-Fadl recommended Masuiah as the most skilled with eye remedies. Al-Rashid ordered his presence and inquired if he had any expertise beyond using kohl in medicine. Masuiah affirmed, stating, "Yes, Amir al-Mu'mineen, and how could I not be skilled, having served the patients at the hospital for thirty years, honing my craft."

H. Yuhanna ibn Masuiah

He was born in Gondishapur, learned Syriac and Arabic, and studied medicine under the professors at the Gondishapur hospital. He excelled in his practice and was fascinated by Baghdad. He journeyed there, and his father, well-known for his service to the rulers, aided him. Yuhanna eventually reached the court of Al-Ma'mun in 225 AH/830 CE and became the head of the House of Wisdom and the

translation department ([Al-Shatti, 1957, p. 39](#)). He was recognized for his intelligence, expertise in medicine, and was appointed by Al-Rashid to translate ancient medical texts found during conquests in Ankara, Amorium, and other Roman lands. He was also made responsible for translations. He served Al-Rashid, Al-Amin, Al-Ma'mun, and subsequent caliphs. The kings would not eat anything without his presence. He authored several works, including "Al-Basrah," "Al-Tamam wal-Kamal," "Al-Hamiyat," "Al-Aghdhiyah," "Kitab al-Hijamah," "Kitab Aslah al-Tagniz," "Kitab al-As'hail," "Kitab al-Ishal," and "Kitab al-Tashrih." Some sources affirm that Yuhanna ibn Masuiah used to dissect monkey bodies in an anatomy hall he built on the banks of the Tigris. It is said that he selected monkeys resembling humans and was assisted in obtaining them from Nubia by Caliph Al-Mu'tasim. This is solid evidence of the Arab caliphs' interest and support for the field of anatomy. It is reported that he translated numerous books from Syriac to Arabic ([Muhammad, 1987, p. 66](#)). It is more likely that he was not proficient in Greek, so he sought the assistance of Haneen ibn Ishaq for translating Greek books. He passed away in Samarra in 243 AH/857 CE ([Ibn Abi Usayiah, 1965, p. 245](#)).

CONCLUSION

This is how the importance of medicine increased among the Arabs, and the number of students and enthusiasts multiplied. The Muslims took great care in it to the point that Ibn Abi Usaybi'a dedicated a whole volume of his book "Uyun al-Anba' fi Tabaqat al-Atibba'" to them. We can say that the most famous physicians in the second Hijri century were Christians, Jews, and Sabians like Haneen ibn Ishaq, Haneen ibn Masuiah, and Bakhtishu'... and others. This can be attributed primarily to two reasons as reported:

1. Knowledge of these individuals in Greek, Syriac, and Latin languages that contain ancient medical knowledge.
2. The preoccupation of Islamic energies in establishing conquests, building the state, documenting Islamic jurisprudence. There is no doubt that the proficiency of non-Muslims in medicine and their fame in it presents a clear and true picture of the atmosphere of freedom prevalent in Islamic society for all people, regardless of their beliefs and sects.

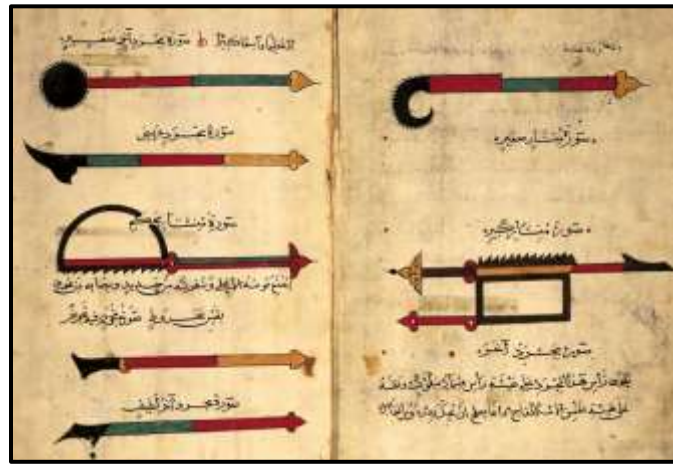
Islamic medicine during the second Hijri century was characterized by creativity, precision, and a continuous spirit of giving. Muslim physicians were exposed to the innovations of other wise individuals from Greece and China. They absorbed and refined these innovations, exploring the new and mastering the means of success to embody these innovations. The intended success made them known for scientific precision, verifying the relative results that required further research and discovery. They subjected them to continuous experimentation. Medical efforts did not stop at a certain point where they were convinced of its effectiveness and appreciated it. Rather, these efforts continued in their giving, always attempting to clarify their path and illuminate their ways to enable future generations with the fundamental data that instills in them the desire to continue their effort in the field of Islamic medicine.

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Appendices:

Image 01: Image from the manuscript of Al-Zahrawi



Source: National Museum of Damascus

Image 02: Image from the manuscript of Al-Zahrawi



Source: National Museum of Damascus

Image 03: Image of some surgical tools invented and made by Al-Zahrawi himself.

Source: Kuwait Scientific Encyclopedia, Volume Ten, Kuwait Foundation for the Advancement of Sciences, 1999 CE.

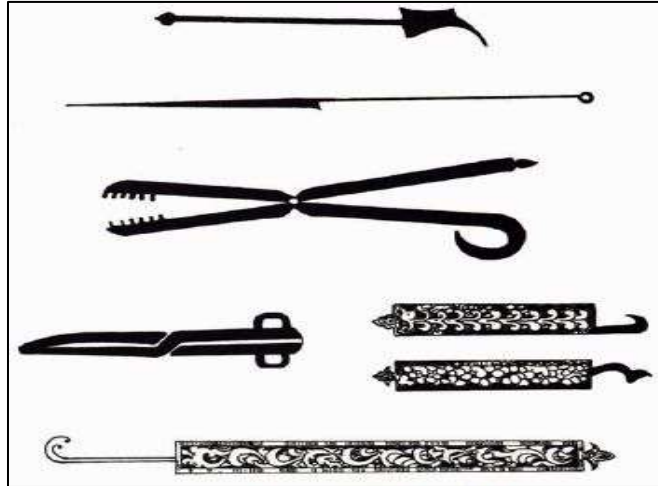


Image 04: Image from the manuscript of Al-Zahrawi.



Source: National Museum of Damascus

Image 05: Image from the manuscript of Al-Zahrawi.



Source: National Museum of Damascus

Image 06: Image from the book "Manafi' al-Hayawan" (Benefits of Animals), one of the important books by the author Ibn Bakhtishu. Muslims produced handwritten copies of this book adorned with illustrations depicting its subjects. Various copies of this book, some in Arabic and others translated into Persian, can be found in international museums and libraries



Source: National Museum of Damascus

Image 07: Image from the book "Manafi' al-Hayawan" (Benefits of Animals), one of the important books by the author Ibn Bakhtishu



Source: National Museum of Damascus