



Magic and divination

Rhazes wrote a work on hidden or 'occult' properties (*ḥawāṣṣ*), arguing that one should investigate this topic, 'until it is correctly established through evidence'.

Astrology and astronomy were linked in the medieval period, and Arab authors made great strides in both fields. Patients wrote and wore amulets and talismans to ward off disease. They used incantations and prayers to improve their health, drinking water out of magic medicinal bowls.

Alchemy, including the figure of Hermes Trismegistus, was very popular. Hermes was the mystical inventor of the magical arts, and the alleged author of a number of alchemical treatises. In the Greek and in Arabic hermetic tradition, we find texts dealing with occult properties, alchemy and magic.

Therapeutics through medication, venesection and cupping

Drugs formed the backbone of the doctor's therapeutical arsenal. Pharmacists in the medieval Islamic world discovered many new drugs and recipes. Because Baghdad lay at the

crossroads of eastern and western culture, new ingredients from the far reaches of the known world came on to the market through trade and travel.

Venesection or phlebotomy (*fāṣḍ*) involved letting blood by cutting open a vein. Dry and wet cupping were also standard medical procedures. During dry cupping, a cupping glass is heated and then put on the skin. As it cools, a local vacuum effect is created, forcing harmful disease matter and other impurities to the surface. The process is similar during wet cupping, but here the skin is scarified (making a series of shallow cuts), to draw blood.



Portrait of John Caius, (1510-1573) by Claude Speechley, 1882
Caius was an early president of the RCP and a medieval western rediscoverer of Galen's works

Latin into Arabic: how Paracelsus' new chemistry filtered into the Ottoman Empire

Humoral pathology was dominant both in Europe and the Middle East throughout the Middle Ages and the Renaissance. But in the German-speaking world, the famous physician, reformer, and natural magician, Paracelsus (1493-1541), drew on the alchemical tradition to develop a new medical theory.



Engraving of Paracelsus

In the Arabic-speaking world the court physician, Ṣāliḥ ibn Naṣr ibn Sallūm (d 1669), commissioned a treatise entitled *The new chemical medicine of Paracelsus* (*Kitāb at-Ṭibb al-ḡadīd al-kīmīyā'ī ta'līf Barākalsūs*), in which he translated the work of two German followers of Paracelsus: Oswald Croll (c1563-1609), professor of medicine at Marburg University, and Daniel Sennert (d 1637), professor of medicine at Wittenberg University.

Collectors and cataloguers

The RCP collection of Islamic manuscripts began with items bequeathed by John Selden (1584-1654), a noted polymath and a prolific writer and scholar. The first catalogue of this collection was produced by Henry Wild (1684-1734). A Norwich tailor, he taught himself Greek, Hebrew, Arabic and Persian, and went on to have an academic career at Oxford.

In the 20th century, Roy Dobbin FRCP (1873- 1939) spent most of his career in Cairo at the famous Qaṣr al-'Aynī hospital. He avidly collected books and knew the German ophthalmologist and medical historian, Max Meyerhof (1874- 1945). They both had modern copies of medieval Arabic texts made.

Cyril Elgood FRCP (1892-1970), author of *A medical history of Persia and the Eastern Caliphate: From the earliest times until the year AD 1932*, was an honorary physician to the Shah of Persia, and researched many Arabic and Persian sources. Dobbin, Meyerhof and Elgood all generously donated manuscripts to the RCP to help form this rare collection.

Free entry

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The mirror of health: discovering medicine in the golden age of Islam

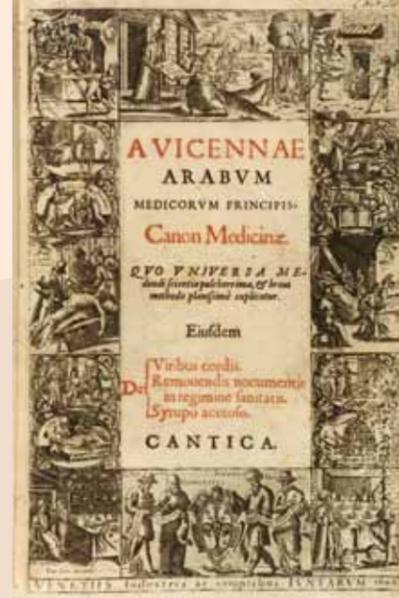
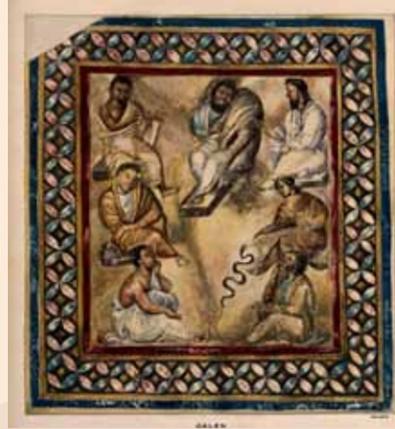
1 May to 25 October 2013

An exhibition exploring medical traditions developed in the heartland of Islam from the 9th to the 17th century, featuring the Royal College of Physician's newly researched collection of Islamic medical manuscripts.

The Royal College of Physicians (RCP) holds a rare collection of Islamic medical manuscripts dating from the 13th century.

Islamic medicine drew heavily on ancient Greek knowledge, especially humoral pathology, as classified by the Roman physician, Galen. The story of Islamic medicine is one not only of transmission and translation, but also of innovation and change, evolving over the centuries into a truly sophisticated science.

Illustration of Galen © Wellcome Trust



Avicenna's Canon in Latin, 1608 Venice edition © The University of Manchester

In the beginning there was Galen

Western medical tradition emerged in the 5th century BC with the writings attributed to Hippocrates. But it was Galen (cAD 129–216) who became the most influential figure in the history of medicine.

Galen classified the medical doctrine first found in the Hippocratic treatise, *On the nature of man*, and now known as humoral pathology. This states that the body's health depends on the balance of the four humours: black bile, yellow bile, blood and phlegm. Galen's works dominated the medical curriculum in late antique Alexandria, and were later translated into Syriac and Arabic.

Avicenna and his legacy

Avicenna (Ibn Sīnā) (980–1037) was a towering intellectual who came from Hamadan in Persia, but wrote most of his works in Arabic. He composed *The canon of medicine*, a medical encyclopaedia in five books. This became the most successful medical work of the medieval period, both in the West, through the Latin translations of Gerard of Cremona (1114–87), and in the East.

In the East, Ibn al Nafis (1213–88) wrote two commentaries: one on the *Generalities*, the first book of the *Canon*; and one on the *Anatomy* in the *Canon*. In the latter, he famously discovered the pulmonary transit: blood moves from the right to the left ventricle of the heart via the lungs, and not through a small opening in the septum, as earlier anatomists had thought.

Illustration from *Manṣūr's Anatomy (Taṣrīḥ-i Maṣṣūfī)*, 1656

Illustration from *Taṣrīḥ-i Maṣṣūfī (Manṣūr's Anatomy)*, 1656



Anatomy: the unknown frontier

Anatomical illustrations are common today, and already existed in the medieval Islamic world. The *Ten treatises on the eye* by Ḥunayn ibn Ishāq (d c873) contain detailed illustrations of the eye. But the earliest illustrations of the whole body that survive appear in a treatise called 'Manṣūr's anatomy' by physician Maṣṣūf ibn Ilyās.

Maṣṣūf's illustrations displayed the five anatomical systems: the bones, nerves, muscles, veins and arteries. These illustrations also pose a considerable mystery to historians of medicine. There are significant similarities between the anatomical figures in *Manṣūr's anatomy* and illustrations in earlier Latin medical texts from the 12th and 13th centuries, such as the one pictured below. Do they have a common source?

Illustration from *Medical miscellany*, late 12th or early 13th century. © Gonville and Caius College, Cambridge



Rhazes, the clinician

Muḥammad ibn Zakariyā' al-Rāzī (d c925), better known as Rhazes in the West, was perhaps the greatest clinician of the medieval world. He drew heavily on the knowledge of earlier and contemporary physicians, as his *Comprehensive book (al-Kitāb al-Ḥāwī)* illustrates.

He distinguished between diseases not formerly recognised, such as smallpox and measles, and his *Book for al-Manṣūr* contains an experiment on an ape to test the toxicity of quicksilver. He used a control group to assess blood-letting as a treatment for brain fever, concluding that it was effective. Even in the 18th and 19th centuries, doctors were reading Rhazes' work on the differential diagnosis for smallpox and measles in order to combat them.



Illustration from *Treatise on the human body*, c1292 © Bodleian library, Oxford