Early Islamic Scholars

Muslim scholars from the early Islamic Empire are responsible for the discovery and development of a wide range of inventions that we now take for granted in our daily lives.

Work by these scholars helped lead the Renaissance in Europe which began in the 14th century - several centuries behind the 'golden age of Islam'.

During the early Islamic civilisation many talented doctors contributed to the development of medicine and surgery.

Muhammad ibn Zakariya Razi

Razi was born in AD 854 and died, aged 71, in AD 925. He was not just a doctor but also a chemist and philosopher amongst other things. Razi made a significant contribution to the history of medicine.

During his work in medicine Razi worked out the difference between smallpox and measles and how best to treat them as two separate diseases.

In his work as a chemist Razi invented a range of phials, flasks and spatulas – items which were used in pharmacies for centuries afterwards.

Razi led studies in the field of ophthalmology (the study and treatment of eyes) and he developed a range of ointments to treat different eye conditions. Unfortunately he was not able to help himself when, in his later years, he began to go blind and eventually lost his sight.

Razi is regarded as 'the father of paediatrics' due to his acknowledgement that children need to be treated differently to adults.

Razi believed that everybody had the right to good medical care He wrote a book called "A medical adviser for the general public" (Man la Yahduruhu Al-Tabib), which described how people could provide self-help for their medical complaints. Razi also challenged those who claimed to be doctors and sold fake cures on the streets

Abu al-Qasim Khalaf ibn al-Abbas Al-Zahrawi

Al-Zahrawi was born in AD 936 and died, aged 77, in AD 1013. He was a doctor and surgeon who is regarded as 'the father of surgery' for his ground-breaking development of surgical techniques and the invention of numerous surgical tools. Al-Zahrawi's whole life was committed to the development of medicine and surgery.

Al-Zahrawis's special achievements include the development of cauterisation and his use of catgut in stitches. Both techniques are still used today.

Al-Zahrawi's book Al- Tasrif was used by European doctors as a reference guide for approximately 500 years after it was finished in AD 1000. It contains advice on how to treat a huge range of medical conditions and many of the techniques described in it are still used today. Al-Zahrawi also wrote a book called 'On Surgery and Instruments' in which he drew over 200 surgical tools.

Abu 'Abdullah Muhammad Ibn Musa Al-Khwarizmi

Al- Khwarizmi was born around AD 800 and is regarded as 'the father of algebra'.

Al-Khwarizmi also introduced the Hindu-Arabic numbers 1-9 and 0 in his book about arithmetic which made the use of these numbers more popular in the Islamic world – 250 years before people in the West would use them.

Algebra, a branch of mathematics which uses letters and numbers to represent amounts, was developed as a separate branch of mathematics by Al-Khwarizmi. Al-Khwarizmi wrote Kitab al-jabr wa'l-muqabalah (The Book of Restoring and Balancing) about algebra (Al-jabr).

Ibn al-Haytham

Ibn al-Haytham was influential in the study and development of optics and invented the first camera.

Al-Haytham invented the first camera obscura or pinhole camera based on his studies. He proved that light travels in straight lines and that we can see because light reflects off objects into our eyes. Before Al-Haytham other ideas about how we see included the Greek belief that our eyes sent out rays of light like lasers to light up the world around us.