

## The medical history books will have to be revised, says Roger Highfield

The Egyptians - not the ancient Greeks - were the true fathers of medicine, according to a study that pushes back the origins by at least a millennium.

Scientists examining documents dating back 3,500 years say they have found proof that the inception lies not with Hippocrates (460BC-370BC) and the Greeks but in ancient Egypt and the likes of Imhotep (2667BC - 2648BC), who designed the pyramids at Saqqara and was elevated to become the god of healing.

The research team from the KNH Centre for Biomedical Egyptology at The University of Manchester discovered the evidence in medical papyri written in 1,500BC - some 1,000 years before Hippocrates was born.

"Classical scholars have always considered the ancient Greeks, particularly Hippocrates, as being the fathers of medicine but our findings suggest that the ancient Egyptians were practising a credible form of pharmacy and medicine much earlier," said Dr Jackie Campbell.

"When we compared the ancient remedies against modern pharmaceutical protocols and standards, we found the prescriptions in the ancient documents not only compared with pharmaceutical preparations of today but that many of the remedies had therapeutic merit."

The medical documents, which were first discovered in the mid-19th century, showed that ancient Egyptian physicians treated wounds with honey, resins and metals now known to have an antimicrobial action.

The team also discovered prescriptions for laxatives of castor oil, colocynth (a bitter fruit), figs and bran. Other references show that colic was treated with hyoscyamus plants, still used today, and that cumin and coriander were used to relieve flatulence.

Further evidence showed that musculo-skeletal disorders were treated with rubefacients, which redden the skin, to stimulate blood flow, along with poultices to warm and soothe.

They used celery and saffron for rheumatism, which are currently topics of pharmaceutical research, and pomegranate was used to eradicate tapeworms, a remedy that remained in clinical use until half a century ago.

"Many of the ancient remedies we discovered survived into the 20th century and, indeed, some remain in use today, albeit that the active component is now produced synthetically," said Dr Campbell.

"Other ingredients endure and acacia is still used in cough remedies while aloes forms a basis to soothe and heal skin conditions."

Fellow researcher Dr Ryan Metcalfe is now developing genetic techniques to investigate the medicinal plants of ancient Egypt. "This may allow us to determine a likely point of origin for the plants while providing additional evidence for the trade routes, purposeful cultivation, trade centres or places of treatment," said Dr Metcalfe.

"The work is inextricably linked to state-of-the-art chemical analyses used by my colleague Judith Seath, who specialises in the essential oils and resins used by the ancient Egyptians."

Prof Rosalie David, Director of the KNH Centre, said: "These results are very significant and show that the ancient Egyptians were practising a credible form of pharmacy long before the Greeks. This has been looked at before but there has never been the firm scientific evidence that has come up in our project."

Although apes are known to use medicines, such as the bitter pith of *Vernonia amygdalina* for the control of intestinal nematode infections, Prof David said that the ancient Egyptians can be thanked for the introduction of a structured medical and pharmacological system that continues to the present day. And of all the ancient Egyptians, it is Imhotep who was regarded as being the father of medicine. "He should have the credit," said Prof David.