THE UNIVERSITY of EDINBURGH

News Release

Issued: Tuesday 8 April 2014

Neandertal's recent link to humans confirmed in DNA study

Humans and neandertals mated in Europe and Asia thousands of years ago to give rise to a legacy of neandertal DNA in modern humans, a study has confirmed.

Scientists have traced the origins of the biological ties that exist between humans and the ancient species, which are believed to have died out around 30,000 years ago.

The finding overturns a previous theory on the link between the species. It had claimed that modern Europeans and Asians are related to neandertals because they originated from a similar sub-population in Africa.

Experts were already agreed that both groups evolved from a common ancestor in Africa before spreading to other parts of the world. Studies have shown that the two groups emerged at different times, and that neandertals left the African continent more than 200,000 years before humans did.

Scientists at the University of Edinburgh and Wageningen University have shown that the genetic similarity between neandertals and modern human populations outside of Africa must have arisen after they began interbreeding in Europe and Asia.

Researchers developed a new method to compare the competing theories on the relationship between humans and neandertals. They divided the genetic code of each species into a series of short blocks, which allowed them to calculate the statistical likelihood of each scenario.

As well as revealing details of the shared history of humans and neandertals, the method could be used to reconstruct the history of any species, including rare or extinct ones.

The study, published in the journal *Genetics*, was funded by the National Environmental Research Council.

Dr Konrad Lohse, of the University of Edinburgh's School of Biological Sciences, said: "Although there has been mounting evidence for genetic exchange between modern humans and neandertals in Eurasia from a number of recent genetic studies, it has been difficult to rule out ancestral structure in Africa. We hope our study settles this issue."

For further information, please contact:
Corin Campbell, Press & PR Office, tel 0131 650 2246; Corin.Campbell@ed.ac.uk