

Study provides first genetic evidence of long-lived African presence within Britain

January 24 2007

New research has identified the first genetic evidence of Africans having lived amongst "indigenous" British people for centuries. Their descendants, living across the UK today, were unaware of their black ancestry.

The University of Leicester study, funded by the Wellcome Trust and published today in the journal *European Journal of Human Genetics*, found that one third of men with a rare Yorkshire surname carry a rare Y chromosome type previously found only amongst people of West African origin.

The researchers, led by Professor Mark Jobling, of the Department of Genetics at the University of Leicester, first spotted the rare Y chromosome type, known as hgA1, in one individual, Mr. X. This happened whilst PhD student Ms. Turi King was sampling a larger group in a study to explore the association between surnames and the Y chromosome, both inherited from father to son. Mr. X, a white Caucasian living in Leicester, was unaware of having any African ancestors.

"As you can imagine, we were pretty amazed to find this result in someone unaware of having any African roots," explains Professor Jobling, a Wellcome Trust Senior Research Fellow. "The Y chromosome is passed down from father to son, so this suggested that Mr. X must have had African ancestry somewhere down the line. Our study suggests that this must have happened some time ago."

Although most of Britain's one million people who define themselves as "Black or Black British" owe their origins to immigration from the Caribbean and Africa from the mid-twentieth century onwards, in reality, there has been a long history of contact with Africa. Africans were first recorded in the north 1800 years ago, as Roman soldiers defending Hadrian's Wall.

To investigate the origins of hgA1 in Britain, the team recruited and studied a further eighteen males with the same surname as Mr. X. All but one were from the UK, with paternal parents and grandparents also born in Britain. Six, including one male in the US whose ancestors had migrated from England in 1894, were found to have the hgA1 chromosome.

Further genealogical research to identify a common ancestor for all seven X-surnamed males suggests that the hgA1 Y chromosome must have entered their lineage over 250 years ago. However, it is unclear whether the male ancestor was a first generation African immigrant or a European man carrying an African Y chromosome introduced into Britain some time earlier, or even whether the hgA1 Y chromosome goes back as far as the Roman occupation.

"This study shows that what it means to be British is complicated and always has been," says Professor Jobling. "Human migration history is clearly very complex, particularly for an island nation such as ours, and this study further debunks the idea that there are simple and distinct populations or 'races'."

In addition, Professor Jobling believes that the research may have implications for DNA profiling in criminal investigations.

"Forensic scientists use DNA analysis to predict a person's ethnic origins, for example from hair or blood samples found at a crime scene.

Whilst they are very likely to predict the correct ethnicity by using wider analysis of DNA other than the Y chromosome, finding this remarkable African chromosome would certainly have them scratching their heads for a while."

Source: Wellcome Trust

Citation: Study provides first genetic evidence of long-lived African presence within Britain (2007, January 24) retrieved 26 April 2024 from <https://phys.org/news/2007-01-genetic-evidence-long-lived-african-presence.html>

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