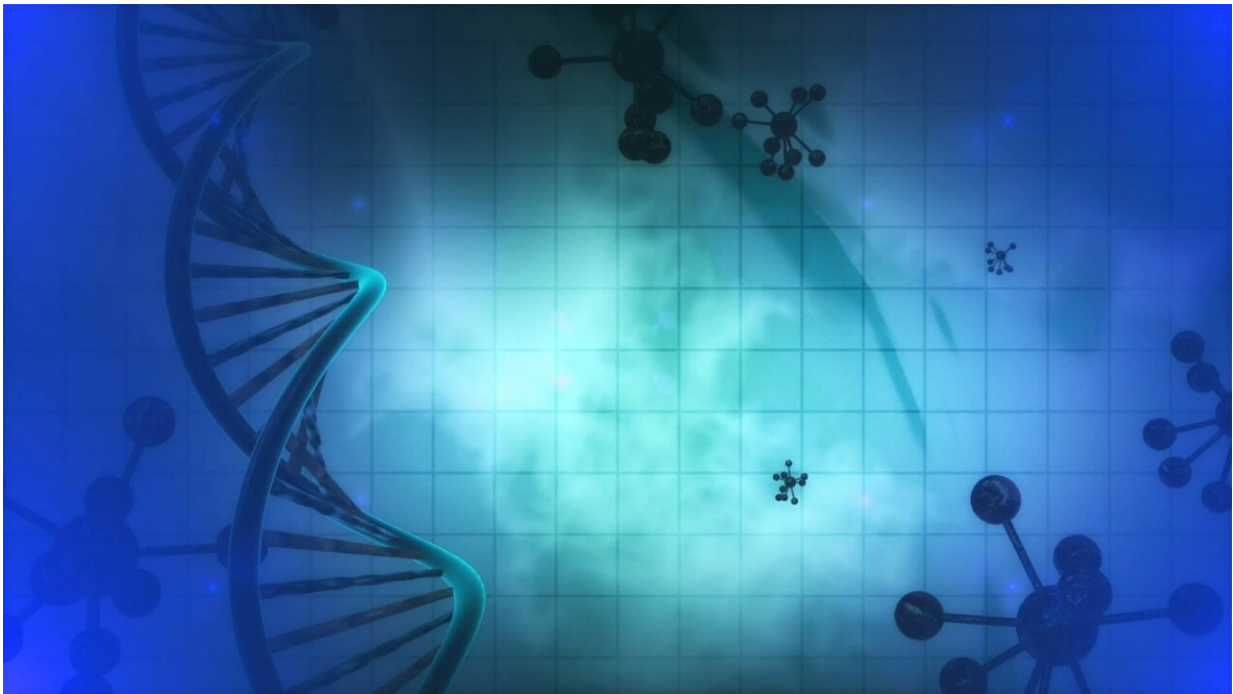


Ancient DNA analysis sheds light on a dark event in medieval Spain

September 23 2021



Credit: Pixabay/CC0 Public Domain

An international team of researchers led by the University of Huddersfield's Archaeogenetics Research Group, including geneticists, archeological scientists, and archeologists, has published the genome sequence of a unique individual from Islamic medieval Spain—al-Andalus—the results of which have shed light on a brutal event that took place in medieval Spain.

The individual, who was discovered in an eleventh century Islamic necropolis from the city of Segorbe, near Valencia in Spain, is known to local archeologists as the "Segorbe Giant" because of his unusual height.

His skeleton had suggested that he might have some African ancestry. Most of Spain had been progressively conquered by Arabs and Berbers from Northwest Africa from the eighth century onwards, creating one of the major centers of medieval European civilisation.

The ancient DNA analysis was carried out by Dr. Marina Silva and Dr. Gonzalo Oteo-Garcia, who had been working on the University's Leverhulme Trust doctoral scholarship program in evolutionary genomics.

They found that the "Giant" carried highly specific North African genetic lineages on both his male and female lines of descent—the Y-chromosome and the mitochondrial DNA—the oldest individual known to have this particular pattern of ancestry. This suggested that his recent ancestry was indeed amongst the newly Islamicized Berber populations of medieval Northwest Africa.

But a more detailed examination revealed a more complex situation. The male and female lines of descent account for only a small fraction of our overall ancestry—that from our father's father's father and our mother's mother's mother, and so on.

His genome-wide ancestry showed that he also carried a significant amount—likely more than half—of local Spanish ancestry in his chromosomes. Moreover, stable isotope analyses suggested that he most likely grew up locally, meaning the "Giant's" Berber ancestry was in fact due to migration from an earlier generation. He therefore belonged to a settled community that had thoroughly intermixed local Spanish and immigrant North African ancestry.

What was especially striking, revealed Professor Martin Richards, Director of the University's Evolutionary Genomics Research Centre, was that he was very unlike modern people from Valencia, who carry little or none of his Berber genetic [heritage](#).

This can be explained by the changing political situation following the Christian reconquest of Spain, as Dr. Oteo-Garcia, who recently commenced work at the University of Parma, explained: "The decree of expulsion of Moriscos from the Valencia region, that is, Muslims who had already been forcibly converted to Christianity, was followed by the [resettlement](#) by people from further north, who had little North African ancestry, thereby transforming the genetic variation in the region."

Dr. Silva, who now works at London's Francis Crick Institute, said, "The impact of this dramatic change in population, resulting from a brutal political decision hundreds of years ago, can finally be witnessed directly using ancient DNA, as seen here in the ancestry of the 'Segorbe Giant' and his contemporaries."

More information: Marina Silva et al, Biomolecular insights into North African-related ancestry, mobility and diet in eleventh-century Al-Andalus, *Scientific Reports* (2021). [DOI: 10.1038/s41598-021-95996-3](https://doi.org/10.1038/s41598-021-95996-3)

Provided by University of Huddersfield

Citation: Ancient DNA analysis sheds light on a dark event in medieval Spain (2021, September 23) retrieved 13 March 2024 from <https://phys.org/news/2021-09-ancient-dna-analysis-dark-event.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.
