

The blood preserved in the pumpkin did not belong to Louis XVI

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The results of an international study, which counted on the participation of the Spanish National Research Council, indicate that the DNA recovered from the inside of a pumpkin, attributed so far to the French King Louis XVI, does not actually belong to the monarch, guillotined in 1793. Complete genome sequencing suggests that blood remains correspond to a male with brown eyes, instead of blue as Louis XVI had, and shorter.

The work has been published in the *Scientific Reports* journal.

CSIC researcher Carles Lalueza-Fox, from the Institute of Evolutionary Biology (a joint centre of CSIC and Pompeu Fabra University-UPF), explains: "When the Y chromosome of three living Bourbons was decoded and we saw that it did not match with the DNA recovered from the pumpkin in 2010, we decided to sequence the complete genome and to make a functional interpretation in order to see if the [blood](#) could actually belong to Louis XVI".

The functional genome analysis was based on two main points, the genealogical line and the physical appearance, and in both cases the result was negative. According to the historical records that go back to his 16 great-great grandparents, Louis XVI had a very heterogeneous genealogical line in which central European ancestors predominated, mainly from the area that today is Germany and Poland, while the genome recovered from the pumpkin belongs to an individual with a clear French and Italian component. In terms of [physical appearance](#), the

sequenced DNA points to an average height in France at the time and brown eyes, while portraits and historical accounts describe Louis XVI as the tallest man on the court and with blue eyes.

Lalueza-Fox adds: "Beyond the anecdotal fact whether or not the DNA belongs to Louis XVI, we present here the first [genome](#) from a recent historical period. The techniques we used will be useful in forensic studies, in which more than recovering some informative genetic markers, it will be able to work with complete genomes".

According to the chronicles of the time, there were many citizens who went to the scaffold in which Louis XVI was executed to dip their handkerchiefs in the blood of the monarch and thus save a historic memory. In 2010, a study coordinated by Lalueza-Fox analyzed the blood from one of these handkerchiefs, which had stained the inside of the pumpkin, decorated with portraits of the protagonists of the French Revolution, in which it had been kept. That study confirmed that the blood belonged to a European man whose paternal lineage was very hard to find in current genetic databases.

More information: M. Marigorta, Charleston W. K. Chiang, Juan Antonio Rodríguez, Marcos Fernández-Callejo, Irene González, Magda Montfort, Laura Matas-Lalueza, Sergi Civit, Donata Luiselli, Philippe Charlier, Davide Pettener, Oscar Ramírez, Arcadi Navarro, Heinz Himmelbauer, Tomás Marquès-Bonet, Carles Lalueza-Fox. Genomic analysis of the blood attributed to Louis XVI (1754-1793), king of France. *Scientific Reports*. [DOI: 10.1038/srep04666](https://doi.org/10.1038/srep04666)

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