# Origin & evolution of Iberian dogs

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The dog (*Canis lupus familiaris*) was the first species to be domesticated from the wolf. Since its domestication, it has undergone thousands of years of selective breeding, contributing to a myriad of phenotypic/behaviour variants. Most modern dog breeds are 200 years old and are of European ancestry. In Iberia, there are 21 internationally recognized dog breeds, including local varieties within breeds.

In this talk, I will summarize the main aims of my research, the zooarchaeogenomic approaches employed and the results of an ongoing project dedicated to the understanding of the origins and evolution of this species in Iberia and the Maghreb regions.

My team gathered temporally spaced archaeological samples identified as dogs covering periods since the Mesolithic (~8,000 years ago in Iberia). Our multidisciplinary research involves the analysis of each sample by different approaches: genomic, zooarchaeological (archaeological context, odontometry, osteometry), isotope, radiographic and pathology analysis. In samples with sufficient endogenous content (e.g. >1%), we perform whole-genome analyses in addition to that of mitogenomes using high-throughput resequencing methods.

Our results show evidence of early morphological diversification, at least since the Chalcolithic (4,000-5,000 years ago), and the presence of distinct maternal lineages of the major haplogroups A and C. We also verify the replacement of some ancient mitogenomic diversity over time.

My team is very much committed to communicate scientific findings to broad audiences, therefore we frequently participate in outreach activities directed to the general public and schools.

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