
Tracking long-term human and pig relationship in Southwest Asia using geometric morphometrics

Allowen Evin^{*†1}, Max Price², Roger Alcàntara Fors³, Azadeh Mohaseb⁴, Maria Saña⁵, Marjan Mashkour⁶, Joris Peters^{7,8}, Thomas Cucchi⁹, Greger Larson¹⁰, and Keith Dobney¹¹

¹Institut des Sciences de l'Évolution de Montpellier – Université de Montpellier, Institut de recherche pour le développement [IRD] : UR226, Centre National de la Recherche Scientifique : UMR5554, École Pratique des Hautes Études [EPHE] – France

²Christian-Albrechts Universität zu Kiel – Germany

³Universitat Autònoma de Barcelona (UAB) – Departament de Prehistòria. Universitat Autònoma de Barcelona 08193 Bellaterra., Spain

⁴UMR 7209 - Archéozoologie et Archéobotanique – Muséum National d'Histoire Naturelle - MNHN (FRANCE), Centre National de la Recherche Scientifique - CNRS – 57, rue Cuvier - 75231 Paris, France

⁵Laboratori d'Arqueozoologia, Autonomous University of Barcelona – Departament de Prehistòria, Edifici B Facultat Filosofia i Lletres, Autonomous University of Barcelona, 08193, Catalonia, Spain., Spain

⁶Centre National de Recherche Scientifique, CNRS – CNRS : UMR7209 – France

⁷SNSB, State collection of Anthropology and Palaeoanatomy – D-80333 Munich, Germany

⁸Department of Veterinary Sciences, Institute of Palaeoanatomy, Domestication Research and the History of Veterinary Medicine, LMU Munich – Kaulbachstr. 37/III, D-80539 Munich, Germany

⁹Archéozoologie, archéobotanique : sociétés, pratiques et environnements (AASPE) – Muséum National d'Histoire Naturelle, Centre National de la Recherche Scientifique : UMR7209 – Muséum national d'Histoire naturelle - Case postale 56 - 55 rue Buffon - 75005 Paris, France

¹⁰Palaeogenomics Bio-Archaeology Research Network, University of Oxford – United Kingdom

¹¹University of Aberdeen – United Kingdom

Abstract

The first evidence of pig domestication appeared ~8.500 BC in Southwest Asia, and the long history of pig domestication in the region has been the subject of growing attention. An increasing number of studies are using morphometrics and especially geometric morphometrics to explore the differences between wild and domestic populations or to track temporal and/or geographic variation of the domestic pig stock. Here we analysed the chrono-cultural and geographic variation of ancient pig remains corresponding to ~500 archaeological teeth (upper and lower second and third molar) recovered at ~30 sites dating from the early Neolithic to the Roman period and located in modern-day Turkey, Syria, Iran, and northern Iraq. We used 2 dimensional geometric morphometrics approach to explore subtle variation within and between sites in order to better understand the long-term relationships between human and pigs in Southwest Asia.

*Speaker

†Corresponding author: allowen.evin@umontpellier.fr

Keywords: Domestication, *Sus scrofa*, diachronic evolution