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Open call for a post-doctoral researcher on ancient sedimentary DNA

Interested in studying our evolutionary past using ancient DNA recovered from sediments?

We are looking for a motivated post-doctoral researcher to develop computational approaches for the analysis of ancient hominin DNA extracted from sediments

Project description:

In this project, we plan to develop analytical pipelines to the study of ancient hominin nuclear DNA retrieved from sediment samples, and apply them to samples of interest, in order to address questions pertaining to our evolutionary history in novel ways.

The project is a collaboration between the Moorjani lab (<https://moorjanilab.org/>) at the University of California, Berkeley, and the Slon lab (www.slonlab.com) at the University of Tel Aviv, Israel, and will involve exchange of ideas and travel between the two labs.

The Moorjani lab focuses on using statistical and computational approaches to study questions in human genetics and evolutionary biology. A central aim in the lab is to understand the impact of evolutionary history on genetic variation and to apply this knowledge to learn about human history and biology. To this end, we use genetic data from ancient specimens and present-day species to learn about: (1) when key events (such as introgression and adaptations) occurred in human history, (2) how different evolutionary processes such as mutation rate evolve across primates, and (3) how we can leverage these patterns to identify genetic variants related to human adaptation and disease. The research in the lab involves both development of new methods and large-scale genomic data analysis.

The Slon lab studies the genetic makeup of prehistoric and proto-historic populations, by implementing and pursuing the development of state-of-the-art methodology suited to face the challenges of DNA preservation over time. One main focus of the laboratory is the recovery of ancient DNA from sediments deposited at archaeological sites – as doing so provides the possibility to study the genomes of ancient humans even in the absence of their physical remains, and to study the environment in which they lived. We strive to develop laboratory and analytical techniques to improve the usability of sediments as a source of paleo-genetic data.



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Required qualifications:

- PhD in biology, computational sciences, genomics, population genetics, or a related field
- Experience with programming (in C, Python, R, or language of your choice) and data analysis
- Experience working with ancient DNA is an advantage, but not required.

Timelines and contract:

The position will be fully-funded for a minimum of two years. Starting date is flexible, and the position will remain open until filled. The chosen applicant will be hired through the Slon lab at Tel Aviv University.

The Slon Lab at Tel Aviv University is part of the Departments of Anatomy and Anthropology and of Human Molecular Genetics and Biochemistry at the Sackler Faculty of Medicine; and is affiliated with the interdisciplinary Dan David Center for Human Evolution and Biohistory Research. Tel Aviv University is the largest research university in Israel, with world-class researchers across the spectrum of science, humanities and art studying all aspects of the human past. Tel Aviv itself is a lively beachside city.

Interested?

Please send a CV, a letter of motivation, and the names and contact information of three references to Dr. Priya Moorjani (moorjani@berkeley.edu) and to Dr Viviane Slon (viviane@tauex.tau.ac.il)