

2 PhD positions: University of Zurich / Orang-Utan Genomics

Two 4-year PhD positions on orang-utan genomics available at the University of Zurich

Overview: I am seeking two highly motivated PhD students for my recently funded project “Orang-utan genomics in an evolutionary and conservation context” at the Evolutionary Genetics Groups of the Department of Anthropology, University of Zurich (UZH), Switzerland (<https://www.aim.uzh.ch/de/research/egg/groupmembers/kruetzenmichael.html>). My group has broad interests in evolutionary genetics and genomics of primates and delphinids. The work will be conducted in close collaboration with Prof. Tomas Marques at University Pompeu Fabra, Spain, Dr. Logan Kistler (Smithsonian), and Prof. Verena Schünemann (UZH). The work will entail a combination of genomic laboratory work (based on faecal and historic DNA samples) at UZH and fieldwork Sumatra, Indonesia. Both positions are for 4 years fixed term. Remuneration is according to Swiss PhD salary scales (CHF 48'540 p.a. plus employer social security contributions). Starting date for the first PhD project will be 1. April 2019, and for the second PhD project 1. November 2019.

Background: Environmental mechanisms are some of the most important forces affecting the evolutionary history and distribution of species, yet the roles of these environmental forces in driving genetic diversity and local adaptation remain underexplored. Investigating the processes of how such mechanisms have shaped patterns of DNA variation in space and time has long been one of the most important goals of evolutionary biology. Such patterns are the result of both adaptive and non-adaptive processes, and the debate about the relative importance of natural selection and random genetic drift in shaping genetic diversity within and among species is still ongoing.

The project aims to investigate (among others) how different evolutionary forces have shaped patterns of DNA variation within and among extant orang-utan species. Orang-utans on each island experienced long-lasting environmental differences throughout their evolutionary history, leading to a number of well-documented differences in their physiology, morphology, among other. As a first for a great ape, this puts us into a unique position to evaluate detailed hypotheses about the occurrence and maintenance of genetic adaptations, and provides the unique opportunity to study how environmental differences shaped the genomes of one of our closest relatives *in situ*.

Requirements: Successful candidates will have a Diploma/Masters degree in a relevant discipline, a strong interest (ideally with prior experience) in bioinformatic and genomic skills, laboratory work, and some background in evolutionary genetics. The ideal candidates will have strong oral and written communication skills in English and the ability to work and share ideas in a collaborative environment. Knowledge of German language is not essential, but may help with everyday life whilst in Zurich.

The students will work in a dynamic research environment and have access to cutting edge next generation sequencing techniques. The Department of Anthropology and others at UZH host several seminar series with high-calibre international speakers. The two PhD positions will be embedded in the Zurich Life Science Graduate School's program in Evolutionary Biology (<http://www.lifescience-graduateschool.ch/>).

Applications: Interested students should send their application package to michael.kruetzen@aim.uzh.ch before 28. February 2019. The package must include, in one PDF file: A cover letter expressing research interests relevant to the position, a complete CV, and reference letters of two academic referees.

Please also attach low-resolution copies of your official academic transcripts and degrees, as well as copies of any publications and Diploma/MSc theses.

Informal enquiries can be addressed to Prof. Michael Krützen, Email: michael.kruetzen@aim.uzh.ch.