

## **PHD/ POSTDOC, VETMEDUNI VIENNA, AUSTRIA: CHARACTERIZATION OF THE IMMUNOGENOME IN DOMESTIC, WILD AND EXTINCT OLD WORLD CAMELIDS**

We encourage applications from highly motivated candidates for 1 PhD and 1 Postdoc position within the FWF (Austrian Science Foundations) funded bilateral project Austria – Czech Republic, between the Conservation Genetics Group ([Pamela Burger lab](#)), Research Institute of Wildlife Ecology, Vetmeduni Vienna and the Animal Genetics Lab ([Petr Horin lab](#)), University of Veterinary and Pharmaceutical Sciences, Brno.

**TOPIC:** Camels present a modified form of single-domain heavy-chain antibodies (IgG) that do not associate with light chains, while their V-regions are free to interact with antigens. We believe that evolution and domestication have shaped the genomic regions encoding the Major Histocompatibility Complex (MHC) class I, II and III molecules and the Natural Killer Cell Receptor (NKR) due to a combination of changes in pathogen pressure and intense artificial selection. We will study these complex genomic regions involved in immunity and resistance to disease, their diversity, (co-)evolution and selection in the three extant Old World camel species *Camelus ferus*, *Camelus bactrianus* and *Camelus dromedarius* as well as in the extinct wild dromedary.

**DURATION:** 3 years; start: PhD - September 2017; PostDoc - flexible, latest Sept. 2017

**LOCATION:** The PhD position is part of the prestigious [PhD programme](#) of the Vetmeduni Vienna and will be located at the [Research Institute of Wildlife Ecology](#), Vetmeduni Vienna, with frequent research stays at the Animal Genetics lab in Brno (CZ) as well as travels to the Palaeogenomic Core Facility, Ludwig-Maximilian University in Munich (DE) and the College of Veterinary Medicine, Cornell University (USA).

The Postdoc is associated with the [Postdoc programme](#) of the Vetmeduni Vienna and will mainly be placed at the [Research Institute of Wildlife Ecology](#), Vetmeduni Vienna, with frequent interactions with the bioinformatics support group at Brno University.

The Vetmeduni Vienna offers a module-based leadership programme with individual mentoring, career planning and coaching, covering a wide range of competencies.

**REQUIREMENTS:** The successful PhD candidate can show (i) a Master degree in Life Sciences (biology, genetics, etc.), Veterinary Medicine or related fields, (ii) broad experience in molecular genetics (wet lab) techniques including DNA/RNA extraction and (real-time) PCR, and (iii) principle knowledge of population genetics and statistics. Candidates with bioinformatics skills (command line, R environment, next generation sequencing data analysis) or experience in ancient DNA analysis will be favored.

The obligatory requirements for the Postdoc include (i) completed PhD or doctorate in Biological Sciences, Computational Biology, Statistical Genomics or related fields, (ii) prior experience with either population genetics, comparative genomics or statistical genetics, and (iii) good knowledge of NGS data analysis (denovo assembly, re-sequenced data) and genome-wide association studies. Candidates with good programming skills (Python, Perl, etc.) or experience in ancient DNA analysis will be preferred.

**APPLICATIONS:** Please send your complete application within the next three weeks as single pdf containing a 1-page (max.) motivation letter, CV including publications and names of 2 references to [pamela.burger@vetmeduni.ac.at](mailto:pamela.burger@vetmeduni.ac.at)

Special interview grants for Postdoc applicants: The top three candidates will be invited for an interview to Vienna, with 80% of travel/accommodation costs covered.

**APPLICATION DEADLINE: Feb 22<sup>nd</sup>, 2017** We look forward to receiving your applications.