

External Job Announcement Reg.-Nr. 3-10807/23-D

Creating Knowledge. Since 1502: Martin Luther University Halle-Wittenberg (MLU) offers a wide range of academic subjects in the areas of humanities, social sciences, natural sciences and medicine. The oldest and largest university in Saxony-Anhalt was created in 1817 when the University of Wittenberg (founded in 1502) merged with Friedrichs University Halle (founded in 1694). Today the university has 340 professors and 20,000 students. Research at the university focuses on nano and life sciences, the Enlightenment, society and culture.

The Martin Luther University Halle-Wittenberg (MLU), Natural Sciences Collections (ZNS), is looking for a

Research assistant (PhD student) (m-w-d)

Work schedule: 75%

Duration: 36 months

Starting date: 01.03.2024

Salary level: E13 TV-L

Funded by the German Research Foundation (DFG), the project "Small or simple: generality and causality of brain size reduction and simplification of cortical folding in insular large mammals" aims to investigate ecogeographic patterns of brain size variation and changes in the degree of cortical folding in insular large mammals by integrating data on fossil and living species. More specifically, the project concentrates on Artiodactyla, one of the most diversified and widespread clades of mammals, and involves the application of computed tomography, geometric morphometrics, and a combination of statistics and machine learning methods. The project represents a collaboration between the Natural Sciences Collections (ZNS) of MLU and the Museum of Natural History Berlin (MfN). The advertised position will be based in Berlin, but it will involve occasional travel to ZNS and other European museums and institutions for data collection. Submission of a PhD thesis based on the research is expected.

Responsibilities:

- Generation of a computed tomography dataset of extant and fossil artiodactyls from islands worldwide and their closest mainland relatives.
- 3D segmentation, modelling and description of brains and neurocranial endocasts.
- Calculation of volumes, surface areas, indices of cortical folding, and linear measurements from the isosurface polygon renderings of each endocast or brain.
- Landmark selection and quantitative shape analysis of endocasts using geometric morphometrics.
- Statistical comparison of insular and mainland species with respect to differences in brain size, degree of cortical folding and morphological disparity.
- Compilation of a dataset of ecological and geographical variables and application of statistical and machine learning methods to investigate the causal mechanisms driving brain evolution in insular artiodactyls.
- Publication of results in international, peer-reviewed journals.
- Preparation of a PhD thesis
- Presentation of results at scientific conferences.



Requirements:

- Willingness to mainly work at the Museum für Naturkunde Berlin, including regular visits to Halle (Saale) for project meetings.
- Completed university education (Master's degree) in paleontology / zoology / biology or an allied field.
- Knowledge of the evolution, biology, and morphology of artiodactyls, including their brain anatomy.
- Experience working with paleontological / zoological collections.
- Experience with comparative morphology and anatomical description of fossils.
- Experience with the "R" statistical software environment.
- Very good English language skills.
- Excellent communication skills.
- Ability to work independently as well as to contribute to a working group environment.
- Additional qualities may include prior experience with geometric morphometrics and a scientific publication record.

The Martin Luther University Halle-Wittenberg is an equal opportunity employer. Disabled candidates with equal qualifications will be given preference. Women are strongly encouraged to apply. Applicants holding a degree that was not obtained at a German higher education institution must submit (a Statement of Comparability for Foreign Higher Education Qualifications) from the Central Office for Foreign Education Zentralstelle für ausländisches Bildungswesen, (<https://www.kmk.org/zab/central-office-for-foreign-education>) as proof of equivalence.

If you have any questions, please contact Dr. Roberto Rozzi, Tel.: +49 0345 55-26073, E-Mail: roberto.rozzi@zns.uni-halle.de.

Please submit your full application (in electronic form as single pdf file named with your surname) with registration number: 3-10807/23-D in the subject line until 30.11.2023 to Dr. Roberto Rozzi, E-mail: roberto.rozzi@zns.uni-halle.de. Applications should consist of (I) a cover letter, (II) a recent curriculum vitae, (III) academic degrees and certificates, and (IV) name and contact information for three references.

The call for applications is subject to possible budgetary restrictions.

Application expenses cannot be reimbursed by the Martin Luther University.