PhD Position in Palaeontology/Isotope Geochemistry (Mainz, Germany)

A PhD position is to be filled at the Institute for Geosciences (Applied and Analytical Palaeontology group) at Johannes Gutenberg University (JGU) in Mainz, Germany within the framework of the ERC Consolidator Grant VERTEBRATE HERBIVORY that investigates the evolution of plant-feeding among amniotes. The project is funded by the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (Grant agreement no. 681450). The JGU has a vibrant campus with over 33,000 students and it hosts the Institute for Geosciences and the Max Planck Institute (MPI) for Chemistry, which have state-of-the-art facilities for trace element and stable isotope analysis as well as cleanroom laboratories.

The PhD candidate will perform controlled feeding experiments with different animal models (mammals, birds and reptiles) to obtain bones, teeth as well as soft tissues for the analysis of calcium ($^{44}Ca/^{42}Ca$) and stable strontium ($^{88}Sr/^{86}Sr$) isotopes. These dietary proxies will be empirically calibrated for different feeding types (insectivory, herbiory and carnivory) using pelleted and natural diets. Furthermore, the influence of diet versus physiology will be assessed across different phylogenetic groups. The PhD project will focus on quantification of stable isotope fractionation of Ca and Sr between bone/teeth bioapatite and various soft tissues on different diets. Subsequently these non-traditional stable isotope proxies will be applied to fossil teeth to determine the evolution of herbivory in specific groups of land vertebrates.

Candidate profile:

- Master or Diploma degree in Earth Sciences or Biology (or a related field).
- Outstanding motivation and a broad scientific background in the fields of vertebrate palaeontology or biology as well as a strong interest in isotope geochemistry is fundamental.
- Ability and readiness to provide care to vertebrates in controlled feeding experiments and subsequent dissection for isotope analysis of their hard and soft tissues is essential.
- Experience in isotope analysis with TIMS and/or MC-ICP-MS is desirable.
- Careful work in a cleanroom laboratory to prepare large numbers of tissue samples to generate high-precision Ca and Sr isotope and other geochemical data is required.
- Very good written and oral communication skills in English.
- Writing publications for peer-reviewed scientific journals is important.
- Ability to work independently but also within an interdisciplinary research team.

The position will be for a fixed term of **3 years** starting **earliest in January 2017**. Salary and benefits are according to a public service position in Germany (**66%** of the salary level **E13 TV-L**). The place of employment will be Mainz, Germany. However, for the first part of the project the candidate will be based at the Veterinary Faculty (Vetsuisse) of the University of Zurich in Switzerland, where the animal feeding experiments will take place. For the remaining time the candidate will work at the JGU in Mainz, where the isotope analyses of the animal tissue samples will be undertaken at the MPI for Chemistry in Mainz and JGU.

We are looking for an enthusiastic and dynamic researcher who will be working in an inspiring, multi-disciplinary research team of geochemists, palaeontologists, biologists and veterinarians, together with other postdocs and PhD students. The candidate will be supervised by the project leader Dr. Tütken (JGU) but will also work intensely with the project collaboration partners Prof. Dr. Marcus Clauss (Vetsuisse) and Dr. Stephen Galer (MPI). He/she will undertake an obligatory course to obtain a licence to perform animal experiments at Vetsuisse. The PhD candidate will have the unique chance to generate animal tissue samples from controlled feeding experiments and will be trained in Ca and Sr isotope analysis of these samples with TIMS using a double-spike technique at MPI.

The JGU supports equal opportunity of men and women and therefore particularly encourages women to apply. Disabled applicants with the same professional and personal qualifications will be given preference.Your application should include a letter of motivation (also stating your research interests), curriculum vitae, degree certificates, MSc thesis and publications (if applicable), as well as contact details of at least 2 referees, and be received before **15th September 2016**. Please submit your application via e-mail as a single PDF file to:

Dr. Thomas Tütken (tuetken@uni-mainz.de):
Institute for Geosciences
AG Applied and Analytical Palaeontology
J.-J.-Becherweg 21
55128 Mainz, Germany

The call is open until the position is filled. For more information contact Dr. Thomas Tütken.

More information:
- on the Institute for Geosciences at JGU in Mainz:
  http://www.geowiss.uni-mainz.de/index_ENG.php
- on the ERC project: www.uni-mainz.de/presse/20130_ENG_HTML.php