

## PhD Opportunity: Using isotopic forensics to recreate a historic profile of animal health

### Rationale

This project aims to ascertain the nutritional history and generate information about migratory patterns of Serengeti wildebeest by characterising of the isotopic signature of sequential samples along the length of an animal's hair. The study will first test the use of hydrogen and oxygen isotopes in tail hair from GPS tagged migratory wildebeest from the Serengeti to recreate the gross movement patterns. Second, specific amino acids in hair keratin will be characterised to determine when endogenous versus exogenous sources of carbon and nitrogen are being utilised by an animal as its nutritional status fluctuates. This will include tests on dairy cows, in which nutritional/metabolic changes associated with reproductive history are well characterised. Third, the candidate will utilise hair from autopsied wildebeest whose cause of death is known to elucidate the animal's nutritional history preceding death.

### About you

We are seeking dynamic candidates with strong ecology/zoology backgrounds, able to function across disciplines, and an enthusiasm to learn the skills and intricacies of stable isotope forensics. Potential applicants must have a minimum of an Upper Second Class degree in an appropriate subject. Funding is only available to European and UK Students. This is funded for 3.5 years, half by SUERC and half by a standard RCUK PhD training award, so please check the eligibility criteria here:

<http://www.rcuk.ac.uk/RCUK-prod/assets/documents/documents/TermsConditionsTrainingGrants.pdf>  
<<http://www.findaphd.com/common/clickCount.aspx?theid=56825&type=75&url=http%3a%2f%2fwww.rcuk.ac.uk%2fRCUK-prod%2fassets%2fdocuments%2fdocuments%2fTermsConditionsTrainingGrants.pdf>>

### Skill development

Initial lab work will comprise some isotope analysis technique development. SUERC, and particularly the Life Sciences Mass Spectrometry Facility, has a strong pedigree in providing innovative stable isotope techniques and training to the ecology community. The student will be largely based at SUERC, however will also have the opportunity to interact with a vibrant intellectual environment provided by the labs based in Institute of Biodiversity, Animal Health and Comparative at the University of Glasgow and the Glasgow Vet School.

For more information please visit: <http://www.findaphd.com/search/ProjectDetails.aspx?PJID=56825> Please submit a CV and the contact details of two referees to Rona McGill (rona.mcgill@glasgow.ac.uk  
<<http://www.findaphd.com/search/EmailEnquiry.aspx?fapjid=56825&LID=2252&EA=rona.mcgill@glasgow.ac.uk>>)

Deadline: December 1st, 2014.