Postdoctoral Fellowship in Xenarthra Genetics

Project title: Application of new technologies for studies in Xenarthra genetics and ecology

Area of expertise: Genetics, Ecology

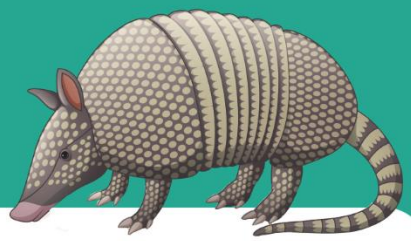
Number of openings: 1

Beginning on: 01/06/2023

Lead researchers: Pedro M. Galetti Junior (UFSCar), PhD; **Helen Taylor** (RZSS), PhD; **Arnaud Desbiez** (ICAS), PhD

Facility/Institution of project development: Department of Genetics and Evolution/Universidade Federal de São Carlos, São Carlos, SP, Brazil

Deadline for applications: 30/04/2023



Email for applications: pmgaletti@ufscar.br

The Laboratory of Molecular Biodiversity and Conservation (LabBMC), through the coordination of professors Pedro Manoel Galetti Junior and Patrícia Domingues de Freitas, from the Department of Genetics and Evolution, at the Universidade Federal de São Carlos, enters into collaboration with the Wild Animal Conservation Institute (ICAS), coordinated by PhD researcher Arnaud Desbiez, to offer a postdoctoral fellowship to an international or Brazilian candidate, with a doctorate, who will develop activities in the project entitled "***Application of new technologies for studies in Xenarthra genetics and ecology***". The project will involve collaboration with the Royal Zoological Society of Scotland's (RZSS) conservation department in Edinburgh, UK, via their conservation programme manager, Dr Helen Taylor, and members of their WildGenes genetics laboratory.with the following specific objectives:

- Develop laboratory and bioinformatics analyses in metabarcoding to identify the vertebrate community in know giant armadillo habitats, with an emphasis on Xenarthrans, based on mixed DNA samples from the blood of hematophagous mosquitoes and other arthropods that potentially feed on the fauna;
- Develop non-invasive molecular analyses, based on DNA extraction from giant armadillo (*Priodontes maximus*) feces, for kinship and dispersal studies;
- Develop laboratory and bioinformatics analyses in Xenarthra DNA barcoding;
- Develop laboratory and bioinformatics analyses in genomics, especially using GBS (Genotyping-By-Sequencing), in Xenarthra species, directed at studies of kinship, dispersal, population structure, and genotype-environment association using tissue samples previously collected.

The available opening is intended for either Brazilian or international candidates with the appropriate qualifications and expertise, preferably in conservation genetics. In the case of candidates with a degree in genetics, they must demonstrate experience in ecology in their CV. The same applies to candidates with a degree in ecology, providing demonstrated experience in genetics. Candidates must possess the ability to read, write, and speak English, as well as the demonstrated capacity to write and publish scientific articles and the willingness to reside in São Carlos. Candidates will also need to be willing to carry out field trips in the geographical area of project operations (Pantanal, Cerrado, and Atlantic Forest). The selected candidate will be involved in the planning and execution of the research activities mentioned in this announcement and will also work in laboratory administration and on the co-supervision of undergraduate and graduate students at UFSCAR. This professional should be familiar with bibliographic search tools and know how to plan and conduct experiments independently. Among the knowledge and techniques necessary for the development of this project, we highlight the need to:

1. Present experience in the field and in the collection of biological material for the full development of field activities;

2. Extract and prepare DNA from biological samples for Sanger sequencing studies (DNA barcoding) and for large-scale sequencing (metabarcoding and GBS);

3. Have a reasonable understanding of bioinformatics and be able to analyze the DNA barcoding, metabarcoding, and genomic (GBS) data produced.

Contract period and start of work: The fellowship lasts for 36 months. Expected start date: 1 June 2023.

Amounts and conditions:

1. Monthly stipend in the amount of R$ 5,000.00 (five thousand reais), fully financed by the Wild Animal Conservation Institute (ICAS);

2. Candidates must have completed their doctorate and reside in São Carlos, SP, Brazil, during the period of study;

3. Expenses related to field trips, transportation, accommodations, and food, when necessary, will be paid for by ICAS, with no financial burden on the research fellow;

4. The funding of the research fellowship is stipulated on the full-time dedication of the candidate to the research project;

5. For the implementation of the fellowship, the selected candidate must present all required documentation to ICAS.

How to apply: The submission deadline is 30 April 2023. Applications exclusively by email (pmgaletti@ufscar.br). The email must include "Xenarthra Genetics Project Postdoctoral Fellowship" in the subject, followed by the candidate's name. The email must also include the following files in PDF format:

1. A text in English, with a maximum of 2 (two) pages, describing your motivations for working on this project;

2. Short CV (maximum 3 pages), including published works that attest to the candidate's ability to carry out the project;

3. Two letters of recommendation from researchers sent directly to this email: pmgaletti@ufscar.br. Subject should include: the title of the project, "Letter of recommendation", and the name of the candidate.

Selection: Selection will be made based on the candidate's CV (experience in the research area of the project and point total for publications), as well as the letters of motivation and recommendation. Pre-selected candidates may be invited for an in-person or online interview.

If you have any questions or need clarification, please contact: pmgaletti@ufscar.br

Note: Emails sent with incomplete information or missing documents requested in this announcement will automatically be excluded from the selection process.