

## **Postdoctoral Opportunity on Leaf Cutting Ants Control in São Carlos and Rio Claro-SP - Brazil**

The Centre of Exact Sciences and Technology of the Federal University of São Carlos (UFSCar) and the Biosciences Institute of UNESP- Rio Claro offer Postdoctoral opportunity on leaf cutting ants control with FAPESP grants.

The registration period ends on 30 April.

Fellows will join the thematic project team "INTEGRATED STUDIES FOR LEAF CUTTING ANTS CONTROL" supported by São Paulo Research Foundation.

The main subject of the project is to control the activity of leaf cutting ants to reduce their action as agricultural pests, as well as human resources training. Three sponsorship have the following objectives: A) obtaining natural products, their toxic effects on leaf cutting ants, their symbiotic fungus, yeasts present in the nest, inhibiting effect of enzymes in the laboratory and in the field, including complexed compounds with metals (metallic smart luminescent insecticides) and microencapsulated to increase the insecticidal and fungicidal activity, know the mechanisms of action and their active sites; B) immobilize enzymes in solid phase of high-performance liquid chromatography column and build microelectrode modified with the same enzymes (pectin, esterase and xylanase of ants or symbiont fungi and others involved in the insecticidal mechanism of action), and to express these enzymes from ants and their associated microorganisms. The fourth scholarship aims the use of microscopy as a tool for evaluation cellular changes at ultra structural level and by confocal microscope of leaf-cutting ants exposed to non-specific pesticides.

Fellows selected for the grants 1-3 will work in laboratories coordinated by Profs. Drs. João Batista Fernandes, Paulo Cezar Vieira, Maria Fatima das G. Fernandes da Silva, Dulce Helena Ferreira de Souza and Ronaldo Cenzi Faria in the Department of UFSCar Chemistry (DQ) in the interface areas of natural products, microelectrodes and enzymology . The fellow selected for the scholarship 4 will work in Social Insects Study Center of UNESP, Biosciences Institute of Rio Claro / SP (IB) coordinated by Dr. Odair Correa Bueno, in the field of confocal microscopy of leaf cutting ants exposed to pesticides. All fellows will develop researches with particular emphasis on control of leaf cutting ants.

Registration can be made exclusively by email. Applicants should send a letter of interest indicating whether the interest is to work in São Carlos or Rio Claro, an updated curriculum vitae, including published papers certifying the project realization capacity, for the thematic project coordinator's address: [djbf@ufscar.br](mailto:djbf@ufscar.br).

Requirements for application - The applicant should have the following requirements:

- Have a PhD in the areas of Organic Chemistry, Biochemistry, Biology or related to them;
- Having obtained the doctor title for a maximum of 7 years;
- The candidate should have curriculum that demonstrate capacity to participate in the project development;
- The candidate for the scholarship in Rio Claro must have proven experience with published works in the project area and the taxonomic group of the same target (ants);

the applicant must also have proven experience in Cell and Molecular Biology, with knowledge of microscopy techniques: optical, electronic and confocal applied in the study of the subproject target taxonomic group.

- It is desirable that the candidate has fluency in English;
- The candidate must devote themselves fully and exclusively to the project activities;
- Do not have employment;
- Do not be receiving post-doctoral fellowship;
- The candidate must have the ability to organize research tasks independently and assist in routine activities related directly to the development of the project;
- The candidate should be able to initiate the activities related to the project as soon as approved his candidacy by FAPESP.
- Curricular Sumula;
- Two letter of professionals recommendation;
- Report of professional experience and motivation as the function to be exercised;
- Copy of three articles that considers important in the tender area.

Selection - The scholarship selection shall be made by analyzing the documentation received;

Result - The result will be sent to the applicant by email on the day 10.05.2016.

Scholarship - The selected candidate will receive funding by FAPESP, being awarded a post-doctoral fellowship, lasting 12 months, with the possibility of 3 more renewals of 12 months each.

Beginning of activities - The selected candidate must be able to start operations as soon as approved his candidacy by FAPESP.