Freie Universität Berlin – Ciência sem Fronteiras (CsF) Program 2015

Open Position for CsF candidates 2015

Department/Institute:	Institute of Biology
Subject Area:	Plant Biochemistry
Name of Supervisor:	**Prof. Dr.Claus-Peter Witte**
Number ofppositions:	**1**
Type of Positions	**PhD**
Project Title:	
Project Description:	A major challenge in life sciences is to elucidate the biochemical and physiological function of gene products while the description of new genes and whole genomes is advancing at a staggering pace. Even for the best characterized genomes (Arabidopsis, human) the function of most genes is unknown. We are combining comprehensive bioinformatic functional prediction with biochemistry to scan for protein function. Using in-planta protein expression and affinity purification we are able to screen proteins for function. At the moment we are applying this technology to discover new proteins involved in purine nitrogen recycling in plants. In modern agriculture the application of nitrogen fertilizers is becoming an ecological problem because nitrogenous compounds pollute the ground water and the air acting as greenhouse gases and ozone killers. For ecological and economic reasons, it is desirable to grow crops with the minimal input of fertilizers while high yields should be maintained. In order to develop crop plants that combine high yield with minimal fertilization needs, the basic understanding on how plants use nutrients needs to be improved. Plants are excellent recyclers because they have to cope with limited nutrient availability in their direct environment and cannot run away. However, the biochemistry and physiology of nutrient recycling (nutrient remobilization) in plants is poorly understood. Nitrogen is the most important mineral element for plant. Our present focus therefore lies in the discovery of new proteins involved in nitrogen remobilization, in particular purine nitrogen remobilization. In our group functional biochemical investigations are coupled with physiological studies using the corresponding mutants and with metabolomic assays using HPLC and GC-MS technologies to firmly establish a protein's role in a plant. Currently we are working with Arabidopsis thaliana, rice and soybean.
Academic Requirements:	Master in Biochemistry or Molecular Biology

Language Requirements:	English (fluent; excellent writing skills)
Further Information:	http://www.biologie.fu-berlin.de/en/arbeitsgruppen/pflanzenphysiologie_biochemie/ag_witte/mitarbeiter2/aktuelle/cp_witte.html
Further Information on Ciência sem Fronteiras at FU Berlin	http://www.fu-berlin.de/en/sites/brazil/Ci__ncia_sem_Fronteiras/index.html
Application	http://www.csf-alemanha.de/pt/ While applying online via this website, please make sure to also upload or send a copy of the following documents to saopaulo@fu-berlin.de: -letter of application; -academic CV (including former study programs, internships, publications); -one or two letters of recommendation of distinguished professors of your university. Some of the above documents are also required by Capes, but FU Berlin needs an **English or German version of each of the listed documents**. The documents are required by the individual institution responsible for the acceptance process. They may enhance your chances to get accepted. A decision cannot be made unless they have fully been transmitted. For further questions, please contact saopaulo@fu-berlin.de.