PhD Program between the Freie Universität Berlin (FUB) and the China Scholarship Council (CSC)

Open PhD Position at Freie Universität Berlin, offered only to Chinese CSC scholarship candidates 2020

Please Note: this PhD position is only offered to Chinese PhD candidates for the application in the framework of the FUB-CSC PhD Program.

Department/Institute: Institute of Biology  
Subject area: Molecular Genetics of Plants  
Name of Supervisor: Prof. Dr. Reinhard Kunze  
Number of open PhD positions: 1  
Type of the PhD Study: Sandwich (One Year)  
Project title: The DNA Damage Response in Plants

PhD Project description:

Plants as sessile organisms can not escape environmental stress conditions but need to be able to withstand them. As our environment and climate change rapidly, it is important to understand the tolerance mechanisms of plants against environmental stresses. One stress that will increase in the future is increasing levels of UV irradiation, which causes DNA damage. We recently discovered a group of novel long non-coding RNAs (lncRNAs) in Arabidopsis thaliana that are strongly induced when the plants are exposed to X-rays or UV light or certain chemicals, which have in common that they cause DNA double strand breaks and other kinds of DNA damage. None of these lncRNAs is functionally characterized to date. We investigate the role of these lncRNAs in the DNA damage response, with a focus on the regulation of the DNA repair pathway. Specifically, we use Arabidopsis mutants of the lncRNA genes and lncRNA overexpression lines to find out if these plants are more tolerant or more sensitive against DNA damage by radiation. In the next step we want to identify the targets of the lncRNAs and unravel their mode of action at the genetic, epigenetic and biochemical level. In this project we apply a wide range of molecular biology techniques, for example transient and stable transformation of plants, qRT-PCR, RNAseq, gene targeting by CRISPR/Cas9, etc.

Language requirements:

IELTS: 6.5 oder TOEFL: 95 ibt

Academic requirements:

Subject area: Biology. The Master of Science degree and experience in plant biology, genetics and molecular biology is required.
**Information of the professor or research group leader (website, awards etc.):**

For more information on our research group see:  

**Please Note:** In a first step, the complete application should be submitted to [csc@international.fu-berlin.de](mailto:csc@international.fu-berlin.de) for evaluation by January 4th, 2020. Please do not contact the professor before. He/she will get in contact with you after having received the complete application via the International Office of Freie Universität Berlin in January.