



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

### Open PhD position for CSC scholarship candidates 2015

The PhD position is only offered to Chinese PhD candidates for application in the framework of the FU-CSC Program.

<b><u>Department/Institute:</u></b>	Applied Genetics/Institute of Biology, Dahlem Centre of Plant Sciences (DCPS)
<b><u>Subject area:</u></b>	Plant Molecular Biology
<b><u>Name of Supervisor:</u></b>	Prof. Dr. Tomáš Werner
<b><u>Number of open positions:</u></b>	2
<b><u>Project title:</u></b>	Molecular mechanisms regulating cytokinin metabolism in the plant cell

#### **Project description:**

Cytokinin is a plant hormone that influences many aspects of plant growth and development. It is a key morphogenic factor controlling cell division and differentiation, and thus formation and growth of plant organs. The question, which specific plant developmental programs are under cytokinin control and which molecular mechanisms underlie cytokinin action in these processes, has been in the focus of my research group.

The cellular concentration of active cytokinin molecules is decisive factor for the correct physiological responses and is therefore tightly regulated by multiple reactions. Metabolically, most relevant processes maintaining the cellular cytokinin homeostasis are de novo biosynthesis, catabolic degradation, as well as various metabolic interconversions and modifications. The project will be mainly focus on characterization of molecular mechanisms regulating the catabolic pathway, which involves cytokinin oxidases/dehydrogenases enzymes. Further, the intracellular distribution of the hormone molecules and the transporting protein machinery mediating this process will be studied. A broad spectrum of genetic, molecular biological, cellular and biochemical approaches and setups will be employed.

#### **Language requirements:**

Excellent English skills (fluent conversation and good writing skills). Basic knowledge of German is not required but may be beneficial.

#### **Academic requirements:**

A Master degree is required for the admission to a full time doctorate study.

Required subject areas:

- molecular biology
- genetics
- plant biology/physiology
- developmental biology
- biochemistry

The candidate is expected to be familiar with the basic techniques of molecular biology; experience with plant research is advantageous but not obligatory.

#### **Link to professor and further information:**

Internet: [http://www.angenetik.fu-berlin.de/werner\\_eng.html](http://www.angenetik.fu-berlin.de/werner_eng.html), where you find also literature relevant to the project

#### **Please note:**

In a first step the complete application should submit to the Beijing Office for evaluation by January 4<sup>th</sup>. Please don't contact the professor before. He will get in contact with you after having received the complete application in January.