



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

Open PhD position at FUB for CSC scholarship candidates 2016

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

<u>Department/Institute:</u>	Chemistry & Biochemistry
<u>Subject area:</u>	Biochemistry, Molecular Immunology
<u>Name of Supervisor:</u>	Prof. Dr. Christian FREUND (Mr.)
<u>Number of open PhD positions:</u>	1
<u>Type of the PhD Study:</u>	Full-time
<u>Project title:</u>	Engineering MHC-peptide interactions for cancer immunology

PhD Project description:

In this project, we aim to characterize and manipulate antigen presentation by so-called MHC class II proteins. These molecules are able to present self or foreign peptides for surveillance by T cells. Ultimately, a goal is to suppress unwanted immune responses by self-reactive T cells and to stimulate cells that are potentially killing harmful cells such as tumor cells. Here, we want to biophysically characterize the interaction profile of tumor-associated antigens derived from deep sequencing of patients and to derive methods that allow one to identify and engineer T cells against such antigens at the cellular or organismic level.

Language requirements:

English: IELTS 6,5 or TOEFL 95 ibt
or
German: Test DaF 16 or DSH 2

Academic requirements:

Applications of highly motivated candidates from the areas of structural, molecular or cellular biology are welcome. Experience in the areas of protein biochemistry or cellular immunology is highly desirable and qualifications and references should be excellent.

Information of the professor or research group leader:

Our group is interested in the understanding and manipulation of molecular interactions that govern the assembly of protein complexes. The focus is on proteins important for immune cell function, such as MHC class II molecule, integrin regulating scaffolds or alternatively spliced proteins. By using molecular and cellular biology techniques we want to decipher regulatory pathways that can subsequently be manipulated by protein engineering approaches. Small molecule and biologics are utilized as tools for understanding and interfering with the molecular switches that govern the behavior of immune cells. Further information is available at:

<http://www.bcp.fu-berlin.de/en/chemie/biochemie/research-groups/freund-group/research/index.html>

Please note:

In a first step the complete application should submit to the Beijing Office for evaluation by January 4th, 2016. Please don't contact the professor before. He/She will get in contact with you after having received the complete application in January.