



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

### **Open Postdoc position for CSC scholarship candidates 2015**

Please note: the postdoc position is only offered to [Chinese](#) who graduated with a [PhD degree from a Chinese university](#).

<b><u>Department/Institute:</u></b>	Department Biology, Chemistry, Pharmacy; Institute of Chemistry and Biochemistry
<b><u>Subject area:</u></b>	Inorganic Chemistry, Radiochemistry, Metals in Medicine
<b><u>Professor / Research Group:</u></b>	Prof. Ulrich Abram
<b><u>Number of open positions:</u></b>	1
<b><u>Project title:</u></b>	Designing of novel chelators for bioconjugation of metal ions for medical applications

#### **Project description:**

Modern applications of metal ions in diagnostic and therapeutic procedures require an exact knowledge of the coordination chemistry or organometallic chemistry of the metals used. The designing of optimized coordination environments for the metal ions is a basic requirement for the control of the thermodynamic and kinetic properties of the corresponding potential pharmaceuticals. A combination of synthetic work and computational chemistry represents a new approach for the development of novel metal complexes for pharmaceutical application.

The scheduled work will include research with complexes of the radioactive metal ions  $^{99,99m}\text{Tc}$ ,  $^{64,67}\text{Cu}$ ,  $^{68}\text{Ga}$ ,  $^{90}\text{Y}$  as well as lanthanides such as  $^{177}\text{Lu}$ ,  $^{153}\text{Sm}$  or  $^{169}\text{Er}$  for diagnostic and therapeutic nuclearmedical applications. Matter of conventional (non-radioactive) studies are metal ions, which have potential for the treatment of cancer or less-regarded diseases such as Chaga's disease, leishmaniasis, African tripanosomiasis, malaria or schistosomiasis: Au(I), Au(III), Pt(II), Pt(IV) or Re(V). Concepts of bioconjugation and the labeling of nanotransportes will be subject of the scheduled research project.

#### **Academic requirements:**

Doctoral degree in Chemistry, Radiochemistry or Pharmacy. Experience and interest in synthetic work as well as in computational chemistry (modeling, DFT)

#### **Link to professor/contact and further information**

<http://www.bcp.fu-berlin.de/chemie/chemie/forschung/InorgChem/agabram/index.htm>

#### **Please note:**

In a first step the complete application should submit to the Beijing Office for evaluation by November 21, 2014. Please don't contact the professor before. He will get in contact with you after having received the complete application.