



## 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>	Department Biology, Chemistry, Pharmacy / Institute of Chemistry and Biochemistry
<b><u>Subject area:</u></b>	Coordination Chemistry, Metals in Medicine
<b><u>Name of Supervisor:</u></b>	Prof. Ulrich Abram
<b><u>Number of open positions:</u></b>	1
<b><u>Project title:</u></b>	Organometallic compounds of gold and other transition metals for medicinal applications

### **Project description:**

Gold compounds cause considerable attention as biologically active compounds for the treatment of cancer, but also of lesser regarded diseases such as tuberculosis, Chaga's disease, leishmaniasis, African trypanosomiasis, malaria or schistosomiasis. For the development of efficient drugs, the synthesis and evaluation of novel classes of active compounds on the fundament of an exact knowledge of the coordination and redox chemistry of the element required.

Recent studies have shown that reduction of Au(III) compounds, which frequently negatively influence the biological activity of such compound, can be avoided by the introduction of gold-carbon bonds. Synthesis, full structural characterization and biological evaluation of such organogold compounds will be in the center of the PhD project. Substituted aryl ligands as well as *N*-heterocyclic carbenes and alkynes will be used for the coordination of gold. Substitutions in the periphery of such systems will enable the formed complexes for bioconjugation by peptide-couplings or 'Click' reactions.

In addition to the studies with gold compounds, analog reactions with other metals, which are suitable for medical applications such as platinum, rhenium, ruthenium or gallium are planned.

### **Language requirements:**

The thesis can be written in German or English. The daily language in our research group is English.

### **Academic requirements:**

Master or diploma degree in chemistry, pharmacy or related fields are required.

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

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

### **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.