



## 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>	Institute of Food Hygiene, Department of Veterinary Medicine
<b><u>Subject area:</u></b>	Food Microbiology
<b><u>Name of Supervisor:</u></b>	Prof. Dr. Thomas Alter / Carolin Riedel DVM
<b><u>Number of open positions:</u></b>	1
<b><u>Project title:</u></b>	Survival mechanisms of <i>Yersinia enterocolitica</i> in the food chain

#### **Project description:**

*Yersinia (Y.) enterocolitica* is an important bacterial cause of food-borne diarrhea in humans. These bacteria are highly resistant to unfavorable conditions during food-processing, such as low pH, salinity, or disinfectants. Of special significance in food hygiene is the ability of *Y. enterocolitica* to grow in refrigerated foods. The genetic backgrounds and the temperature-dependent regulation of gene expression are still poorly understood.

The aim of the PhD position is to characterize the strain specific ability of *Y. enterocolitica* to survive several stressors, particularly low temperatures, in different food matrices. Stress response mechanisms of *Y. enterocolitica* will be investigated by analysis of the gene expression changes on the mRNA level by RT-qPCR, followed by detection of changes in the protein profiles by 2D-PAGE. Single proteins will be identified by MALDI-TOF-MS. Results will decipher possible regulatory factors to understand the survival of *Y. enterocolitica* strains and their adaptation to sublethal stress factors in the food chain.

#### **Language requirements:**

English: very good command of the English language is needed;  
German: basic knowledge of the German language would be of advantage for communication with lab technicians.

#### **Academic requirements:**

Master in food sciences, veterinary medicine or biological sciences

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

Homepage: <http://www.vetmed.fu-berlin.de/en/einrichtungen/institute/we08/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..