



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.

<u>Department/Institute:</u>	Institute of Food Hygiene, Department of Veterinary Medicine
<u>Subject area:</u>	Food Microbiology
<u>Name of Supervisor:</u>	Prof. Dr. Thomas Alter / Carolin Riedel DVM
<u>Number of open positions:</u>	1
<u>Project title:</u>	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 4th. Please don't contact the professor before. He will get in contact with you after having received the complete application in January..