



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

Open PhD position at FUB for CSC scholarship candidates 2017

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>	Leibniz Institute for Farm Animal Biology, FBN Dummerstorf, Reproductive Cell Biology Unit; The supervisor is associated to the Institute of Veterinary Biochemistry, Department of Veterinary Medicine, FUB
<u>Subject area:</u>	Cell Biology
<u>Name of Supervisor:</u>	PD Dr. Jennifer SCHÖN (Ms.)
<u>Number of open PhD positions:</u>	2
<u>Type of the PhD Study:</u>	Full-time
<u>Project title:</u>	Deciphering the early embryo-maternal crosstalk in vitro

PhD Project description:

Incidences of early pregnancy losses in women reach as high as 70%. Despite of the rapid progress in technology, the average implantation rate after IVF is only approximately 25-35%. Also in cattle early embryonic death is highly prevalent and leads to major economic losses. In Holstein Friesian the expected early embryonic death increased up to 43%. Consequently, there is a pressing need to understand the dynamic events and signals exchanged between the mother and the offspring at very early stages of pregnancy as disturbances of this network can result in adverse outcomes including sub-fertility, infertility, loss of pregnancy and even offspring with poor health status in adulthood. However, investigating the subtle local interactions between the mammalian pre-implantation embryo and the maternal organism in vivo is technically challenging if not impossible. Therefore, our group established highly differentiated in vitro models of the mammalian oviduct epithelium allowing long-term co-culture with living embryos.

Aims of the present PhD projects are

- Optimizing the embryo-epithelial co-culture conditions for models derived from murine, porcine, and bovine oviduct epithelia.
- Analyzing the transcriptome and secretome of the epithelial cells in response to steroid hormones and embryo contact.

Techniques relevant for the project: Mammalian 3D cell culture / Embryo (Co-)Culture / Molecular Biology / Transcriptome analysis / Imaging / (Glyco-)Protein analysis

Language requirements:

Language in lab and for thesis is English. IELTS 6.5 or TOEFL 95 ibt.

Academic requirements:

Requirement: Last year of master studies or master degree, Bachelor degree is NOT sufficient for a full time doctorate. Subject areas: Life sciences, Biotechnology, Veterinary Science

Information of the professor or research group leader:

https://www.researchgate.net/profile/Jennifer_Schoen

Please note:

In a first step the complete application should be submitted to the Beijing Office for evaluation by January 4th, 2017. Please don't contact the professor before. He/She will get in contact with you after having received the complete application in January.