

Open Position for CsF candidates 2015

Department/Institute: Institute of Virology

Subject Area: Veterinary Medicine

Name of Supervisor: **Prof. Dr. Klaus Osterrieder**

Number of positions: 1

Type of Positions: **PhD (Fulltime)**

Project title: Viral glycoproteins and cellular receptors determining the efficiency of Equine Herpesvirus type 1 and 4 entry into different cells

Project description: Equine herpesvirus type 1 and type 4 (EHV-1 and EHV-4) are members of Varicellovirus and cause respiratory infections to horses all over the world. EHV-1 and EHV-4 have different virulence factors including the envelope glycoproteins gC, gB, gD, gH, and gL. These glycoproteins are conserved in both viruses with high similarity rate reach around 95 % and they have been shown to play a role in viral penetration and fusion with the host cell. gD of EHV-1 and EHV-4 can bind to multiple cell receptors and determine the host range of each virus. Recently, two different studies have shown that equine major histocompatibility complex class I (MHC-I) can serve as a receptor for EHV-1 to gain entry into equine cells through interaction with gD. **However, the full set of receptors that the virus can use to enter other cells is not fully known.**

The process of entry of many alphaherpesviruses have been shown to be controlled by five glycoproteins through a complicated, not yet identified, process. It was suggested that the binding of gD with cell receptors leads to activation of gH/gL complex, which in turn prime gB for fusion with the host cell to deliver the viral genome. **The exact mechanism of gH/gL interaction with gB needs to be elucidated.**

Academic Requirements: Completion of Master or Diploma. PCR, cloning, cell culture

Language Requirements: English

Further Information: <http://www.vetmed.fu-berlin.de/en/einrichtungen/institute/we05/index.html>

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**Further Information
on Ciência sem
Fronteiras at FUB**

http://www.fu-berlin.de/en/sites/brazil/Ciencia_sem_Fronteiras/index.html
For further questions, please contact the Liaison Office of FU Berlin in São Paulo saopaulo@fu-berlin.de.

Application

<http://www.csf-alemanha.de/pt/>
While applying online via this website, please make sure to also upload or send a copy of the following documents to saopaulo@fu-berlin.de:
-letter of application;
-academic CV (including former study programs, internships, publications);
-one or two letters of recommendation of distinguished professors of your university.
Some of the above documents are also required by Capes, but FU Berlin needs an **English or German version of each of the listed documents**. The documents are required by the individual institution responsible for the acceptance process. They may enhance your chances to get accepted. A decision cannot be made unless they have fully been transmitted. For further questions, please contact saopaulo@fu-berlin.de.