OFERTA BECA FPI

PROYECTO: "Host-pathogen interaction of high/low virulence strains: *in vitro* and *in vivo* studies to investigate the basis of *Neospora caninum* virulence in cattle".

- 4 años. Grupo de investigación SALUVET (Departamento de Sanidad Animal, Facultad de Veterinaria-UCM)
- Posibilidad de cubrir estancias en otros centros de investigación.

PERFIL DEL CANDIDATO:

- Licenciado en el área biosanitaria.
- Se valorará experiencia previa en técnicas de biología molecular y ADN recombinante, genómica, transcriptómica y bioinformática.
- Imprescindible buen conocimiento de inglés y ofimática.
- Se valorará la aptitud en una entrevista personal.

INTERESADOS MANDAR C.V. DETALLADO Y DATOS DE CONTACTO A LA DIRECCIÓN DE CORREO luis.ortega@ucm.es

RESUMEN DEL PROYECTO:

Neospora caninum is an apicomplexan protozoan parasite that is considered to be one of the main causes of abortion in cattle. The costs of the management practices used for the control of neosporosis have indicated that vaccination could be the best intervention. However, no effective vaccine is currently available on the market. The overall objective of our project is the identification of mechanisms underlying the molecular basis of the virulence of *N. caninum* in the host. The final aim is the identification of virulence factors of *N. caninum* that could be used as potential vaccine candidates. The specific objectives involve: 1) the transcriptome analysis of high and low virulence isolates of *N. caninum*: identifying variations in expression of key proteins involved in the parasite lytic cycle and obtaining a global view of the tachyzoite processes implicated in host cellular invasion and proliferation. 2) bovine trophoblast and dendritic cell (DCs) modulation by high and low virulence isolates of *N. caninum*. Bovine DCs and trophoblast cell lines are mediators of the innate immune responses and the local immune regulation in the placenta. The effects of *N. caninum* infection on the cells will be studied to identify key elements in parasite pathogenicity and their relationships to host responses. 3) parasite-host interaction in the placenta after infection with high and low virulence isolates of *N. caninum* in a pregnant bovine model. Special emphasis will be given to investigate the consequences of infection in the placenta based on the profiles of the immune cell population and cytokine expression and other markers of interest related to innate immune response and pathogenesis.

Grupo SALUVET
Edificio Principal, planta -3 – Facultad de Veterinaria
Ciudad Universitaria, s/n
28040 – Madrid - SPAIN
Teléfono – Fax: 34 – 91 394 40 98
e-mail: saluvet@vet.ucm.es