



Marie Curie Initial Training Network (EU Work Programme PEOPLE)

POSTICK- *Post-graduate training network for capacity building to control ticks and tick-borne diseases*

Recruitment of Early Stage Researchers (ESRs)

Applications are invited for filling **10 Early Stage Researcher (ESR)** positions for a period of 36 months in accordance with the terms of an EU FP7 Marie Curie ITN. The ESRs will develop a research project, pursuing a PhD degree at one of the POSTICK's participating institutions either in **Germany, Scotland, Spain, Czech Republic or France**.

Applicants should hold a strong university degree (Masters/diploma or equivalent) in a relevant subject (veterinary medicine, biology or related discipline) and satisfy the Marie Curie Early Stage Researcher eligibility criteria (i.e. a maximum of four years research experience at the time of selection) and must not be nationals of the country in which they propose to hold the fellowship (unless they have spent 3 out of the previous 4 years outside of that country). Furthermore, applicants must not have spent 12 months (over the past three years) in the country in which they propose to hold the fellowship and must have a very good working knowledge of English, as all POSTICK training events will be in English.

The ESRs will benefit from a competitive salary, mobility allowance, international collaborations, secondments, and complementary training activities organized by the POSTICK network.

Applications should be submitted exclusively through the Online Application Tool dedicated to the call (www.graduatecenter-lmu.de/postick/). Applicants are asked to express two choices of host institutions in order of preference. Further details of the research projects and training activities can be found on the POSTICK website www.postick.eu.

Application deadline: June 20, 2010

POSTICK Short description

In the context of global warming and globalisation, ticks and tick-borne diseases (TTBD) are expected to emerge, with an increasing risk for animals and humans. The POSTICK ITN aims to design new effective control strategies for TTBD diseases through understanding the mechanisms of tick-host-pathogen interactions regarding: (a) pathogen diversity, survival and transmission, modulation of host immune response and tick survival and (b) identification of host-pathogen-tick molecules for designing anti-tick vaccine and blocking pathogen transmission. This will be achieved through this strategic Post-graduate training programme, coordinated by the Ludwig-Maximilian-University (LMU-Munich, Germany), consisting of 7 main research projects (each with 2 sub-projects) and complementary training modules (seminars, workshops, symposiums and a conference), combining the facilities and complementary expertise of European institutions (5 universities, 1 research institute and 2 industrial participants) and associated partners (in Brazil and Israel). Each main project will recruit ESRs to develop individual sub-projects, as follows:

Project 1 (In vitro culture studies and pathogen polymorphism analyses), **Ludwig-Maximilian-University (Munich, Germany)**: the ESR positions are already filled

Project 2 (Impact of tick infestation on the immunological reaction of the host; 2 open positions) will study the impact of tick infestation on the immunological reaction of the host regarding the immunomodulatory effect of the ticks which might lead to the development of inflammatory and allergic reactions. This project is based at the **Borstel Research Centre (Borstel, Germany)** and comprises the following sub-projects: (1) Characterization of anti-inflammatory function of tick proteins and (2) Investigation on the allergenic potential of tick antigens.

Project 3 (Genomics and expression profiling of tick-borne pathogens; 2 open positions) aims at identifying parasite molecules involved in stage differentiation in the tick for designing strategies for blocking pathogen transmission. This project is based at the **University of Glasgow (Glasgow, U.K.)** and comprises the following sub-projects: (1) Investigation of regulation of differentiation into tick transmissible stages in *Theileria annulata* and (2) Expression profiling of tick transmissible stages of *T. annulata* and screening for transmission blocking vaccine candidates.

Project 4 (Dissecting tick cell responses to arboviruses; 1 open position) will study the tick cell responses to RNA arbovirus infections and the role of these in determining the outcome of infection. This project is based at the **University of Edinburgh (Edinburgh, U.K.)**. The ESR will work on “Modulation of the tick cell transcriptome by virus infection” and will spend 8 weeks in Spain learning and carrying out subtractive hybridisation studies.

Project 5 (Functional genomics of tick-host-pathogen interactions and vaccine development; 1 open position) aims at the identification and characterization of key tick molecules involved in tick feeding and reproduction for selection of candidate protective antigens in vaccine formulations against tick infestations in cattle, using a gene expression approach. This project is based at the **Universidad de Castilla – La Mancha (Ciudad Real, Spain)** and comprises the following sub-projects: (1) Functional genomics of tick-*Rickettsia* interactions and vaccine development and (2) Functional genomics of tick (*Boophilus* spp.)-host (*Bos taurus*) interactions and vaccine development.

Project 6 (The role of tick molecules in modulation of vector-host interactions; 2 open positions) will analyse the molecular and cellular mechanisms of pathogen survival in the tick and the anti-microbial activity of peptides regarding a possible selective blocking of pathogen transmission. This project is based at the **Biology Centre of the ASCR (Budweis, Czech Republic)** and comprises the following sub-projects: (1) Functional analysis of defence peptides complex from *Ixodes ricinus* and (2) Glycoprotein analysis of *Ixodes ricinus* salivary glands.

Project 7 (In vitro tick screening systems and transmission mechanisms of tick-borne pathogens; 2 open positions) will be run by both industrial participants and will focus on tick feeding and breeding systems, and mechanisms of pathogen transmission from vertebrate host to tick and *vice versa*. One sub-project (7a: *In vitro* tick breeding and screening systems) is based at **Bayer Animal Health (Monheim, Germany)** and the other (7b: Kinetics of tick-borne pathogen transmission) is based at **Merial (Lyon, France)**.