POSTICK: POST-GRADUATE TRAINING NETWORK FOR CAPACITY BUILDING TO CONTROL TICKS AND TICK-BORNE DISEASES

Lygia Maria Friche Passos[1,2]

[1]Departamento de Medicina Veterinaria Preventiva, INCT-Pecuária, Escola de Veterinária-UFMG, Belo Horizonte, Minas Gerais, Brazil. [*]lygiapassos@yahoo.com
[2]Comparative Tropical Medicine and Parasitology, Ludwig-Maximilians-Universität München, Germany.

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 is an strategic post-graduate training programme, coordinated by the Ludwig-Maximilians-University (LMU, Munich, Germany), consisting of 7 main research projects (each with 2 sub-projects) and complementary training modules (seminars, workshops, and a conference), combining the facilities and complementary expertise of European institutions (5 universities, 1 research institute and 1 industrial participant) and associated partners (in Brazil and Israel). 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. The main achievements will be presented regarding the Research Training Packages (RTP), which cover the following topics: (a) In vitro culture studies and pathogen polymorphism analyses, (b) Impact of tick infestation on the immunological reaction of the host with a special emphasis to immunomodulation leading to the development of inflammatory reactions including allergic reactions, (c) Genomics and expression profiling of tick-borne pathogens, (d) Dissecting tick cell responses to arboviruses, (e) Functional genomics of tick-host-pathogen interactions and vaccine development, (f) The role of tick molecules in modulation of vector-host interactions, (g) *In vitro* tick screening systems and transmission mechanisms of tick-borne pathogens and Kinetics of tick-borne pathogen transmission. A total of 15 Early Stage Researchers (ESRs) develop individual sub-projects, aiming to tackle a common task.

Key words: Post-graduate training network, Ticks and Tick-borne pathogens, European Commission.

Financial support: POSTICK is an Initial Training Network (ITN) funded through the EU Marie Curie actions within the FP7- PEOPLE – ITN programme (EU Grant No. 238511).