

AFRICAN TRYPANOSOMOSIS AND LEISHMANOSIS

from 16 to 20 December 2013

1 week

In charge scientists

G. Cuny - D. Berthier (Cirad Intertryp UMR)

Presentation

The study of human and animal African trypanosomosis and leishmaniasis, are at the heart of the activities of the [UMR Intertryp](#).

Vector-borne diseases per excellence, they are closely related to the meeting host-vector-parasite. The complexity of the pathogenic system and the increasing instability of its environment influence the evolution of these major parasitic diseases. The fight therefore relies both on the knowledge of the triptych parasites-vectors-hosts, and that of climatic, environmental and socio-economic factors.

Interrelationships host / parasite that characterize *Trypanosomatidae* infections involve complex molecular and cellular mechanisms. An integrated approach to the various compartments of the cycle of trypanosomes (mammalian host, trypanosome, vector, symbiont) allows to better understand these diseases and be able to better diagnose, prevent and optimize interventions. The unit has chosen an integrated and innovative approach, allowing a detailed analysis of different biological compartments of the parasite and the host, since phenotypic characterization, gene structure, modulation of gene expression and characterization of the nature and the amount of protein produced *in fine*.

Based on the research results, the unit focuses on the development of new diagnostic and prognostic tools, of new drugs, pharmaceutical formulations (to increase the effectiveness of treatment) and prophylactic and immunotherapeutic protocols, as well as the development of a vaccine against these diseases.



Educational objectives

At the end of training, participants will be able to:

- Know the symptoms and the clinical evolution of these diseases;
- Know the main species of tsetse flies of medical and / or veterinary interest;
- Know the breakthroughs in therapeutics (trypanosomosis) and vaccination (canine leishmaniasis);
- Propose measures relating to the methods and organization of the control of these diseases, to enhance the reliability of official control services;
- Lead an integrated approach to different compartments of the parasite life cycle (human or animal host, *Trypanosoma* / *Leishmania*, vector, symbionts) to diagnose, predict and optimize the interventions against these endemic diseases.

"CIRAD is a collaborating center to OIE for the diagnosis and control of animal diseases in tropical regions. The organization of training in this area is part of the mandate for this title."

Modular training



If you are interested by this training in Cirad at Montpellier :

http://www.cirad.fr/ur/formation_elevage_en

Admission

This training is open to veterinarians, agronomists and engineers working in the field of livestock (and / or health) in tropical areas and desiring to strengthen their skills. It may be followed by candidates not belonging to these categories, but justifying sufficient professional experience.

Candidates must also properly master the French and / or English languages.

Partnerships



With the participation of the IRD and CIRDES.

These searches are possible thanks to the unique complementarity of the disciplines present in the unit. They are conducted through continual interactions between researchers based in the North and the South, and some of these activities are conducted entirely by Southern partners.

Training costs

- Pedagogic : 1 050 €
- Travel towards Montpellier : to be determined by participant
- Housing expenses : about 80 € per day

If necessary, a personalized estimate can be made upon request, especially if several modules are followed



Important !!!

CIRAD is not able to provide scholarships. Requests should be submitted as soon as possible to : Competent national authorities in charge of livestock and / or the granting of scholarships; Cooperation and Cultural Action Services (SCAC) of the French Embassy; Embassies of other countries; International organizations (FAO, UNDP, EU, IAEA, IDB, ...); Development projects or NGOs

Application procedure

Applications, consisting of a detailed resume, a motivation letter and details about the organization managing your grant, must be sent as much as possible before

November 23, 2013,

by email : formation-emvt-fvi@cirad.fr or to the following address :

Equipe mixte CIRAD - FVI
Formation et Enseignement en Elevage et Médecine Vétérinaire en Régions Chaudes
TA A-15/B - Campus international de Baillarguet 34398 MONTPELLIER Cedex 5 France
Tel : 33 (0) 4.67.59.39.02 / Fax : 33 (0) 4.67.59.37.97
E-mail : marie-caroline.estienne@cirad.fr

Programme (data indicative)

The main diseases caused by Trypanosomatidae: AAT, HAT and leishmanosis

- African Animal Trypanosomosis
- Human African Trypanosomosis and atypical forms
- Human and animal leishmanosis

Vectors of African trypanosomes

- Tsetse flies cyclic vectors of African trypanosomes
- Microorganisms (viruses, bacteria) and vector competence of tsetse flies
- Mechanical vectors of trypanosomes

Control tools

- Vector control applied to tsetse flies and interest of entomology in epidemiological surveillance of trypanosomosis
- Study of the variability of the host response to infection : animal trypanotolerance
- Study of the variability of the host response to infection : tolerance / sensitivity in humans
- Use of new biotechnological tools
- Immunization, an essential asset for prevention: the case of leishmanosis

Visit of the insectarium in Baillarguet