POST-DOC IN PARASITOLOGY / MEDICAL ENTOMOLOGY

A postdoctoral position, funded by the Institut Pasteur Transversal Program of Research is available in the Genetics and genomics of insect vector unit (50%) and in the Trypanosome cell biology unit (50%) under the co-supervision of Christian Mitri and Brice Rotureau

**Deciphering the impact of Plasmodium/Trypanosoma co-infections on the vectorial capacity of Anopheles mosquitoes**

**Description of the Project:**

Malaria and African trypanosomiasis (AT), also known as sleeping sickness in humans and Nagana in cattle, are two parasitic diseases prevalent in African tropics. Both diseases are caused by parasitic protozoa of the genus Plasmodium for malaria and Trypanosoma for AT. These parasites are transmitted to humans and other mammals by the bite of blood-feeding insect vectors: the adult female Anopheles mosquito for Plasmodium and the adult male and female tsetse flies (or Glossina) for Trypanosoma.

In some areas of sub-Saharan Africa, these two parasites are sympatiacally transmitted due the presence of both insect vectors in the same ecological zones. Hence, in these areas, a fly or a mosquito could bite host reservoirs carrying Trypanosoma and/or Plasmodium. In such scenarios, insects have to cope with both parasites simultaneously or consecutively. For this project we will mainly focus on Anopheles, due to the higher impact of malaria on public health and to the technical limitations of the Glossina model.

The current project aims at understanding how the ingestion of the two parasites could impact the development and the transmission of Plasmodium by Anopheles. In addition a field component of this project will provide the necessary data to refine, and possibly tackle differently the risk of Plasmodium transmission in co-endemic areas, where others microorganisms such as Trypanosoma are sympatric.

**Experimental program:**
Co-infection experiments in mice and insect vectors (Anopheles and Glossina), dsRNA synthesis and injections in mosquitoes, vector dissections and sample treatment, data analyses and communication.

**Candidate requirements:**
Candidates with at least a PhD in Biological Science, especially in Parasitology or Medical Entomology are encouraged to postulate. Highly motivated and autonomous candidates are wanted. Skills in medical entomology and in vivo experiments would be appreciated.

**Funding information:**
Type: Postdoctoral funding by the Programme Transversal de Recherche of the Institut Pasteur. The salary is suited for a first or second postdoctoral experience after a PhD.
Duration: 24 months
Starting date: November/December 2015

**Application:** Deadline 09-30-2015
Candidates should send a CV including a publication record, a brief description of their research interests and contact details for two referees to Dr. Christian Mitri (christian.mitri@pasteur.fr).