

Post doctoral position in Cellular and Molecular Parasitology

STUDY OF THE MECHANISM OF ACTION OF ANTILEISHMANIAL AGENTS ACTING ON HOST-CELL VESICULAR TRAFFICKING AND IDENTIFICATION OF NEW THERAPEUTIC TARGETS

Laboratory :

Université Paris-Sud, UMR 8076 CNRS BioCIS, Team « Chimiothérapie Antiparasitaire »
(Director : Philippe LOISEAU)

Supervisor :

Sébastien POMEL

Keywords:

Leishmania, Chemotherapy, Mechanism of action, vesicular trafficking

Profile and skills:

PhD with strong background in cellular and molecular biology. A previous experience in in vivo experimentations will be appreciated. Knowledge in parasitology is not a prerequisite.

Description of the project:

A drug candidate, and its back-up, for the treatment of visceral leishmaniasis were identified from *in vitro* and *in vivo* experimentations, in collaboration with CEA Saclay. These compounds were selected to be inactive on the axenic amastigote form itself in order to prevent a risk of drug resistance, but very active on the intramacrophage form. Previous works have shown that a derivative of these compounds inhibit the retrograde transport and the formation of the parasitophorous vacuole.

The objectives of the project consist in :

→ Analysis in cellular biology with different markers

The effect of these compounds on host cell vesicular trafficking will be analyzed in confocal microscopy and videomicroscopy using markers of different steps of the endo-lysosomal pathway (e.g. EEA1, Rab7, LAMP...), as well as the acidification of the parasitophorous vacuole (e.g. LysoTracker). The effect of the compounds will be also studied in electron microscopy.

→ Pharmacoproteomics analyses on uninfected macrophages and axenic amastigotes

This approach will allow the identify the targets of the compounds. The expression and the localization of these targets will be further analyzed.

Funding

Région Ile de France (DIM1HEALTH) for 2 years from Oct. 2018 to Oct. 2020

Salary

≈ 2000 € / month

How to apply

Send a CV, a motivation letter and the name and contact information of three references to Sébastien Pomel (sebastien.pomel@u-psud.fr) and Philippe Loiseau (philippe.loiseau@u-psud.fr).