- **Title:** Postdoctoral Scholarship in Molecular Pathology/Immunopathology
- **Field of knowledge:** Pathology/Parasitology/Immunology
- **FAPESP process: 2018/14398-0**
- **Project Title:** UK:Brazil Joint Centre Partnership in leishmaniasis (JCPiL) - Molecular pathology of leishmaniasis: towards host-directed therapy in leishmaniases
- **Working area:** Molecular Pathology/Molecular Biology/Molecular Parasitology
- **Principal Investigator:** Hiro Goto
- **Unit/Institution:** Tropical Medicine Institute, University of São Paulo Medical School, University of São Paulo, IMTSP/FMUSP/USP
- **Partner Institution:** Hull York Medical School and Department of Biology, University of York, UK
- **Deadline for submissions:** October/25/2019
- **Publishing Date:** September/20/2019

A Post-Doctoral Scholarship is available to work on the project " UK:Brazil Joint Centre Partnership in leishmaniasis (JCPiL)". This project is a partnership between Brazilian (Hiro Goto, IMTSP/USP) and UK (Paul Kaye, University of York) laboratories. The postdoctoral fellow will study "**Molecular pathology of leishmaniasis: towards host-directed therapy in leishmaniases***"* at the Brazilian laboratory but will also spend periods of time in the UK laboratory.

Summary: The leishmaniases are parasitic diseases caused by one of several species of single cell parasites (*Leishmania*) that are transmitted to humans by the bite of infected sand flies. These diseases affect over 150 million people across 98 countries worldwide. Some forms of leishmaniasis are fatal, whereas other are very stigmatising and affect quality of life. Few drugs are available for patients and no vaccines are currently registered for use in preventing or treating these diseases. Importantly, the drugs that we do have are not universally effective and often have significant side effects. Sometimes patients even in the same geographical area will respond quite differently to therapy. In this proposal, we will use new molecular approaches to perform deep phenotyping on tissue samples collected from patients with various forms of leishmaniasis to analyse cellular and molecular elements engaged in pathogenesis and treatment response. The aim is to identify host and parasite targets that could be the focus for developing novel therapies.

Objectives: The aim of this project involves understanding the pathophysiology of the diverse forms of leishmaniasis found in Brazil focusing on deep phenotyping of patients, comparing cutaneous and mucosal lesions of patients with American tegumentary leishmaniasis and visceral leishmaniasis. The project will determine the immune profile across the disease spectrum using new multiplex immunohistochemistry and RNA-FISH assays, Nanostring whole tissue transcriptomics and Nanostring Digital Spatial Profiling. The project will deliver new data on immune mechanisms operating in the diverse forms of leishmaniasis, and on the parasite response. The identified pathways could be the focus for developing novel therapies.

Requirements: Applicants must have a Ph.D. in Tropical Medicine, Parasitology, Immunology, Molecular Biology or related fields. Preference will be given to individuals

with a proven experience on molecular parasitology/immunopathology. The candidate should have experience with projects involving humans and experimental mouse models and/or in vitro host cell-parasite assays. Proven experience in field work in endemic areas, including epidemiological surveys or follow up of patients, sample collection, samples processing for pathological, immunohistochemistry and molecular biology and diagnostic techniques such as direct research, parasite culture, ELISA, IFI and PCR. The candidate should also demonstrate experience in molecular techniques including DNA/RNA extraction from fresh biopsy and formalin fixed paraffin embedded (FFPE) sections, Real Time PCR, diagnosis based on qPCR to identify the *Leishmania* species and / or training on RNA-FISH assays.. Candidates should be creative, personally motivated, have excellent oral and written communication skills and a sense of teamwork. It is mandatory that applicants are fluent in Portuguese and English. The selected candidate will receive a Post-Doctoral Fellowship from FAPESP (explicit details are at **www.fapesp.br/en/5427**).

How to apply: Interested individuals should contact Profa. Dra. Hiro Goto by email (**hgoto@usp.br** using "PostDoc_UK/FAPESP JCPiL" as the subject of the email). Documents requested: a letter of intent and a short version of Curriculum Vitae with a list of publications and previous professional experiences. Also, two letters of recommendation from mentors/supervisors should be sent to the same email address. A part of the shortlisted candidates meeting the requirements will be contacted and interviewed (in-person or via Skype).