

Paris, 11 August 2022

We have a two years fellowship funded by the Labex IBEID for a post-doctoral fellow specialized in metabolomics and microbiology to work in the frame of a consortium of teams at the Institut Pasteur. The selected candidate will be working at the [Metabolomics Core Facility](#) headed by Sandrine Aros and in the [Biology and Genetics of the Bacterial Cell Wall Unit](#) headed by Ivo G. Boneca. The other teams of the consortium are the [Imaging and Modeling Unit](#) (Christophe Zimmer) and [UTechS Photonic BioImaging](#) (Spencer Shorte).

The project is aimed at studying the metabolome of *Helicobacter pylori* by LC-MSMS after treatment with a library of antimicrobials. The metabolomic data will be extended to a sub-set of mutants of an ordered library of transposon mutants. The metabolomic data will be then used to develop an artificial intelligence pipeline to cluster gene networks with mode of action of antibiotics. Finally, the metabolomic set will be compared to microscopy imaging set acquired in the same conditions by the consortium. The combined set of metabolomics and imaging data will be used to improve the pipeline prediction of the mode of action of antibiotics.

A sub-aim of the project is to focus and characterize on *H. pylori* mutants with morphological phenotypes in close collaboration with another post-doctoral fellow involved in the transposon library generation and imaging acquisition.

Candidates should have a very strong background in small molecules high resolution mass spectrometry and in microbiology. Applications (a motivation letter, a full CV and minimum of two references) should be sent to Ivo G Boneca (bonecai@pasteur.fr). The selected candidate will start the latest on January 1st 2023.



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