

**An 18-months Post-doc position in Molecular Biology, microbiology and genetic manipulation of intestinal bacteria**

**Context**

An 18-months Post-doc position funded by Satt-Paris-Saclay is available in the laboratory of Commensal and Probiotic Microorganisms-Host Interactions (Acronym ProbiHôte), Micalis Institute, INRAE, Jouy en Josas, France.

Following its 2020 call for projects, the SATT Paris ‐ Saclay (http://www.satt‐paris‐saclay.fr/) has confirmed its support for the “SUCCESS” maturation project carried by the MICALIS Institute, a research unit INRAE / AgroParisTech / Université Paris-Saclay. This project aims **to develop a human intestinal bacterium as a next-generation probiotic to prevent and to treat inflammatory bowel disease (IBD).**

**Main activities**

The two leaders of the SUCCESS project are looking for a post-doc in molecular biology, microbiology and genetic manipulation of intestinal bacteria whose main missions will be:

- To master the growth and physiology of two intestinal bacteria (a model intestinal bacterium and the identified bacterium object of the project)

- To develop DNA transfer techniques such as electrotransformation and conjugation for these two bacteria

- To develop classical techniques of cloning and mutagenesis

- To transpose the CrispR-Cas9 techniques in these two bacteria

- To identify candidate genes to inactivate or overproduce in order to determine modes of action

- To evaluate the properties of the mutants obtained in cell culture models and mouse models of colitis and NAFLD which will be performed by an external service provider

**Expertises needed**

Under the supervision of the two project managers, the post-doc will therefore have the tasks of i) developing new cloning and mutagenesis tools for these two intestinal bacteria and ii) building and characterizing new mutants and new recombinant strains in order to better understand the mechanisms of action of these two intestinal bacteria. The post-doc must therefore have excellent expertises in microbiology, molecular biology, biochemistry, genetic engineering techniques for the manipulation of the two strains of intestinal bacteria and animal experimentations (knowledge in immunology and metabolism would be a plus).

**Expected skills**

- Molecular biology techniques (DNA extraction, PCR, qPCR, ...)

- Microbiology techniques

- Animal experimentation

- Ability to produce and analyze results

- Ability to provide oral and written feedback on results

- Ability to analyze scientific bibliography and write scientific reports and publications

- Project management experience

- Supervisory skills and listening skills

- Reliability, technical thoroughness, rigor

- Good listening to others and good ability to express oneself

Strong sense of innovation and dynamism in order to master, in particular, molecular biology techniques.

**Researched profile**

Ideally a PhD in Life Sciences after a Master 2 or an Engineer School in biology or equivalent) in molecular biology, microbiology and a solid expertise in genetic manipulation of bacteria

**Required qualities**

* Enthusiasm, reliability, technical thoroughness, rigor
* Good listening to others and good ability to express oneself

**Location:** The workplace is the Micalis Institute located at the INRAE Center in Jouy en Josas (78350)

**Fixed-term contract:** 18 months.

**Salary range:** between 2200 and 2500 € (monthly net)

**Desired starting date:** No later than March 1st, 2021

**Contacts:** Send your CV, a cover letter and the names/coordinates of 2 referees by email to the two project leaders:

Philippe Langella: philippe.langella@inrae.fr

Harry Sokol: harry.sokol@gmail.com