# Research Associate Position in Biosensor Engineering

We are seeking an outstanding candidate for a research associate position in bacterial Synthetic Biology and Metabolic Engineering. The successful candidate will take part of an ongoing European H2020 project aimed at developing a biosensing platform for multiplex detection at single-cell level of biomarkers linked to cancer metastasis.

The position is open at the MICALIS institute (INRAE, University of Paris-Saclay), a research unit of more than 350 researchers developing multidisciplinary approaches and promoting microbial systems biology towards the development of synthetic biology applications for health and biotechnology. Within MICALIS, the recruiting research team specializes in developing whole-cell and cell-free synthetic biology for metabolic pathway and biosensor engineering to produce biologically active molecules and monitor disease biomarkers.

The person recruited will be responsible for engineering pathways that upon biomarker detection trigger the production of chemical signals simultaneously detectable with high sensitivity by surface-enhanced Raman scattering (SERS). The work will involve (i) design of pathway producing SERS detectable molecules, (ii) engineering and benchmarking the designed pathways in an *E. coli* strain, (iii) integrating the engineered pathways with biosensing devices develop by other project partners of the EU project. To achieve these tasks the successful candidate will benefit from several years of experience the recruiting team has developed connecting biosensing devices with metabolic pathways (//www.jfaulon.com/biosensor/).

**Applicants' profile:**

- Applicants should have a Ph.D. degree, preferably with post-doctoral experience, in one or more of: systems & synthetic biology, metabolic engineering, or molecular biology.
- Essential skills required include experimental protocols and analytical techniques used in synthetic biology and molecular biology. Experience in designing and engineering metabolic pathways or biosensing devices are desirable. Additional experience with phage techniques will be an additional advantage (but not essential).
- Ability to write high-quality research manuscripts, strong collaborative skills, and excellent communication skills in English are required.

**The position is open for 12 months (then renewable for two additional years) from July 1st, 2021**. The appointee will be hired through fixed-term contracts in accordance with the French legislation. A competitive salary will be proposed based on qualifications and experience.

**To Apply:** Applicants should send a detailed curriculum vitae, a letter of intent explaining their motivations for the position, and contact details of at least two references. Send your queries/ applications to: manish.kushwaha@inrae.fr and jean-loup.faulon@inrae.fr.