



INRAE
la science pour la vie, l'humain, la terre

AgroParisTech  universit 
PARIS-SACLAY

JOB OFFER

Research Engineer in Microscopy/microfluidics

MISSIONS AND WORK ENVIRONMENT

■ You will work in the « Mutagenesis in Single Cells and Evolution » team (MUSE ; <https://www.muselab.fr/>) of the MICALIS Institute, in Jouy-en-Josas (20 km southwest of Paris and 8 km from Versailles). Our group studies the cellular processes that generate genetic diversity, the basis of evolutionary processes. In recent years, we have developed a new method for the quantitative study of mutations in genomes, enabling mutations to be studied at the level of single cells and in real time, in the bacterium *Escherichia coli* (Robert et al, Science, 2018; Ollion et al, Nature Protocols, 2019; Robert et al, Nature Protocols, 2019). In particular, this has enabled us to study cell-to-cell variations in mutation rate and to estimate the effect of mutations on bacterial growth (Robert et al, Science, 2018). We plan to continue developing tools to study mutagenesis at the scale of individual cells and to characterize the effect of a stressful environment on mutagenesis and evolution, as part of the Impulscience project "Mutation rate variations and their evolutionary consequences".

■ The candidate will be in charge of technical, scientific and organizational support for the microscopy and microfluidics aspects of the Impulscience project. He/she will be responsible for implementing new microfluidic devices, as well as optimizing videomicroscopy experiments, including optical instrumentation for the development and implementation of new imaging techniques. He/she will also be responsible for microscope maintenance. The candidate will also participate in the analysis of images from videomicroscopy experiments using our BACMMAN software (<https://doi.org/10.1038/s41596-019-0216-9>), as well as in the development of new image analysis strategies.

CANDIDATE PROFILE

■ Recommended training: Engineer degree or Master 2 in physics or biophysics. Candidates with a PhD are also welcome; work and remuneration will be adapted according to experience.

■ appreciated knowledge/experience: Knowledge of optics and microscopy, instrumentation, programming. Previous experience in microfluidics would be appreciated.

↳ Details

- INRAE, Micalis (UMR1319), MuSE team
<https://www.muselab.fr/>
- City : Jouy-en-Josas
- Type of contract: CDD
- 2 years contract (renewable once)
- Start date : as soon as possible
- Salary: depending on experience, in line with civil service salaries

↳ how to apply

Write to Lydia Robert :

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