

Université Claude Bernard Lyon 1- Hosting offer for a MSCA Post-doctoral fellowship candidate in Functional Genetics and Molecular Mechanisms of Plant Pathogenic Bacteria

Host Organisation	Université Claude Bernard Lyon 1
Department	UFR Biosciences / MAP UMR5240
Laboratory	Microbiology, Adaptation and Pathogenesis (MAP)
Website (lab / research team)	https://map.insa-lyon.fr/en/
Supervisor Contact name	Dr. Erwan Gueguen
Supervisor Contact email	erwan.gueguen@univ-lyon1.fr

Host Organisation

The Université Claude Bernard Lyon 1 welcomes Marie Sklodowska Curie Postdoctoral Fellowships applications !

With 62 laboratories and more than 7000 publications per year, and leading French university in terms of the number of patents filed in collaboration with industry, Lyon 1 contributes to scientific and innovation progress in numerous fields: health, mathematics, IT, physics, chemistry, earth and space sciences, life sciences, etc. Creator of emerging knowledge and new technologies, the University is consolidating its research excellence on a global and international level by developing inter- and multidisciplinary approaches targeting the major challenges facing today society.

Host research lab/team

The MAP Laboratory (UMR 5240) is a joint research unit (CNRS, UCBL, INSA Lyon) dedicated to understanding the molecular mechanisms of microbial adaptation and pathogenesis. Our multidisciplinary approach combines genetics, molecular biology and biochemistry within a stimulating international environment (English and French are the working language).

The [MTSB Team](#) (Membrane Trafficking and Signaling in Bacteria) is a leading expert in the functional genetics of *Pectobacteriaceae*. With nearly 30 years of dedicated research on these phytopathogens (*Dickeya*, *Pectobacterium*), our team focuses on:

- Bacterial virulence mechanisms and necrotrophic lifestyles.
- Signal transduction and membrane stress response.
- Specialized secretion systems (T2SS) and secondary metabolites.
- Advanced functional genomics (including Tn-seq expertise).

Hosting Offer

The MTSB team offers to host a MSCA Postdoctoral Fellowship candidate (typically a post-doc of less than 8 years research experience since PhD defence), submitting an application to the next MSCA-2026-PF call for proposals (deadline 09th of September 2026).

We are looking for motivated candidates interested in working on **necrotrophic plant pathogens from the *Pectobacteriaceae* family**, focusing on:

- **In-depth investigation of specific virulence factors** and their role in the infection process.
- **Characterization of secondary metabolites biosynthesis** and their impact on bacterial fitness and plant interaction.
- **Phenotypic heterogeneity** during plant infection.
- **Functional genomic studies** to identify novel genes involved in adaptation to diverse ecological niches.

The fellowship could last for 12 to 36 months, depending on the type of Postdoctoral Fellowship.

Supervision

The successful Marie-Curie Postdoctoral Fellow will be mentored by [Dr. Erwan Gueguen](#), Associate Professor at Université Claude Bernard Lyon 1 and co-PI the MTSB team. Since joining the MAP laboratory in 2012 with a PhD from Toulouse III, Dr. Gueguen has established himself as an expert in bacterial functional genetics. His career has evolved from studying stress responses in human pathogens to his current focus on the molecular complexities of *Pectobacteriaceae*. His research program integrates genomic, metabolic, and ecological perspectives to understand how pathogens coordinate virulence and adapt across niches, such as plant hosts and aquatic environments. A key strength of his mentorship is scientific versatility, encompassing genetic manipulation across diverse bacterial systems, plasmid biology, and sRNA regulation. Dr. Gueguen leverages high-throughput technologies like **Tn-seq** to dissect signaling networks and secretion systems, identifying determinants of virulence and secondary metabolite production (e.g., antibiotics, siderophores) essential for competition and persistence. Beyond technical expertise, he provides personalized supervision to help fellows explore evolutionary adaptation and ecological specialization in a high-level academic setting.

Application process

Interested candidates are invited to contact us exclusively by email at erwan.gueguen@univ-lyon1.fr

Please include the reference "**MSCA-2026-MTSB Application**" in the subject line and attach:

- A detailed CV.
- A **motivation letter** (outlining your interest in the team and career plan).
- Your **MSc marks/transcripts**.
- A **1-page research proposal** summary.

Deadline for expression of interest: June 15th, 2026.

Professional grant application support:

Candidates will receive the support of the supervisors, as well as online training from a professional grant application company, and advices from successful applicants, to prepare and submit their application with the MAP UMR5240 as a host laboratory, to the next MSCA-PF call for proposals.