

Postdoctoral position

Intracellular Persister Biology

Persistence and single-cell dynamics of respiratory pathogens Lab (Dr. Nicolas Personnic)
International Center for Infectiology Research (CIRI) – Lyon

Phenotypic heterogeneity reflects the ability of bacterial communities to encode large amounts of information, enabling precise, diverse, and context-aware decision-making. A key question in microbiology is how individual bacteria determine their fate and ensure robust phenotypic diversity. In the context of infection, this heterogeneity underpins the emergence of antibiotic persisters, rare, transient phenotypic variants that survive antimicrobial treatment without genetic resistance. At CIRI, the Persistence and single-cell dynamics of respiratory pathogens Lab led by Nicolas Personnic explores how heterogeneity, across scales, is generated and how it allows pathogens to evade antibiotic clearance.

A postdoctoral scientist position is available to dissect how bacterial persisters emerge within host cells. The successful candidate will develop innovative projects combining methods in microbiology, cell biology, molecular biology, and mathematical modeling to cutting-edge quantitative single-cell approaches and multi-omics analysis. The candidate will be encouraged to train and mentor students and to develop their own ideas towards becoming an independent scientist.

Your profile

We welcome applications from individuals who are passionate about new concepts and methods in quantitative single-cell biology, and who have a strong interest in handling and interpreting large-scale data using data science approaches. Candidates should hold a relevant PhD degree (e.g., system biology, cell biology, microbiology or computational biology, ...) with a strong publication record relative to their experience level. We value diverse and atypical academic backgrounds, including candidates who have transitioned between fields and bring unique perspectives to biological research. Team spirit is essential as well as an excellent oral and written communication skills in English. Applications from non-French scientists are encouraged.

Conditions

- Start date is flexible, ideally from September 2025 to December 2025.
- The position is funded for 3 years in the form of a renewable 1-year contract. The candidate will be encouraged to apply to independent funding.
- Salary follows Lyon 1 University regulations according to experience.

Contact

Candidates should send a CV and a cover letter including a brief description of research interests and your motivation to join the lab to nicolas.personnic@cns.fr. Include two letters of reference (one from your PhD supervisor). Applications will be reviewed on a rolling basis until the position is filled.

Relevant publications

- Dadole, I. *et al.* (2024) The macrophage-bacterium mismatch in persister formation. *Trends in Microbiology*.
- Striednig, B, *et al.* (2021). Quorum sensing governs a transmissible *Legionella* subpopulation at the pathogen vacuole periphery. *EMBO Reports*.
- Personnic, N. *et al.* (2019) Quorum sensing modulates the formation of virulent *Legionella* persisters within infected cells. *Nature Communications*.



About CIRI

CIRI is a leading research institute jointly affiliated to INSERM, CNRS, ENS Lyon and Lyon 1 University. CIRI gathers 400 scientists with a diverse panel of expertise ranging from molecular microbiology to human immunology. At the CIRI, we offer a dynamic and stimulating scientific environment at the heart of the Lyon Biodistrict, with strong links to clinical research and direct access to state-of-the-art technological platforms through the SFR Biosciences (UMS3444/US8). Located in a city renowned for its thriving biotech ecosystem and vibrant cultural life, Lyon also offers easy access to the French Alps, the Auvergne region, the Mediterranean Sea, and is just a two-hour train ride from Paris. It's an ideal setting to pursue cutting-edge research while enjoying an exceptional quality of life.



BIOLOGIE



Lyon 1

