

Université Claude Bernard Lyon 1- Hosting offer for a MSCA Post-doctoral fellowship candidate in **multidimensional chromatography**

Host Organisation	Université Claude Bernard Lyon 1
Department	Institut des Sciences Analytiques (ISA) UMR 5280
Laboratory	MDMC - Chromatography and Hyphenated Techniques
Website (lab / research team)	https://www.isa-lyon.fr/team/chromatographe-et-techniques-couplees/
Supervisor Contact name	Karine Faure
Supervisor Contact email	karine.faure@isa-lyon.fr

Host Organisation

The Université Claude Bernard Lyon 1 welcomes Marie Skłodowska 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 Institut des Sciences Analytiques (ISA, UMR5280) is a leading research lab in Europe in analytical sciences, with complementary expertise ranging from physical sciences and materials engineering to biochemistry and sensing. ISA teams have a unique expertise in developing innovative analytical tools for the characterization of complex systems from macro to nanoscales. The research activities are organized following three main thrusts: 1) multidimensional approaches to study complex systems, 2) surfaces and miniaturization for analytical research and technologies, 3) theoretical and experimental approaches for molecular interactions. ISA also hosts several startups and fosters collaborations with industrial partners.

The **Chromatography and Hyphenated Techniques team**, led by Dr Karine Faure, is an international research platform focusing its research on multidimensional chromatography hyphenated with mass spectrometry for the non-targeted analyses of complex mixtures (> 100 molecules). The subjects studied are therefore dictated by the limits to be exceeded; resolution of isobars, isomers or structurally close molecules for which LC-MS/MS approaches exhibit poor resolution. The team conducts fundamental and applied research. The fundamental studies include, but not limited to, the development of LCxSFC, the modelisation of ultra-fast SFC or the automatization of peak picking and data treatment in multidimensional liquid chromatography. The main application interest lies in the analysis of small molecules involved in biomass valorization, bio-based, recycled or renewable products.

Hosting Offer

The **Institut des Sciences Analytiques** 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-2024 - PF call for proposals (deadline 11th September 2024), interested to work on the following research topic:

- Data mining in two-dimensional liquid chromatography coupled to mass spectrometry. LCxLC-MS method development for the analysis of bio-based products
- LCxSFC retention modelisation
- Molecular networks involving two or more separation dimensions
- Any other topics involving two-dimensional chromatography (LC or SFC)
- The fellowship could last for 12 to 36 months, depending on the type of Postdoctoral Fellowship.

Supervision

The successful Marie-Curie Post-doctoral fellow will be supervised by Dr Karine Faure.

He/she will join a team of six persons, and an analytical platform unique in France (3 2DLC, 2 SFC, 1 QToF, 2 MS).

Application process

Interested candidates are invited to contact us exclusively by email at karine.faure@isa-lyon.fr

Make sure that you include the reference to this offer in the title of your email. Please attach a CV, a motivation letter, your MSc marks, **as well as a 1 page research proposal.**

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 Institut des Sciences Analytiques as a host laboratory, to the next MSCA-PF call for proposals.