



December 3rd, 2024

Assistant engineer position in N-terminomics at I2BC University Paris-Saclay (20km south of Paris): 10 months

Working context: The Institute for Integrative Biology of the Cell (I2BC) is a large mixed research unit created on January 1, 2015. It is jointly supervised by the CNRS, CEA, and Université Paris-Saclay, with additional partnerships including INRAe, INSERM, and Université Paris Diderot, among others. Located 20 km from Paris, France, the institute fosters interdisciplinary research at the cutting edge of biological sciences (<https://www.i2bc.paris-saclay.fr>).

Host laboratory: Our research group (Protein Maturation, Cell fate and Therapeutics, <https://www.i2bc.paris-saclay.fr/equipe-protein-maturation-cell-fate-therapeutics/>), headed by C. Giglione, is seeking a highly motivated and skilled assistant engineer to join our team. Our group focuses on a range of modifications that affect proteins. These modifications share the common feature of targeting reactive amino groups, either at the N-terminus or on the side chains of lysines. The team aims to understand the nature and biological effects of these modifications as well as the impact of these modifications on the maintenance of a functional proteome. In this context, our research focus includes identifying the protein populations involved, exploring competition between different modifications on the same chemical group, and examining the physiological adjustment of their stoichiometry, which lies at the heart of proteostasis. Protein analysis and modification studies are conducted using mass spectrometry, leveraging instruments managed by the platform adjacent to the team's location. The properties of the enzymes catalyzing these modifications are characterized both in vitro through biochemical approaches and in vivo through genetic methods (e.g., loss-of-function studies). The nature of the modifications can also be analyzed in cell extracts from various species using targeted approaches for specific amino groups or broader methods. In all cases, a quantitative analysis is prioritized and carefully examined. Computational tools and databases are developed to support these analyses. Additionally, biophysical in vitro studies or in-cellulo cellular biology approaches are employed to enhance the understanding of the distribution of modified proteins across different compartments.

Candidate's profile: We are looking for an assistant engineer with experience in protein biochemistry (fractionation using high or medium-pressure chromatography) and mass spectrometry techniques. Experience in approaches for N-terminal proteomic characterization and quantification in complex extracts as well as protein modification enrichment and analysis will be highly appreciated. Over time, the candidate will be expected to independently conduct routine MS experiments and analyze the resulting data.

This opportunity is ideal for someone who is driven, curious, and passionate about proteomics and protein biochemistry.

Salary: ~40 k€ for 10 months (extension possible depending on funding)

How to Apply:

If this opportunity aligns with your skills and career aspirations, please send your CV with at least two references and a cover letter outlining your relevant experience and motivation to carmela.giglione@cnrs.fr and carmela.giglione@i2bc.paris-saclay.fr