A fully-funded position[1] for a PhD student (4 years) or a post-doctoral researcher (2 - 3 years, depending on experience) is open in the Computational Biology and Bioinformatics lab (CBIO) at the de Duve Institute, UCLouvain in Brussels, Belgium.

The CBIO lab has developed a leading expertise in mass spectrometry-based single-cell proteomics data processing, analysis and interpretation and is looking for a researcher to contribute to this research theme [1,2,3]. The position will focus on computational and statistical approaches, including research software development, integration with other omics modalities, and could, depending on the candidate interests and experience, also include a small wet lab component.

The successful candidate will have a degree in bioinformatics, statistics, computer sciences, biomedical sciences, bio-engineering, or equivalent and be able to demonstrate experience and/or keen interest in one or several of the following:

- experience in one or multiple omics experimental technologies, data processing, analysis and/or interpretation
- experience in mass spectrometry and proteomics is an advantage;
- a keen interest in understanding and tackling biomedically relevant questions;
- interest in robust method development;
- background/expertise in statistics, machine learning and/or artificial intelligence;
- open and reproducible research (e.g., Rmarkdown, Jupyter notebooks, Github, version control, …);
- research software development (e.g., unit testing, version control, continuous integration, …);
- experience in R/Bioconductor data structures, in particular those used for omics data analysis (e.g., SummarizedExperiment, SingleCellExeriment, QFeatures, …);
- contribution to an open and inclusive research environment;
- good written and oral communication skills.

The project is funded by the Fonds National de la Recherche Scientifique (FNRS). The position is open immediately until filled.

**About the CBIO lab**

The Computational Biology and Bioinformatics lab is headed by Prof Laurent Gatto and is composed of students and researchers with expertise in biomedical sciences, statistics, omics data analysis and bioinformatics. Details about our work and the members can be found at https://lgatto.github.io/cbio-lab/. The lab supports a friendly and supportive work environment through flexible working hours and the possibility to work remotely. The lab meetings are typically scheduled in-person (or mixed remote/in-person) to favour interactions among lab members. While joining the lab and contribution to our research, you will also have the opportunity to get involved in the international Bioconductor community. The lab members have opportunities to join courses and conferences in Belgium and abroad to present their work.

**Academic environment**

The de Duve Institute is a multidisciplinary biomedical research institute (250-300 scientists) hosting several laboratories the UCLouvain, as well as the Brussels branch of the Ludwig Institute for Cancer Research. The focus is on basic research in the fields of tumour immunology and signal transduction in cancer, genetics and development, including human genetics, stem cells and organ development, infection and inflammation and metabolism and hormones. The de Duve Institute also features several core facilities, including imaging, transgenesis, mass spectrometry, flow cytometry and cell sorting, as well as genomics. The de Duve Institute provides access to a high-performance computing cluster and storage, managed by a dedicated IT team.

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[1] https://lgatto.github.io/scp-job-2023/

**Application**

To apply for the position, please send the following documents to Laurent Gatto:

- A cover letter describing why you would like to join the lab and how you match the requirement;
- A detailed CV including, depending on seniority, some or all of the following: a list of publications, pre-prints, posters and/or software contributions; a link to publicly available code/data analysis you have contributed to; education and professional experience; current and past positions; awards; obtained funding; teaching experience; any additional information you deem relevant.
- If no code is publicly available, please include code chunks that illustrate best your programming experience and interests.
- Among your publications/software/projects, select up to 3 and provide a short narrative describing why these are important in your career, your specific contributions and/or the unique skills you have gained through these.
- A list of at least 2 (for a PhD application) or 3 (for a post-doctoral researcher application) academic references.

Expectations are different for PhD or PDRA application and will be assessed accordingly.

For more details, feel free to contact Laurent Gatto.

**References**

[1] Vanderaa and Gatto. Replication of single-cell proteomics data reveals important computational challenges. Expert Review of Proteomics, 2021. DOI: 10.1080/14789450.2021.1988571.

[2] Vanderaa and Gatto. The Current State of Single-Cell Proteomics Data Analysis. Current Protocols, 2023. DOI: 10.1002/cpz1.658.

[3] Gatto *et al*. Initial recommendations for performing, benchmarking, and reporting single-cell proteomics experiments, Nature Methods, 2023. DOI: 10.1038/s41592-023-01785-3.