

## PhD position in the fields of Structural and Computational Biology

The Institute invites applications for a PhD position in the fields of Structural and Computational Biology.

### The project

We are looking for a PhD candidate to work on an interdisciplinary project in the areas of electron cryotomography (cryo-ET), deep learning, and protein modeling. Research objectives include the development and implementation of deep learning models for the segmentation and structural analysis of non-discrete protein assemblies in cells imaged by cryo-ET. The research will be carried out jointly in the groups of Wanda Kukulski and Thomas Lemmin of the Institute of Biochemistry and Molecular Medicine (IBMM) at the University of Bern, in Bern, Switzerland.

### The Ph.D. Position

The PhD student will be enrolled in the Graduate School for Cellular and Biomedical Sciences (GCB) and will work under the scientific supervision of Wanda Kukulski and Thomas Lemmin. The successful candidate will be offered the possibility to work in a dynamic and multidisciplinary scientific environment.

The PhD candidate will contribute to the development of the institute research agenda. She or he will have the task of setting up data collection and analysis for his or her dissertation, while at the same time participating in a variety of tasks related to the research streams in which he/she is involved. The candidate will have the opportunity to gain teaching experience by working as a teaching assistant in courses at bachelor or master level, or tutoring students. The PhD candidate will be presenting their work at internal meetings as well as scientific conferences and will produce publications for scientific journals.

### Candidates' profile

You are a highly motivated individual capable of grasping and applying new concepts, working individually, and collaborating with multidisciplinary research teams.

- Master of Science (MSc) degree
- Interest in Machine Learning and/or Computational Biology. Proficiency in Deep Learning and Molecular Modeling are a plus.
- Interest in cryo-ET of cells. Previous experience in cryo-EM or cryo-ET are a plus.
- Good skills in oral and written English
- Ability to work independently and to plan and direct own work
- Motivation to engage in the elaboration of a PhD dissertation
- Ability to work in a team and autonomy in scheduling research steps
- Interest for teaching and tutoring students as well as availability to interact with colleagues (engage in scientific dialogue, listen and think critically)

### General terms

Admission to the Ph.D. program is competitive. Admission decisions are based on the candidate's background, interests, attitude, and potential for academic achievement.

The successful candidate will work as research assistant at the Institute of Biochemistry and Molecular Medicine (IBMM), which is part of the University of Bern, located in the center of Bern, Switzerland. The local research environment offers an international life sciences community as well as access to excellent scientific facilities, including electron microscopy and computational resources. Bern is a beautiful city which offers an excellent quality of life, proximity to the mountains and a multitude of other opportunities for recreation.

The position will be kept open until a suitable candidate has been found.

## The Application

Applications should contain: (1) a letter in which the applicant describes their research interests and motivation to apply, (2) a complete CV, (3) copies of relevant diplomas, certificates as well as the full transcript of records, (4) an electronic version of a research work (Master thesis or other scientific publication) accompanied by a short summary in English (1 page maximum). Alternatively, a support letter written by the Master thesis supervisor (or another principal investigator who knows the candidate well) is equally welcome. (5) letters or contact information of 2 – 3 references.

Please send your application (in electronic form) or requests for further information to [info@ibmm.unibe.ch](mailto:info@ibmm.unibe.ch). Successful applicants will be invited to meet the two research groups and visit the lab.

As an institute that values diversity, we particularly encourage applications from women and from all individuals from underrepresented groups.

[www.unibe.ch](http://www.unibe.ch)