



The VIB-VUB center for structural biology invites applications for several

PhD and Postdoctoral positions in cryo-EM and microfluidics are available at VIB in Brussels.

There are openings for postdoctoral and PhD positions at the Brussels-based VIB-VUB center (<http://www.vib.be>) for structural biology (CSB) in the group of Rouslan Efremov. CSB is a leading structural biology laboratory in Belgium, it hosts research groups with expertise in X-ray crystallography, NRM, biophysics and cryo-EM. The laboratory is equipped with modern instruments for high-resolution structural biology and biophysics including latest generation JEOL cryogenic electron microscope for imaging protein samples at atomic resolution and ample computational resources. The Efremov lab (www.cryo-em.be) studies structure of proteins using single particle cryogenic electron microscopy with particular interest in the mechanisms of biological molecular machines and in method development. The following positions are currently available in the group:

Postdoctoral position: Cryo-EM on biological molecular machines

This multidisciplinary project focuses on development methodology for time-resolved single particle cryo-EM and will combine methodological developments for rapid reaction initiation using microfluidics, preparation of biological samples, single particle cryo-EM and image processing.

The ideal candidates will have PhD in structural biology/biophysics physics/physics/engineering or related discipline, have strong interest in structural biology, molecular machines in particular, and excellent experimentalists/engineering skills.

Prior experience in microfluidics and one or more of the following: electronics, microfluidic actuators, microfabrication, fast mixing, optics, programming is of an advantage.

Apply online at: <http://www.vib.be/en/jobs/Pages/Postdoctoral-Position-in-Microfluidics-to-Study-Biological-Molecular-Machines.aspx>

Postdoctoral position: Method development for single particle cryo-EM

We are looking for a motivated postdoc to develop novel sample preparation techniques for cryogenic microscopy using microfluidics with the goal of miniaturizing sample preparation methodology. The new methods will open opportunities for visualizing at atomic resolution biological molecular machines not accessible using current technologies.

The ideal candidate will have PhD in physics/biophysics/(bio)engineering or related discipline and will be experienced in designing, fabricating and using microfluidic integrated devices, preferentially for biological applications and have a strong interest in structural biology. Previous experience with proteins, protein purification, structural biology or electron microscopy will be of an advantage.

The candidate will have an opportunity to learn electron microscopy and methods for determining protein structures using single particle cryo-EM. Our laboratory is experienced in production, purification and structure determination of proteins as well as in engineering, programming, designing and building instruments.

Apply online at: <http://www.vib.be/en/jobs/Pages/Postdoctoral-Position-in-Microfluidics-Miniaturization-of-Protein-Purification.aspx>

PhD position: Studies of structural dynamics of molecular machines using single particle cryo-EM

The PhD project will focus on studies of the functional dynamics in a molecular machine using time-resolved single particle cryo-EM. The project will involve extensive single particle cryo-EM, image processing, biochemistry and molecular biology.

The candidates with strong background in physics/mathematics and knowledge of biochemistry and molecular biology are welcome to apply. For further enquiries please contact Rouslan Efremov rouslan.efremov@vib-vub.be. To apply submit your CV, letter of motivation and contact details of two referees. Preferred starting date is between August and October 2017.