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PhD student in Structural and Molecular Biology

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Uppsala University is a comprehensive research-intensive university with a strong international standing. Our ultimate goal is to conduct education and research of the highest quality and relevance to make a long-term difference in society. Our most important assets are all the individuals whose curiosity and dedication make Uppsala University one of Sweden's most exciting workplaces. Uppsala University has over 54,000 students, more than 7,500 employees and a turnover of around SEK 8 billion.

The Department of Cell and Molecular Biology is organized into seven research programmes which all focus on different areas of cell and molecular biology: Computational Biology and Bioinformatics, Microbiology and Immunology, Molecular Biology, Molecular Biophysics, Molecular Evolution, Molecular Systems Biology and Structural Biology. The scientific basis of what we do lies in biology, but our research overlaps with other areas such as medicine, computer science, mathematics, chemistry, engineering sciences and physics. In total, we are over 200 staff and ~60 Ph.D. students. Please read more about the department's work at <https://icm.uu.se>.

Anna Sundborger-Lunna's lab is part of the Structural Biology Group at the Department of Cell and Molecular Biology at Uppsala University. The Sundborger-Lunna lab uses biochemical, and structural and cell biology methods to study how peripheral membrane proteins modulate (bend, permeabilize and sever) cellular membranes in critical cellular processes involved in neurodegeneration, specifically apoptosis and autophagy. Ongoing projects are focused on elucidating how BAR-protein endophilin B1 regulates mitochondrial dynamics and Bax-dependent cell death, and how mis-folding of Huntingtin leads to formation of toxic amyloid species, neuronal cell death and Huntington's disease. The majority of the work is focused on

structural determination of proteins and protein-lipid complexes by cryo-electron microscopy. This is done both locally, at Cryo-EM Uppsala (<https://www.icm.uu.se/cryo-em/>) and at the national facility at SciLifeLabs in Solna (<https://www.scilifelab.se/units/cryo-em/>).

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Duties

The candidate will predominately work on the VR-funded project concerning the molecular mechanisms controlling mitochondrial membrane remodeling during cell death. This work includes protein expression and purification, biochemical and biophysical methods to study protein-protein and protein-lipid interactions, cell culture, cell-based apoptosis assays, cryo-EM sample preparation, analysis, image analysis and 3D reconstruction.

Requirements

The candidate must have a M.Sc. degree in Biochemistry, Biology, Cell Biology, Chemistry or a related field and extensive experience in protein chemistry (protein expression and purification in E.coli), cryo-EM sample preparation and analysis, in addition to other protein characterization methods, including ITC, SEC, DLS, etc.). The candidate must also have excellent communication skills and master English in written and spoken form, be detail-oriented, organized and able to keep impeccable notes.

Additional qualifications

Additional qualifications we are looking for are the ability to work in a group and to be motivated to learn new things.

Rules governing PhD students are set out in the Higher Education Ordinance chapter 5, §§ 1-7 and in [Uppsala University's rules and guidelines](#).

About the employment

The employment is a temporary position according to the Higher Education Ordinance chapter 5 § 7. Scope of employment 100 %. Starting date as agreed.
Placement: Uppsala

For further information about the position, please contact: Anna Sundborger-Lunna, 076-047 28 07, anna-sundborger-lunna@icm.uu.se

Please submit your application by 15 April 2022, UFV-PA 2022/1248.

Are you considering moving to Sweden to work at Uppsala University? [Find out more about what it's like to work and live in Sweden.](#)

Please do not send offers of recruitment or advertising services.

Submit your application through Uppsala University's recruitment system.

Placement: Department of Cell and Molecular Biology

Type of employment: Full time , Temporary position longer than 6 months

Pay: Fixed salary

Number of positions: 1

Working hours: 100 %

Town: Uppsala

County: Uppsala län

Country: Sweden

Union representative: ST/TCO tco@fackorg.uu.se

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Saco-rådet saco@uadm.uu.se

Number of reference: UFV-PA 2022/1248

Last application date: 2022-04-15

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