PhD in Chemistry specializing in Molecular Biomimetics

Published: 2021-10-20

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 45,000 students, more than 7,000 employees and a turnover of around SEK 7 billion.

The Department of Chemistry - Ångström conducts research and education in the chemistry field. The department has more than 250 employees and has a turnover of 250 million SEK. At the department's six programs, we conduct very successful research of a high international standard. We have a large number of externally funded research projects, often with international cooperation and we see continued good growth in our subject area. The department has education assignments in engineering programs and master's programs. More information is available on our [website](#).

**Project description:** Carbon monoxide dehydrogenase enzymes are highly active catalysts with regards to the reversible reduction/oxidation of CO2. Consequently, they are intensively studied due to their biotechnological potential. The project follows one of the major project lines in the group, which focuses on the biochemical characterization of novel examples of this diverse enzyme family to identify those most relevant in a CO2 fixation context.

**Duties:** The applicant will work in an interdisciplinary project that involves biochemistry, molecular biology and biophysics. The primary role of the PhD student in the project will deal with the identification of novel carbon monoxide dehydrogenases of potential biotechnological relevance, followed by their
heterologous expression and characterization. Selected enzymes will be characterized in depth utilizing a combination of electrochemistry, spectroscopy and structural biology, with a focus on determining reaction mechanisms and the identification of carbon monoxide dehydrogenases with novel properties. The work will be performed by the PhD student in collaboration with spectroscopists and structural biologists at Uppsala University, within Sweden, and abroad.

The main duties of doctoral students are to devote themselves to their research studies which includes participating in research projects mentioned above and third cycle courses. The work duties can also include teaching and other departmental duties (no more than 20%).

Eligibility Requirements: A person meets the general admission requirements for third-cycle courses and study programmes if he or she:

- has been awarded a second-cycle qualification, or
- has satisfied the requirements for courses comprising at least 240 credits of which at least 60 credits were awarded in the second cycle, or
- has acquired essentially equivalent knowledge in some other way in Sweden or abroad.

Required qualifications:

- Degree or equivalent as above in biochemistry, molecular biology or similar.
- Very good oral and written proficiency in English.

Consideration will also be given to good collaborative skills, drive and independence, and how the applicant’s experience and skills complement and strengthen ongoing research within the department, and how they stand to contribute to its future development.

Additional qualifications: Advanced knowledge and/or practical experience in biochemistry, biophysics, bioinformatics and/or (bio)inorganic chemistry will be beneficial.

Terms of employment: The rules about PhD students are found in the Higher Education Ordinance Chapter 5 §§1-7 and the university's rules and guidelines.

Application procedure: The application should include a statement of research
interest, CV, certificates of exams, degrees and grades, a copy of Master thesis, published article or relevant materials, if available. Also, contact information of at least two reference persons should be included.

**Salary:** According to local agreement for PhD students. (Local collective agreement for doctoral students and students).

**Starting date:** 01-02-2022 or as otherwise agreed.

**Type of employment:** Temporary position according to the Higher Education Ordinance chapter 5 § 7.

**Scope of employment:** 100 %

For further information about the position, please contact: Dr. Henrik Land, e-mail: henrik.land@kemi.uu.se.

Please submit your application by 22 November 2021, UFV-PA 2021/3925.

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.

**Placement:** Department of Chemistry - Ångström Laboratory

**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:** Seko Universitetsklubben seko@uadm.uu.se

ST/TCO tco@fackorg.uu.se

Saco-rådet saco@uadm.uu.se

**Number of reference:** UFV-PA 2021/3925

**Last application date:** 2021-11-22

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