Aalto University is a community of bold thinkers where science and art meet technology and business. We are committed to identifying and solving grand societal challenges and building an innovative future. Aalto University has six schools with nearly 20,000 students and more than 400 professors. Our campuses are located in Espoo and Helsinki, Finland.

For “ExtremoForm”, a joint Academy of Finland project at Aalto University and at VTT-Technical Research Centre of Finland, we are looking for:
2 Postdoctoral Researchers in Enzyme Engineering or Biocatalysis

Aalto University School of Chemical Engineering

Direct Link: https://www.AcademicKeys.com/r?job=137976

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2 Postdoctoral Researchers in Enzyme Engineering or Biocatalysis

Formic acid is discussed as an alternative form of hydrogen storage. Our concept is to convert CO2 + H2 directly to formic acid via next generation formate dehydrogenases. Our overall goal is to find, express and engineer formate dehydrogenases to become extremely acid-tolerant. To achieve our goal, we established a consortium involving:

Biochemistry (postdoc with Prof. Silvan Scheller, Aalto)
Catalysis (postdoc with Prof. Jan Deska, Aalto)
Environmental genomics (with Dr. Malin Bomberg, VTT)

Research is carried out at our excellent facilities at Aalto University, School of Chemical Engineering (http://www.bioeconomyinfra.fi/). The laboratories are situated on the main campus of Aalto University in Otaniemi (short metro-ride from Helsinki). One position is in the Scheller group within the Department of Bioproducts and Biosystems; the other position is in the Deska group within the Department of Chemistry and Materials Science.

Job description “Enzyme engineering”:

The postdoc works on the interface towards environmental genomics, with the goal of bringing extremophilic enzymes alive. Key tasks include expression of extremely acid-tolerant formate dehydrogenases, assessment of enzyme parameters in vitro, and to control function via enzyme engineering to push the limit of acid tolerance.

Job description “Biocatalysis”:

The postdoc works on the interface towards catalysis. Key tasks include the fundamental understanding of which structural factors control enzyme-activity, directed evolution, to create enzyme cascades for CO2 reduction to methanol, and to exploit enzyme promiscuity for the synthesis of formate derivatives.

Requirements

To be eligible, you need to:

have a PhD in a suitable field, such as Enzyme engineering, biochemistry, catalysis, organic chemistry
be highly committed to science and strive for excellence
develop own smart ideas and think independently
be able to focus on solving tough scientific problems
have good written and oral communication skills in English

Skills, knowledge or interest in some of the following areas are highly appreciated:

- Enzymology, protein purification
- Directed evolution
- Anaerobic biochemistry
- Spectroscopic methods (X-ray crystallography, NMR, EPR, Electrochemistry)
- Organic chemistry/synthesis

We offer

- High-end laboratory infrastructure and friendly colleagues
- Opportunity to work in a newly established research group
- Freedom to bring in own ideas
- Funding for 2 years with option of continuation

For more information

For additional scientific information, please contact Prof. Silvan Scheller or Prof. Jan Deska, in matters related to the recruitment process, HR Coordinator Sanni Mero, e-mails: firstname.lastname@aalto.fi.

How to apply (deadline = 31st of March 2020)

The application should include the following:

- Cover letter (start as follows: “I am interested in this position because… “)
- CV, incl. list of publications
- Research interest description
- Names and contact details of references

All materials should be provided in English as pdf files through the online recruitment system.

Review of applications starts on March 1st. Aalto University reserves the right for justified reasons to leave the position open, to extend the application period and to consider candidates who have not submitted applications during the application period.
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Contact Information

Please reference AcademicKeys in your cover letter when applying for or inquiring about this job announcement.

Contact  Assistant Professor Silvan Scheller
Department of Bioproducts and Biosystems
Aalto University School of Chemical Engineering
Finland

Contact E-mail  firstname.lastname@aalto.fi