Aarhus University is seeking three postdoctoral fellows for research on metabolic dynamics and plasticity of acetogenic bacteria at the systems-level

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Do you have a passion and vision for developing new platforms to unleash the power of **microbial metabolism and physiology to find scalable solutions for CO2 capture and conversion**?
Come and be part of the team of Prof. Alfred Spormann in the Department of Chemistry at Aarhus University to engage in cutting edge systems-level research in metabolic dynamics and plasticity of acetogens during gas fermentation!
This Novo Nordisk Foundation-funded research project is a collaboration with three other, international research groups in the Netherlands and Germany.

Starting date and duration of employment
The positions are available from 01st of August, 2026, and are fixed term positions of a 13-19 months' period.

The relevant research projects are

1. **Microbial plasticity upon perturbations in syngas fermentation.** This project pursues approaches probing the systems-level plasticity of pure cultures of acetogens upon physical-chemical perturbations during syngas fermentation. This project involves detailed mechanistic and systems-level studies including, but not limited to, stable/radio isotope tracing experiments, metabolomic, and proteomic approaches, as well as genetic analyzes.
2. **Role of microbial consortia in mitigating perturbation in syngas fermentation.** This project pursues microbial population and ecological studies to examine the effect of diverse microbial consortia to mitigate perturbations in syngas fermentation of acetogens. The tools and approaches include, but are not limited to, monitoring microbial community dynamics upon perturbations using tools of molecular ecology, as well as tracking the composition and metabolic and physiological state of populations.
3. **Microbial adaptive evolution to conditions of long-term syngas fermentations.** This project pursues population genetic studies to identify emerging genetic variants as well as selectable traits during long-term syngas fermentation. Of particular interest are metabolic and ecological niches as they arise within the dynamically changing physical-chemical environment of large scale syngas fermentation. The approaches include, but are not limited to, building reactor platforms for studying adaptive evolution, operating long-term adaptive evolution experiments, tracking diverse populations during perturbations, as well as dissecting genotype-phenotype relationships in emerging mutants.

Your qualifications
You should have a PhD in microbiology, population genetics or molecular biology, or closely related fields and have a solid background in microbial metabolism and metabolic (bio)chemistry, or population genetics.
Candidates should also have extensive and demonstrated expertise in metabolism of acetogens and quantitative metabolic analyses. Experience in metabolomics, proteomics, isotope tracing experiments or genetic characterization of evolved strains from adaptive laboratory evolution experiments is a plus. Your high personal motivation and demonstrated scientific creativity will match that of our expert team.

Application Deadline:
03 May 2026

Institute/Faculty:
Department of Chemistry

Faculty:
Faculty of Natural Sciences

Academic contact person:
Alfred Michael Spormann
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+4593522579

Vacant positions:
3

Number of months:
13

Hours per week:
37

Expected date of accession:
01/08/2026

About us

We are a modern, state-of-the-art molecular and metabolic lab with a highly motivated and collaborative team of researchers, which is reflected in our use of English as the day-to-day language.

The Department of Chemistry at Aarhus University is a leading European chemistry department with a broad research portfolio. It is undertaking a restructuring and will have a permanent staff of 43 full, associate and assistant professors, a support staff of ~40 technical and administrative staff, ~150 PhD-students and ~100 postdocs and around 350 students. In addition to excellence in research, teaching and supervision, the Department of Chemistry values equal opportunities, a collegial atmosphere, and a student-friendly mindset of future colleagues.

What we offer

- Exciting, interdisciplinary research environment at the forefront of microbial systems-level biology for CO2 mitigation.
- Workday with daily contact with many different people in an international and creative research environment.
- A professional, but informal work environment.

Place of work and area of employment

The place of work is Gustav Wieds Vej 10, 8000 Aarhus C, and the area of employment is Aarhus University with affiliated institutions.

Contact info

Applicants seeking further information are invited to contact Alfred Spormann, e-mail: spormann@inano.au.dk

Application procedure

Shortlisting is used. This means that after the deadline for applications – and with the assistance from the assessment committee chairman, and the appointment committee if necessary, – the head of department selects the candidates to be evaluated. All applicants will be notified whether or not their applications have been sent to an expert assessment committee for evaluation. The selected applicants will be informed about the composition of the committee, and each applicant is given the opportunity to comment on the part of the assessment that concerns him/her self.

Letter of reference

If you want a referee to upload a letter of reference on your behalf, please state the referee's contact information when you submit your application. We strongly recommend that you make an agreement with the person in question before you enter the referee's contact information, and that you ensure that the referee has enough time to write the letter of reference before the application deadline. Unfortunately, it is not possible to ensure that letters of reference received after the application deadline will be taken into consideration.

If you wish to add a referee **after** you have submitted your application, you must send this person's details (name, job title, place of work, and email address) as well as the name of the position you have applied for to: HR.Nattech@au.dk

Formalities and salary range

Natural Sciences refers to the Ministerial Order on the Appointment of Academic Staff at Danish Universities under the Danish Ministry of Science, Technology and Innovation.

The application must be in English and include a curriculum vitae, degree certificate, a complete list of publications, a statement of future research plans and information about research activities, teaching portfolio and verified information on previous teaching experience (if any). Guidelines for applicants can be found here.

Appointment shall be in accordance with the collective labour agreement between the Danish Ministry of Taxation and the Danish Confederation of Professional Associations. Further information on qualification requirements and job content may be found in the Memorandum on Job Structure for Academic Staff at Danish Universities.

Salary depends on seniority as agreed between the Danish Ministry of Taxation and the Confederation of Professional Associations.

Aarhus University's ambition is to be an attractive and inspiring workplace for all and to foster a culture in which each individual has opportunities to thrive, achieve and develop. We view equality and diversity as assets, and we welcome all applicants.

Research activities will be evaluated in relation to actual research time. Thus, we encourage applicants to specify periods of leave without research activities, in order to be able to subtract these periods from the span of the scientific career during the evaluation of scientific productivity.

Aarhus University offers a broad variety of services for international researchers and accompanying families, including relocation service and career counselling to expat partners. Read more here. Please find more information about entering and working in Denmark here.

Aarhus University also offers a Junior Researcher Development Programme targeted at career development for postdocs at AU. You can read more about it here.

At the Faculty of Natural Science at Aarhus University, we strive to support our scientific staff in their career development. We focus on competency development and career clarification and want to make your opportunities transparent. On our website, you can find information on all types of scientific positions, as well as the entry criteria we use when assessing candidates. You can also read more about how we can assist you in your career planning and development.

The application must be submitted via Aarhus University's recruitment system, which can be accessed under the job advertisement on Aarhus University's website.

Aarhus University

Aarhus University is an academically diverse and research-intensive university with a strong commitment to high-quality research and education and the development of society nationally and globally. The university offers an inspiring research and teaching environment to its 37,000 students (FTEs) and 8.700 employees and has an annual revenue of EUR 1.106 billion. Learn more at www.international.au.dk/