Postdoc in aerobiology

The Department of Environmental Science at Aarhus University (AU-ENVS), Roskilde, invites applications for a 2 year position in aerobiology with a possibility for an extension up to 1.5 additional years. The main task is to carry out research on air samples using molecular methods. The position is to be filled by October 1, 2024 or as soon as possible thereafter. This is subject to negotiation.

Application Deadline:
10 August 2024

Faculty:
Faculty of Technical Sciences

Institute/Faculty:
Department of Environmental Science

Academic contact person:
Carsten Ambelas Skjøth
Professor
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Vacant positions:
1

Hours per week:
37

Number of months:
24

Expected date of accession:
01/10/2024

Description of the position

This position is part of the 7 year project (2022-29) termed **High resolution detection and modelling of pollen and spores.** The RECRUIT project is funded by the **RECRUIT** programme at Novo Nordisk Foundation and led by Professor in aerobiology Carsten Ambelas Skjøth. The RECRUIT programme has as an objective to build a research group in aerobiology by providing ample long term funding to a research team. The scientific aims are to understand the atmospheric distribution of grass pollen and fungal spores, focusing on Denmark. For this purpose, the project will use state-of-the-art techniques such as molecular methods, artificial intelligence and advanced atmospheric modelling along with data fusion to quantify the concentrations of airborne spores and pollen at the species level. The project will secure impact by applying the most modern instrumentation and implement new methods for sampling of pollen and spore forecasting in Denmark. Furthermore, the project will deliver a national network of pollen and spore air samplers operating in the real-time

This postdoc project will be an interdisciplinary project with a focus on molecular techniques and digital PCR (dPCR) to quantify daily air concentrations of spores and grass pollen at the species level. The post doc will use a dPCR instrument from Qiagen, a set of existing primers for individual grass species and selected fungal spores but may also be required to develop new primers. The post doc will take over communication with the EU-funded ADOPT network that in 2024 executes an international sampling campaign of airborne pollen and spores. ADOPT uses multi-vial cyclones from Burkard distributed at 24 locations in Europe and the post doc is expected to lead the Danish contribution. The samples from this campaign are supposed to be analysed by the post doc. The post doc will also contribute to work with generating reference aerosols of specific grasses and fungal spores. They will be used both for the DNA work and work with AI models that analyse airborne spores and pollen using 3 instruments from Swisens: Poleno Jupiter. This work will be conducted in collaboration with the European EUMETNET AUTOPOLLEN project. The post doc will also have access to one of Europe’s longest records and airborne pollen and spores: The +40 year record from Copenhagen obtained within the operational network. The post doc is expected to present work at international conferences, lead and contribute to publications written by the entire group.

Qualifications/profile:

- PhD in aerobiology or microbiology or other disciplines with relevant specialization
- Experience in working in a molecular laboratory
- Experience with relevant techniques such as qPCR, dPCR or sequencing

Further requirements are English fluency, good writing and verbal communication skills. Ability to work independently and in an international academic environment.

Applicants should hold scientific qualifications at the PhD graduate level and demonstrate experience with publication in peer reviewed journals. Candidates with a completed PhD degree before the interview date will also be considered.

Application

Please see below for guidance and formalities regarding the application procedure. Per default, the application system requires upload of

- Cover letter – please state your reasons for applying and your relevant qualifications
- Curriculum vitae
- Degree certificate
- Complete list of publications

- Statement of research plan and research activities. Please indicate your previous research and your intentions and visions with regard to carrying out research, with particular attention to the application of the dPCR technique using samples from the European sampling campaign being executed in 2024.
- Teaching portfolio – please be aware, however, that apart from possible supervision activities, teaching is not planned for this position.

Department of Environmental Science

The Department of Environmental Science is an interdisciplinary department under the Faculty of Technical Sciences at Aarhus University. The expertise of the department ranges from physics, chemistry, microbiology, social science, geography, economics, to policy analysis. Basic as well as applied research is conducted on some of the major challenges facing society, such as pollution and pollution control mechanisms, management of land, soil, water, air and biodiversity, protection of ecosystem services, and climate change. Advisory services within these areas are offered to ministries and other authorities. Currently, the department employs about 140 staff, postdocs and PhD students. We believe in values of equality, diversity and inclusion, and creating an attractive work/life balance. Further information can be found at www.envs.au.dk.

The selected candidate will be affiliated with the Section for Atmospheric Environment in the Group of Atmospheric Measurements. Due to the interdisciplinary work, the post doc will also contribute to the Section for environmental microbiology and be affiliated with the interdisciplinary iCLIMATE Aarhus University Interdisciplinary Centre for Climate Change.

Work location

The place of work will be at Aarhus University, Frederiksborgvej 399, 4000 Roskilde, Denmark. The city of Roskilde (www.roskilde.dk) is located approx. 30 km from Copenhagen. The area provides immediate access to a wealth of cultural and recreational pursuits.

International candidates may find information concerning living and working in Denmark at www.workindenmark.dk. AU International Center offers a full range of services to make your transition to Denmark as smooth as possible (http://www.au.dk/en/internationalcentre/ias/), and the department will assist foreign candidates with finding a suitable place to live.

Further information

Further information may be obtained by contacting Professor in Aerobiology Carsten Ambelas Skjøth (c.skjoth@envs.au.dk), or head of section Lise Lotte Sørensen (lls@envs.au.dk).

Deadline

All applications must be made online and received by: 10.08.2024. Invitations for interviews expected August 2024

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. Once the recruitment process is completed a final letter of rejection is sent to the deselected applicants.

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.

Formalities and salary range

Technical 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.

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 38,000 students (FTEs) and 8,300 employees, and has an annual revenues of EUR 935 million. Learn more at www.international.au.dk/