Assistant Professor in RNA-based sensors and molecular diagnostics

Applications are invited for a 20-month position as Assistant Professor in **RNA-based sensors and molecular diagnostics** at the Department of Molecular Biology and Genetics, Aarhus University, Denmark.

Application Deadline:
19 June 2026

Institute/Faculty:
Department of Molecular Biology and Genetics

Faculty:
Faculty of Natural Sciences

Academic contact person:
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Vacant positions:
1

Number of months:
20

Hours per week:
37

Expected date of accession:
01/08/2026

Expected start date and duration of employment

This is a fixed-term position for 20 months starting from 1 Aug 2026 or as soon as possible thereafter.

Job description

Your general tasks will consist of

- Independent research of high international quality, including publication.
- Teaching, guidance and examination of Bachelor’s and Master's degree students, as well as possibly co-supervision of PhD students.
- Contribution to external research funding.
- Development of national and international networks and collaborations in research.

Your specific tasks will consist of

- Development and application of RNA aptamer-based technologies, including optimization of chemically modified RNA libraries and SELEX workflows
- Analysis of high-throughput sequencing data using statistical and machine learning approaches to identify disease-specific molecular signatures
- Identification and validation of diagnostic aptamer panels for early detection of disease signatures using clinical cohorts
- Bioinformatic and statistical analysis of high-dimensional datasets, including classification of disease-associated profiles
- Experimental validation of aptamer–protein interactions using affinity-based methods and downstream proteomic analyses (e.g., LC-MS/MS)
- Contribution to biomarker discovery and collaboration with clinical and interdisciplinary research partners

Candidate Profile and Qualifications

Applicants should hold a PhD in nanoscience, molecular medicine, biotechnology, or a related discipline, and demonstrate clear potential to establish an independent research profile within RNA nanotechnology, proteomics, and advanced molecular profiling technologies.

The successful candidate has strong interdisciplinary expertise combining experimental and computational approaches to study complex biological systems, particularly in relation to disease mechanisms and biomarker discovery. Documented experience with RNA nanotechnology, aptamer development, SELEX, and affinity-based selection methods is required, along with hands-on expertise in next-generation sequencing platforms. A solid background in statistical data analysis (e.g., R), and application of machine learning approaches for high-dimensional biological data is considered essential.

The candidate should demonstrate a strong and developing publication record in peer-reviewed journals and show evidence of research independence, including the ability to develop original research ideas and contribute to or secure competitive funding. Experience in supervising students and contributing to teaching at undergraduate and graduate levels is expected, together with a commitment to research-based education.

Furthermore, the candidate should have experience working in interdisciplinary and collaborative research environments and be able to contribute actively to the academic community within the department. Personal qualifications include strong analytical and problem-solving skills, independence, and excellent communication skills in English.

Who we are

Situated in a newly renovated laboratory complex within the central campus of Aarhus University, The Department of Molecular Biology and Genetics comprises a vibrant research and education environment. The department currently has 75 full time scientific staff, 95 PhD students and a yearly uptake of around 100 students housed in the same building ensuring a lively setting.
The department has access to state-of-the-art core facilities, including FACS, Bioimaging, CryoEM and Biophysics cores.
Please refer to http://mbg.au.dk/ for further information about The Department of Molecular Biology and Genetics and to https://nat.au.dk/ and http://www.au.dk/ for information on Faculty of Natural Sciences and Aarhus University, respectively

What we offer

The department offers:

- A well-developed research infrastructure, laboratories and access to shared equipment.
- An exciting interdisciplinary environment with many national, international and industrial collaborators.
- A research climate encouraging lively, open and critical discussion within and across different fields of research.
- A work environment with close working relationships, networking and social activities
- A workplace characterised by professionalism, equality and a healthy work-life balance.

Place of work and area of employment

The place of work is Gustav Wieds Vej 14, 8000 Aarhus C, and the area of employment is Aarhus University with related departments.

Contact information

For further information, please contact: Professor Jørgen Kjems, jk@mbg.au.dk

Deadline

Applications must be received no later than 19 June 2026.

Application procedure

Shortlisting is used. This means that after the deadline for applications – and with the assistance from the assessment committee chairman, and the assessment committee if necessary, – the head of department selects the candidates to be evaluated. The selection is made on the basis of an assessment of who of the candidates are most relevant considering the requirements of the advertisement. All applicants will be notified within 6 weeks 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 will receive his/her assessment.

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.

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.

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.

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/