

Postdoc in Microfluidic Systems and Metabolic MR Imaging

The MR Research Centre, Department of Clinical Medicine, Health, Aarhus University, invites applications for a postdoctoral position in the project QCHIP-MET: A Multimodal Organ-on-Chip Platform for Quantum ROS Detection and Metabolic Monitoring, starting 1 August 2026 or as soon as possible thereafter. The position is a full-time fixed-term appointment for 2.5 years and is funded by the ODIN – Open Discovery Innovation Network foundation, NNF grant number: NNF23SA0088590.

The position focuses on experimental development at the interface of microfluidic organ-on-chip systems and metabolic magnetic resonance (MR) measurements. The successful candidate will play a key role in establishing stable and reproducible experimental workflows for studying bacterial metabolism and treatment response.

Department of Clinical Medicine

As a postdoctoral researcher in the Department of Clinical Medicine, you will be part of one of the largest health science research environments in Denmark. The department covers all medical specialties and works in close collaboration with Aarhus University Hospital and regional hospitals in Central Denmark Region. The department has access to approximately 30,000 m² of modern research facilities, including advanced MRI scanners, laboratories, and animal facilities. The department employs around 670 academic staff, 500 PhD students, and 160 technical/administrative staff. You can read more about the institute [her](#) and the faculty [her](#).

The position will be affiliated with the MR Research Centre, Department of Clinical Medicine, Aarhus University.

The research project

The QCHIP-MET project is an interdisciplinary research project aiming to develop a multimodal organ-on-chip platform for studying metabolism and reactive oxygen species (ROS) in infection models. The project integrates hyperpolarized ¹³C magnetic resonance spectroscopy, nanodiamond-based quantum sensing of ROS, and advanced label-free optical microscopy to establish robust experimental workflows for studying infection biology. The project is conducted in collaboration between Aarhus University, the Technical University of Denmark (DTU), and industrial partners.

The MR Research Centre provides a collaborative research environment with strong emphasis on scientific quality, collegial support, and interdisciplinary collaboration.

Your job responsibilities

As a Postdoc, your position is primarily research-based but may also involve teaching assignments. You will work closely with other postdoctoral researchers, PhD students, and senior scientists at the department and across the consortium.

Key tasks include:

- Conduct independent research at a high international level, including publication
- Develop, optimize, and maintain microfluidic systems and workflows for organ-on-chip experiments combined with MR measurements
- Plan and execute MR experiments using hyperpolarized ¹³C tracers in collaboration with project partners
- Develop robust experimental procedures and protocols to ensure reproducibility
- Contribute to data analysis and interpretation in collaboration with interdisciplinary partners, including development and integration of open-source data pipelines

You will report to Associate Professor Lotte Bonde Bertelsen.

Your competences

You have academic qualifications at PhD level within biomedical engineering, engineering, physics, medical physics, chemistry, biophysics or a related discipline. We expect applicants to have a strong experimental profile and experience with complex laboratory systems.

Experience within one or more of the following areas will be considered an advantage:

- Microfluidic systems or organ-on-chip technologies
- Flow systems, perfusion platforms or pressure-controlled systems
- Experimental system development and troubleshooting
- MR, metabolic imaging or related measurement technologies

Application Deadline:
22 April 2026

Institute/Faculty:
Department of Clinical
Medicine

Faculty:
Faculty of Health

**Academic contact
person:**
Lotte Bonde Bertelsen
Lektor
lotte@clin.au.dk

Vacant positions:
1

Number of months:
30

Hours per week:
37

**Expected date of
accession:**
01/08/2026

We are looking for a motivated and collaborative researcher who can work independently and contribute positively to a team in an international, interdisciplinary environment. Fluency in written and spoken English is required.

To be assessed as qualified for a Postdoc position, you must meet the academic criteria defined in the Danish Ministerial Order on the Appointment of Academic Staff at Universities.

Shortlisting will be used.

Questions about the position

For further information about the position, please contact Associate Professor Lotte Bonde Bertelsen at: Lotte@clin.au.dk

Your place of work will be the MR Research Centre, Department of Clinical Medicine, Aarhus University, Palle Juul-Jensens Boulevard 99, DK-8200 Aarhus N, Denmark.

We expect to conduct interviews in May.

Read more about the MR Research Centre at www.mr.au.dk.

Terms of employment

- Appointment as a postdoc requires academic qualifications at PhD level.
- Further information on the appointment procedure can be found in the [Ministerial Order on the Appointment of Academic Staff at Universities](#).
- The appointment is in accordance with the [Danish Confederation of Professional Associations](#) (Akademikerne).
- Remuneration is in accordance with the above, and the [Salary agreement catalogue for staff at Health](#).
- The yearly base salary for a fulltime postdoc is between DKK 484.214,84 and DKK 538.720,20 depending on the years of working experience after achieved MSc degree. The base salary includes a position related supplement and pension (17.1 %). Additional supplement(s) for special qualifications can be negotiated. Authorisation supplement(s) will be granted, if relevant for the position. Your local eligible trade union representative at Aarhus University negotiates your salary on your behalf.
- Researchers recruited from abroad are offered a [special researcher tax scheme](#) with a lower tax rate.
- Further information on qualification requirements and job description can be found in the [Ministerial Order on Job Structure for Academic Staff](#)

Application

Your application must include the following:

- Motivated application
- Curriculum Vitae
- Diploma
- [Template for applicant - postdoc](#)
- A list of publications
- A teaching portfolio. We refer to [Guideline on the use of teaching portfolios](#)
- A maximum of five of the publications of greatest relevance to the job may be submitted (optional)
- Research plan can be uploaded (optional)
- Coauthor statement(s) can be uploaded (optional)
- References/recommendations can be uploaded separately in the e-recruitment system (optional)

We refer to the faculty's [Guidelines for applicants](#).

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.

International applicant?

Aarhus University offers a broad variety of services for international researchers and accompanying families, including assistance with relocation and career counselling to expat partners. Please find more information about the International Staff Office and the range of services [here](#). Aarhus University also has a Junior Researcher Association and offers career development support. You can read more about these resources [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/