

# Postdoc in Quantum Enhanced MRI

The Department of Clinical Medicine at Faculty of Health at Aarhus University invites applications for a position as Postdoc in the field of Magnetic Resonance Imaging as per 15 August 2026 or as soon as possible thereafter. The position is a fixed-term full-time position for 2 years.

## Department of Clinical Medicine

As a Post-Doc at the Department of Clinical Medicine, you will be part of what is probably the largest health science research department in Denmark. Our clinical research covers all the medical specialities and takes place in close collaboration with the university hospital and the regional hospitals in the Central Denmark Region. We have approx. 30,000 square metres of modern research facilities for experimental surgery and medicine, animal facilities and also advanced scanners at our disposal. The department has overall responsibility for the Master's degree programs in medicine and in molecular medicine. At the department we are approx. 670 academic employees, 500 PhD students and 160 technical/administrative employees who are cooperating across disciplines. As a postdoc, you will be working at Aarhus University in the Central Denmark Region. You can read more about the department [here](#) and about the faculty [here](#).

## About the research project

We are seeking a highly motivated postdoctoral researcher to join the QuantuMRI programme, funded by the Novo Nordisk Foundation's Interdisciplinary Synergy Programme and carried out in collaboration between Aarhus University, the Weizmann Institute of Science, and collaborators in Argentina. QuantuMRI aims to bridge quantum sensing and MRI to achieve imaging beyond the limits of conventional voxel-based imaging. The project will involve theoretical and computational work, with particular emphasis on physics-based simulations, biophysical modelling of signal formation and transfer mechanisms, and assessment of experimental feasibility in quantum-enhanced MRI. Depending on the candidate's profile and the development of the project, the position may also include experimental activities in Aarhus and/or at Weizmann. We therefore welcome applicants who combine strong analytical skills with initiative, independence, and the ability to shape and drive their own research direction within a collaborative framework. The ideal candidate will contribute original ideas and complementary expertise in areas such as MRI/NMR physics, quantum sensing, biophysical modelling, or numerical methods.

## Your job responsibilities

As a Postdoc in Quantum Enhanced MRI your position is primarily research-based but may also involve teaching assignments. You will contribute to the development of the department through research of high international quality. In your daily work, you will interact closely with colleagues and collaborators across the consortium, while being expected to develop and pursue independent ideas within the project framework

Your main tasks will consist of:

- Independent research of high international quality, including publication.
- Development of physics-based and biophysical models relevant to quantum-enhanced MRI.
- Numerical simulations and analytical work aimed at understanding signal formation, magnetization transfer, and experimental feasibility in low-field MRI and quantum-sensing-based readouts.
- Contribution to the design, implementation, and analysis of NMR/MRI experiments, including saturation-transfer and related contrast mechanisms.
- Collaboration with project partners at Aarhus University, the Weizmann Institute of Science, and the collaborating lab at CNEA/CONICET in Argentina, including participation in consortium activities and annual workshops.
- Dissemination of research through conference presentations and scientific meetings.

You will report to Professor Sune Nørhøj Jespersen.

## Your competences

You have academic qualifications at PhD level, preferably within physics, chemistry, biomedical engineering, or a related field. Candidates with experience in MRI/NMR,

**Application Deadline:**  
31 May 2026

**Institute/Faculty:**  
Department of Clinical  
Medicine

**Faculty:**  
Faculty of Health

**Academic contact person:**  
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**Vacant positions:**  
1

**Number of months:**  
24

**Hours per week:**  
37

**Expected date of accession:**  
15/08/2026

numerical simulations, and quantitative modelling are preferred. Experience with quantum sensing, magnetization transfer, low-field magnetic resonance, or related experimental and theoretical methods will be considered an advantage. We are looking for a candidate with strong analytical skills, scientific curiosity, and the ability to work both independently and collaboratively in an interdisciplinary and international research environment.

As a person, you have good interpersonal skills, are inclusive and team-oriented and able to contribute to a good work environment. We expect you to be fluent in oral and written English.

In order to be assessed as qualified for a Postdoc position, you must meet [these academic criteria](#).

Shortlisting will be used.

To be considered for the position, applicants must meet the formal requirements for academic appointments at Aarhus University and submit all required application materials by the deadline. Applications that are substantially incomplete will not proceed to further assessment

#### **Questions about the position**

If you have any questions about the position, please contact Professor Sune Nørhøj Jespersen, [sune@cfm.au.dk](mailto:sune@cfm.au.dk).

Your place of work will be at the Center of Functionally Integrative Neuroscience, Department of Clinical Medicine, Universitetsbyen 3, DK-8000 Aarhus C, Denmark.

We expect to conduct interviews in week 25.

#### **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/](http://www.international.au.dk/)*