

# Postdoc in fetal MEG with optically pumped magnetometers

The Department of Clinical Medicine at Faculty of Health at Aarhus University invites applications for a position as Postdoc in the field of optically pumped magnetometers for magnetoencephalography (OPM-MEG), starting March 1, 2026 or as soon as possible thereafter. The position is a fixed-term full-time position for 2 years within the Center of Functionally Integrative Neuroscience (CFIN).

CFIN is an international multidisciplinary research centre based at Aarhus University's Department of Clinical Medicine. Our research groups are supported by state-of-the-art laboratory facilities and have well-established clinical and other collaborations. Access to clinical populations is available on-site at Aarhus University Hospital.

Aarhus University is a top-tier international research-intensive University which provides an inspiring environment with top neuroscience facilities. Aarhus is a dynamic university city located on the seaside of continental Denmark and surrounded by nature; it offers very high living standards, rich cultural and intellectual life, outdoor activities, excellent restaurant/nightlife scene, etc.

## About the research project

This Lundbeck Foundation-funded project aims to develop OPMs for measuring fetal MEG into a robust technique and investigate the beginnings of sensory responses in the human brain. The project will involve close collaboration with Lars Henning Pedersen, our clinical partner at Aarhus University Hospital and Ana Namburete, an ultrasound image processing expert at the University of Oxford.

The project will make use of the CFIN's new 96-sensor QuSpin Neuro-1 OPM-MEG system, along with computer-controlled visual and auditory stimulus presentation. The postdoc will also work with data from state-of-the-art fetal ultrasound imaging systems. The Center's resources include a high-performance computing cluster.

## Your job responsibilities

As Postdoc, your position is primarily research-based but may optionally involve teaching assignments (occasional lectures). You will contribute to the development of the department through research of high international quality. In your daily work, you will work closely with colleagues on your project, where you will receive supervision and guidance.

Your main tasks will consist of:

- Designing novel stimulus paradigms for evoking fetal auditory and/or visual responses
- Executing fetal MEG measurements with OPMs
- Analyzing resulting fetal OPM-MEG data
- Advanced signal processing using individualized models derived from 3D ultrasound
- Measurement of fetal sensory responses in a high-risk pregnancy group
- Independent research of high international quality, including publication, presentation at conferences, and contribution to future grant applications.

You will report to Prof. Sarang Dalal.

## Your competences

- PhD in neuroscience, biomedical engineering, physics, or a related field (if not yet formally awarded, all requirements for the degree should be fulfilled by the start date)
- Experience with auditory neuroscience with MEG or EEG
- Scientific programming experience with Python and/or Matlab
- Experience with advanced MEG/EEG signal processing and/or machine learning is desirable
- Strong interest in translational research and developmental neuroscience
- Good interpersonal skills, inclusive and team-oriented. and able to contribute to a

**Application Deadline:**  
01 February 2026

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

**Faculty:**  
Faculty of Health

**Academic contact person:**  
Sarang S. Dalal  
Professor  
sarang@cfin.au.dk

**Vacant positions:**  
1

**Number of months:**  
24

**Hours per week:**  
37

**Expected date of accession:**  
01/03/2026

good work environment.

- Fluency 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.

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

If you have any questions about the position, please contact Prof. Sarang Dalal; email: [sarang@cfm.au.dk](mailto:sarang@cfm.au.dk).

Your main place of work will be the Center of Functionally Integrative Neuroscience, Universitetsbyen 3, 8000 Aarhus C, Denmark, with laboratory work at the center's facilities located at Aarhus University Hospital, Palle Juul-Jensens Boulevard 99, 8200 Aarhus N, Denmark.

We expect to conduct interviews in February 2026.

#### **Department of Clinical Medicine**

As a postdoc 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 ~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 ~670 academic employees, 500 PhD students and 160 technical/administrative employees who are cooperating across disciplines. You can read more about the department [here](#) and about the faculty [here](#).

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