

The Danish Research Centre for Magnetic Resonance (DRCMR) at Copenhagen University Hospital Hvidovre (Denmark) is seeking a **Innovative thinking Postdoc in Microstructure Imaging**

**About us:**

The **Danish Research Centre for Magnetic Resonance (DRCMR)** is one of the leading research centers for biomedical MRI in Europe ([www.drcmr.dk](http://www.drcmr.dk)). Our mission is to triangulate MR physics and basic physiology from preclinical to clinical research. Approximately 75 researchers from a diverse range of disciplines are currently pursuing basic and clinically applied MR research and its validation with a focus on structural, functional, and metabolic MRI of the human brain and its disorders. The DRCMR is embedded in the Center for Functional and Diagnostic Imaging and Research, a large diagnostic imaging department including all biomedical imaging modalities at **Copenhagen University Hospital Hvidovre**. DRCMR has a state-of-the-art MR-research infrastructure enabling translational research, which includes a pre-clinical 7T MR scanner, six whole-body MR scanners (one 7T, three 3T and two 1.5T scanners) and a High Performance Computer cluster for neuroimaging. The DRCMR have pre-clinical labs, a neuropsychology laboratory, an EEG laboratory, and two laboratories for non-invasive brain stimulation.

**Basic research in microstructure and plasticity imaging** is centered around the newly install 7T Bruker BioSpec MRI system fully equipped with powerful gradients and a cryo-coil system. Variety of RF coils enables imaging of small tissue or phantom samples to whole brain ex vivo or in vivo rodents combined with optogenetic brain stimulation. The preclinical labs are fully equipped with e.g. electrophysiology facilities. Our cross-disciplinary research team is designing and validating new types of diffusion MRI and quantitative MRI imaging technologies to non-invasively disentangle microstructural features today only seen under the microscope. Here, it is key to have a true interest into how the microanatomy of the normal and diseased brain can look like with MRI. It is our vision to improve the future non-invasive imaging technologies for better patient diagnosis.

The project has been supported by The Capital Region Research Foundation. The aim is to investigate the potential of the world strongest 3D nano-scope namely the newly installed MAXIV synchrotron in Lund Sweden and its application to preclinical research.

**Your profile:**

You should be a team player MR scientist with:

- A PhD degree or corresponding qualification in engineering, physics, computer scientist or a related field.
- A strong documented background in experimental diffusion MRI and biophysical modeling.
- Proficiency regarding MRI scanner software preferably for Bruker MRI and Paravision software

**Your tasks:**

- To work directly with the team of preclinical researchers ensuring that our microstructure and functional MRI experiments take full advantage of the well equipped 7 tesla preclinical MRI.
- To advance the field through your own research and its validation within microstructure imaging
- Sequence development and optimization, biophysical modeling, simulations, data analysis and validation.
- To be engaged in supervision of BSc, MSc and PhD students, knowledge dissemination and publishing in international recognized scientific journals.

**Your position:**

The candidate will be employed for a **postdoc period** of 18 months (with the possibility for extension) at the Danish Research Centre for Magnetic Resonance where he / she will be part of the Microstructure and Plasticity Group ([drcmr.dk/map](http://drcmr.dk/map)) and the Preclinical Method group, both led by Associate Professor Tim B. Dyrby.

**Salary and Terms of Employment**

Salary, pension and terms of employment are in accordance with the agreement between the Danish Regions (Danske Regioner) and the relevant professional organization. The salary depends on background education and seniority. Further, supplements can be negotiated. Note that candidates coming from abroad may be eligible for tax reductions. The position is open for candidates of all nationalities. We expect you to start around October 1<sup>st</sup>, 2017.

We see diversity as strength and encourage all persons regardless of gender, age, ethnicity, disabilities or religion to apply.

**Applications should include a cover letter, CV and list of publications together with the names of three references. Applications must be submitted on-line through the RegionH job portal.**

**Application deadline:** August 17<sup>th</sup>, 2017 at 23:59 CET)

For further information regarding the position please contact Associate Professor Tim B. Dyrby  
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