

PhD grant in Medical Technology

PhD position at the Department of Circulation and Medical Imaging, Faculty of Medicine, Norwegian University of Science and Technology (NTNU)

The Department of Circulation and Medical Imaging has 210 employees and embodies an academic environment where clinicians, translational scientists, engineers and industrial innovators work in concert to meet the needs of modern health care within its fields. State of the art research facilities are located at the Heart and Lung Center, St. Olav's Hospital, closely integrated with the clinical departments of anesthesiology, cardiology, cardiothoracic surgery, pulmonary medicine, radiology and vascular surgery. The Department hosts a distinguished K.G. Jebsen Center for Exercise in Medicine and the Medical Imaging Laboratory for research-based innovation in magnetic resonance and ultrasound technology, which has a long-standing tradition of excellence in interdisciplinary collaboration. For more information please visit www.ntnu.edu/isb.

The project will be carried out within the MR Cancer research group (www.ntnu.edu/isb/mr-cancer). The research group focuses on development and implementation of new MR technology for better diagnostics and treatment management within cancer. Our long-term objective is to improve and individualize cancer treatment by developing integrated MR methods and data analysis tools for functional and molecular assessment of tumors.

Access to state-of-the-art MR equipment including two new 600 MHz spectrometers dedicated for ex vivo analyses of biofluids and tissue samples, a 7T animal scanner and a 3T clinical scanner, is available through the MR core facility. The MR Cancer group is a part of the Medical Imaging Laboratory, and has a solid collaboration with St. Olavs University Hospital as well as being a partner of the distinguished K.G. Jebsen Center for Breast Cancer Research in Oslo.

The PhD research project "MR biomarkers for prostate cancer aggressiveness" aims to validate MR biomarkers for prostate cancer aggressiveness in a large patient cohort using MR Metabolomics by high-resolution magic angle spinning (HR MAS) magnetic resonance spectroscopy on tissue samples. Metabolomics in combination with other molecular methods (i.e. immunohistochemistry) will also be in focus. Setting up methods for metabolite quantification, using advanced multivariate statistical analyses and managing biobank databases will be important for handling large amounts of MR and patient data.

The period of employment for the PhD position is 3 years. The position of the PhD candidate has the objective of taking organized academic training and the completion of the doctoral degree. Admission to a doctoral degree programme is a requirement for employment as a PhD candidate. During the period of employment, three years are to be devoted to research training, including a total of 30 credits from NTNU's PhD courses. For regulations concerning the PhD-degree at NTNU, please see: <http://www.ntnu.edu/dmf/research/phd>

We seek a talented, enthusiastic and creative scientist with a strong commitment to cancer research. Excellent communication skills, both oral and written are important. Candidates finishing their Master Degree in June 2013 will also be considered. The candidates' motivation, skills and personal qualifications for the position and project should be described in the application letter

For this position the applicants must:

- Hold a master's degree or equivalent education within biochemistry, biomathematics, medicine or other life sciences.
- Hold a strong academic record with a weighted average grade of master's or equivalent education with a grade of B or higher, in accordance with NTNU's grading system.
- Speak and write English fluently
- Be willing to perform a research stay outside Norway (3-5 months) during the 3 years PhD position.

Emphasis will also be placed on:

- The candidates' motivation and personal qualifications for the position.
- Excellent collaboration skills (interdisciplinary teams) and ability to work independently
- Theoretical and/or practical experience with MR spectroscopy is an advantage
- Experience with Matlab/R and advanced statistical methods (chemometrics, multivariate analyses) is an advantage

NTNU is an equal opportunity employer and welcomes applicants from both EU/EEA and non-EU countries. The university is strongly committed to diversity within its community and welcomes applications from members of ethnic minorities.

Chosen applicants will be invited to undergo an interview.

Depending on qualifications and academic background, PhD candidates at the Faculty of Medicine will be remunerated at wage levels 50-62 on the Norwegian State salary scale, with gross salary from NOK 416 600 – NOK 513 000 a year, of which 2 % is deducted for the Norwegian Public Service Pension Fund. Normal Wage level is 50-58. A yearly amount for operating costs will be added.

The appointment will be made in accordance with current regulations and supplementary rules with guidelines for employment as PhD candidate appointments at universities and university colleges.

How to apply:

Applicants are asked to apply via the website www.jobbnorge.no. The vacancy has ID number **7-13**.

The application should contain the following attachments:

- Application letter
- Applicants' CV
- Copy of relevant transcripts and diplomas
- Short statement from a former supervisor/tutor/teacher
- Contact information for at least two relevant references

Deadline for applications: February 6th 2013

For further information about the position, please contact:

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For information concerning the application process, please contact:

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