

PhD scholarship in blood-brain barrier biology and drug delivery.

Department of Micro- and Nanotechnology is a diverse department with activities spanning from material sciences to biological sciences. We are now offering a 3 years PhD scholarship. You will be part of a team of dedicated scientists focused on the blood-brain barrier and drug delivery to the central nervous system. We are a mixture of chemists, engineers and biologists that find cross-disciplinary research interesting.

Responsibilities and tasks

The project is focused on endothelial cells lining all blood vessels. In cerebral blood vessels the endothelial cells are responsible for delivering nutrients to the brain while keeping unwanted substances away from the brain. We wish to understand how receptor-mediated uptake of ligands takes place. This will be relevant in optimizing drug delivery to the brain.

This will be investigated by using different types of electron microscopy supported by other techniques. Furthermore it will be studied how brain tumours (glioblastoma) affect the endothelium and how that in turn affects drug delivery to the tumour.

The hypotheses will be addressed by in vitro and in vivo setups.

Qualifications

The candidate should have a Master's degree in human biology, molecular medicine, biology, biotechnology or an equivalent Master's degree. Candidates should have a strong academic record, have good communication skills and be fluent in English. Furthermore the candidate should be highly ambitious and interested in working in a collaborative and cross-disciplinary research environment.

Approval and Enrolment

The scholarships for the PhD degree are subject to academic approval, and the candidates will be enrolled in one of the general degree programmes of DTU. For information about the general requirements for enrolment and the general planning of the scholarship studies, please see the [DTU PhD Guide](#).

Assessment

The assessment of the applicants will be made by Professor Thomas L. Andresen.

We offer an interesting and challenging job in an international environment focusing on education, research, scientific advice and innovation, which contribute to enhancing the economy and improving social welfare. We strive for academic excellence, collegial respect and freedom tempered by responsibility. The Technical University of Denmark (DTU) is a leading technical university in northern Europe and benchmarks with the best universities in the world.

Further information (*Please do not send applications to this e-mail address, instead apply online*)

Postdoc Casper Hempel, cash@nanotech.dtu.dk.

Head of Department, Professor Thomas L. Andresen, tlan@nanotech.dtu.dk

Application: Apply only online at www.career.dtu.dk. Deadline **March 15th 2017**

To apply, please open the link "Apply online", fill in the online application form, and attach **all your materials in English in one pdf file**. The file must include:

- A letter motivating the application (cover letter)
- Curriculum vitae
- Grade transcripts and BSc/MSc diploma (an official translation into English)
- Excel sheet with translation of grades to the Danish grading system (see guidelines and [excel spreadsheet here](#))

DTU Nanotech - the Department of Micro- and Nanotechnology - is situated in the northern part of Copenhagen. DTU Nanotech is a center of excellence in micro- and nanotechnology, exploiting sciences across the traditional boundaries of technology, thereby enabling innovative solutions for the benefit of society. DTU Nanotech has approx. 220 people on its staff, and with 40 % non-Danes, the department constitutes an international environment.

DTU is a technical university providing internationally leading research, education, innovation and scientific advice. Our staff of 5,800 advance science and technology to create innovative solutions that meet the demands of society; and our 10,300 students are being educated to address the technological challenges of the future. DTU is an independent academic university collaborating globally with business, industry, government, and public agencies.