



# Doctoral research fellow in stem cell differentiation at Hybrid Technology Hub, Center of Excellence, Institute of Basic Medical Sciences

## Positions available to develop future models for diabetes research funded by UiO:Life Science Convergence environment

Convergence environments are interdisciplinary research environment/groups that aim to solve grand challenges related to health and environment. They are funded by UiO's interdisciplinary strategic initiative [UiO:Life Science](#).

Diabetes is a global disease affecting more than 400 million people. Disease burden due to life-threatening secondary complications means diabetes is now the 7th leading cause of death worldwide. A new era in science and medicine has emerged as a result of the possibilities offered by human stem cells. The newly established convergence environment "[Artificial Biomimetic systems- the Niche of Islet Organoids \(ABINO\)](#)" seeks to integrate our knowledge of islet biology and stem cell differentiation pathways, together with expertise in matrices, and acoustic-mechanical stimuli to develop novel differentiation protocols for generation of insulin producing cells. By applying deep learning and theoretical modelling approaches, we will optimize these protocols to improve differentiation efficiency and functionality to achieve true glucose responsive insulin producing cells. Development of such model systems could enable (i) therapeutic transplantation to cure diabetes, (ii) studies of diabetes development and progression, (iii) drug-screening for more effective treatments of diabetes. The ABINO project unites three centers of excellence, the Hybrid Technology Hub (HTH) (led by Prof. Stefan Krauss and Dr. Hanne Scholz), Rhythm, Time and Motion (RITMO) (led by Prof. Anne Danielsen and Asst. Prof. Alexander Jensenius) and the Centre for Computing in Science Education (FI/CCSE) (led by Prof. Anders Maltre-Sørensen) to achieve its ambitious goals. The candidates will work together (share same office) and be part of a large and closely interacting interdisciplinary team of basic scientists, clinicians, computational biologists, physicists, and musicians in all three location.

## About the position

A three-year PhD Fellowship position is available in the [Hybrid Technology Hub - Centre of Excellence](#) (HTH-CoE) at the Institute of Basic Medical Sciences at University of Oslo, Norway. The position is part of the newly established [Convergence environment ABINO](#) funded by UiO's interdisciplinary strategic area [UiO:Life Science](#).

## About the Hybrid Technology Hub

The Hybrid Technology Hub (HTH) is a Centre of Excellence (CoE) funded by the Research Council of Norway and is located at the Institute of Basic Medical Sciences, at the University of Oslo. The overall objective of the Hybrid Technology Hub is to develop a "organ on a chip" platform that reproduces core energy metabolism within energy regulating organs of the human body and which will allow real time data acquisition upon exposure to therapeutic tools.

## Job description

The candidate will work on understanding the differentiation process from stem cells to pancreatic beta cells. It is expected that the individual will be involved in high-impact publications and have an eagerness for career development. The research fellow will be employed by HTH-CoE and must take part in the [PhD program at the Faculty of Medicine](#). The main purpose of the fellowship is research training leading to the successful completion of a PhD degree. The position is available for 3 years.

## Major responsibilities

- Conduct relevant analyses within the project
- Learn and develop methods for stem cell differentiation towards insulin producing islet-like cells including complex stem cell set up.
- Collaborate with all members of the Convergence environment, including technicians, PhD students and postdoctoral researchers
- Write progress reports, high quality manuscripts for publication and fulfill the requirements of the PhD program at the Faculty of Medicine

## Qualification requirements

- Applicants must hold a Master's degree with a strong scientific background relevant to the position
- Scientific creativity and ability to drive own research ideas to a successful conclusion
- Excellent written, oral and presentation skills (English)
- Proven ability to work and collaborate within a multidisciplinary environment
- Knowledge in stem cell culture, and diabetes research will be an advantage

## We offer

- An inspiring and friendly work environment with strong mentoring
- National and international collaborators
- salary NOK 479 600 - 523 200 per annum depending on qualifications in a position as PhD Research fellow, (position code 1017)
- attractive welfare benefits and a generous pension agreement, in addition to Oslo's family-friendly environment with its rich opportunities for culture and outdoor activities

## How to apply

The application must include

- cover letter statement of motivation and research interests
- CV (summarizing education, positions and academic work)
- copies of educational certificates (academic transcripts only)
- a complete list of publications and academic works
- list of at least two reference persons (name, relation to candidate, e-mail and phone number)
- letters of recommendation (optional)

The application with attachments must be delivered in our electronic recruiting system, please follow the link "apply for this job". Foreign applicants are advised to attach an explanation of their University's grading system. Please note that all documents should be in English (or a Scandinavian language).

When evaluating the application, emphasis will be given to the applicant's academic and personal prerequisites to carry out the project. Applicants may be called in for an interview.

## Formal regulations

Please see the [guidelines and regulations](#) for appointments to Research Fellowships at the University of Oslo.

No one can be appointed for more than one PhD Research Fellowship period at the University of Oslo.

According to the Norwegian Freedom and Information Act (Offentleglova) information about the applicant may be included in the public applicant list, also in cases where the applicant has requested non-disclosure.

The appointment may be shortened/given a more limited scope within the framework of the applicable guidelines on account of any previous employment in academic positions.

The University of Oslo has an [agreement](#) for all employees, aiming to secure rights to research results etc.

## Contact information

Project leader Dr. Hanne Scholz, [hanne.scholz@medisin.uio.no](mailto:hanne.scholz@medisin.uio.no) (phone +47 97514215)

Administrative coordinator Haakon Berg Johnsen, [h.b.johnsen@medisin.uio.no](mailto:h.b.johnsen@medisin.uio.no)

## About the University of Oslo

**The University of Oslo** is Norway's oldest and highest ranked educational and research institution, with 28 000 students and 7000 employees. With its broad range of academic disciplines and internationally recognised research communities, UiO is an important contributor to society.

**The Institute of Basic Medical Sciences** overall objective is to promote basic medical knowledge in order to understand normal processes, provide insight into mechanisms that cause illness, and promote good health. The Institute is responsible for teaching in basic medical sciences for the programmes of professional study in medicine and the Master's programme in clinical nutrition. The Institute has more than 300 employees and is located in Domus Medica.

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