Two postdoctoral fellows: CRISPR gene therapy and immunogenetics groups (Haapaniemi/Saarela)

About the position

Two fixed term postdoc positions (2 years) are available at Centre for Molecular Medicine Norway (NCMM). We welcome applications both from recent PhD graduates and more experienced scientists. Experimentalists, computer scientists and hybrids alike are encouraged to apply. Researchers aiming for academic principal investigator positions in the future are encouraged to apply for independent funding during their first year in NCMM.

The aim of the Haapaniemi group is to build a gene editing platform that can be used to correct patient-specific mutations in ex vivo cell therapies for genetic immune and other rare childhood diseases. We will use high-throughput biology techniques to optimize, develop and understand the CRISPR-Cas system that forms the base of the platform, and develop and implement methods to evaluate its safety in a clinical setting. We will use the modified gene editing technologies for the benefit of the patients in the Nordic hospitals.

The aim of the Saarela group is to identify novel genetic causes for rare and complex immune and hematological diseases and improve their diagnostics and treatment. We use modern genetic and informatics methods, including deep learning, to analyze genomics and clinical data, as well as molecular genetics and cell biology approaches to understand molecular bases of the diseases and normal immune function. We will also use NGS based methods to identify molecular diagnosis for patients suffering from rare genetic disorders to enable accurate prediction of disease course, targeted treatment and genetic counselling.

Work tasks

The work tasks will depend on your interest and scientific background and will generally include one or more of the following:

**Wetlab scientists**
- Design and conduct custom CRISPR experiments and screens
- Design and optimize high-throughput biology experiments in robotics platforms
- Set up custom Next Generation Sequencing libraries and technologies
- Set up Flow cytometry - based immunological assays
- Set up functional assays for immune cells
- Supervise students and technicians in designing and conducting molecular biology experiments.

**Computer scientists**
- Set up bioinformatics analysis pipelines for different Next Generation Sequencing assays. These include both standardized workflows and the development of new methods for novel assays.
- Set up analysis pipelines for improved gene variant prioritization in large datasets of rare disease samples (both single nucleotide and structural variants)
- Integrate omics data from multiple published datasets and patient samples to aid diagnostics and treatment design
- Set up analysis pipelines for guide prioritization in CRISPR experiments
- Help wetlab scientists in data analysis

Qualification requirements

**Postdoctoral fellow, position code 1352:**
- PhD, BA or MA (expected PhD graduation date within 6 months of application closing date)
- Documented research experience in one or more of the following fields: Bioinformatics, High-throughput biology and/or Next Generation Sequencing method development, Immunology or stem cell biology, DNA repair and genome stability
- At least one published first-author paper
- Fluent oral and written communication skills in English

The following qualifications will count in the assessment of the applicants:
- Experience with any of the following techniques: Multi-color flow cytometry, Next Generation Sequencing library preparation, protein production and purification in insect or mammalian systems, or experience with mouse work.
- Experience in genetic analyses
- Python, Perl, R and other relevant programming language skills
- Advanced bioinformatics and statistics skills including experience in deep learning methods
Personal skills

- Organized, meticulous and independent
- Willing to learn new skills as the laboratory grows and techniques evolve
- Ability to communicate and work in large, shared projects in multidisciplinary teams
- Willing to supervise students and staff

We offer

- Salary NOK 523 200 - 594 400 per annum depending on qualifications
- An exciting, translational project where your strong basic science background can directly benefit our sickest patients
- Opportunity to shape a new laboratory
- Upon mutual agreement, the possibility to transition into a researcher position (position code 1109) after the postdoctoral period
- 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, summarizing scientific work and research interest)
- CV (summarizing education, positions, pedagogical experience, administrative experience and other qualifying activity)
- copies of educational certificates (academic transcripts only)
- a complete list of publications
- list of 3 reference persons (name, relation to candidate, e-mail and phone number)

The application with attachments must be delivered in our electronic recruiting system. Foreign applicants are advised to attach an explanation of their University's grading system. Please note that all documents should be in English.

In assessing the applications, special emphasis will be placed on the documented, academic qualifications as well as the candidate's motivation and personal suitability. Interviews with the best qualified candidates will be arranged. It is expected that the successful candidate will be able to complete the project in the course of the period of employment.

Formal regulations

Please see the guidelines and regulations for appointments to Postdoctoral fellowships at the University of Oslo.

No one can be appointed for more than one Postdoctoral Fellow 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 University of Oslo has an agreement for all employees, aiming to secure rights to research results etc.

The University of Oslo aims to achieve a balanced gender composition in the workforce and to recruit people with ethnic minority backgrounds.

Contact information

Inquiries about the positions can be directed to Centre Director Dr. Janna Saarela or to Group Leader Dr. Emma Haapaniemi

Inquiries about application can be directed to HR-adviser Nina Modahl

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.

Centre for Molecular Medicine Norway (NCMM) was established in 2008 and is the Norwegian node in the Nordic EMBL Partnership for Molecular Medicine. NCMM is a joint venture between the University of Oslo, Health Region South-East and the Research Council of Norway. From 2017 NCMM is merged with the Biotechnology Centre of Oslo and now has altogether 11 research groups. The overall objective of NCMM is to conduct cutting edge research in molecular medicine and biotechnology as well as facilitate translation of discoveries in basic medical research into clinical practice.

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