



# Postdoctoral Research Fellow position in antibody engineering and characterization

## Job description

A three-year full-time Postdoctoral Research Fellow (position code SKO 1352) in antibody characterization is available at the Department of Immunology, Institute of Clinical Medicine, The Faculty of Medicine, University of Oslo.

## More about the position

The position is available from September 2019 with a flexible start between September and December 2019. The position will be located in the laboratories of Dr. Lund-Johansen (Protein Array Laboratory) and Dr. Greiff (Lab for Computational and Systems Immunology). The announced position is part of the [UiO Convergence Environment ImmunoLingo](#), which is headed by Dr. Greiff. The primary objective of ImmunoLingo is to decipher how disease and antigen recognition is encoded in the immune system and to perform experiments in silico to improve intervention and treatment of human diseases.

The aim of the project is to determine structure-function relationships between antibodies and peptide antigens. The candidate will collaborate with experienced antibody manufacturers to produce recombinant antibodies to peptides. The antibodies will be sequenced and tested for binding to bead-based arrays with the antigens used for immunization and variants where the position is exchanged with all amino acids. We will also use molecular techniques to vary the sequence in the antigen-binding domains of the antibody. The results will be analyzed with bioinformatics tools developed in the Greiff lab.

The Greiff Lab focuses on the quantitative understanding of adaptive immune receptor (antibody and T-cell receptor) specificity using high-throughput experimental and computational immunology combined with machine learning.

The long-term aim is to conceive in-silico novel immunodiagnostics and immunotherapeutics using the disease-diagnostic information and therapeutic potential that is directly encoded into adaptive immune receptors. The advent of high-throughput sequencing has enabled an unprecedented accumulation of big immune repertoire sequencing data. However, as of yet, we lack the computational methods that help us decode the immune grammar that translates immune sequencing data to immune state diagnosis and prediction of antigen binding. We believe that learning to read and write the immune repertoire language is key for the development of entirely novel, nature-inspired precision medicine immunodiagnostics and immunotherapeutics. Recent publications by Dr. Greiff may be found on [google scholar](#).

The Lund-Johansen Lab focuses on antibody array analysis and mass spectrometry. Our long-term goal is to develop technology that will enable researchers to measure thousands of proteins in routine experiments. We work in close collaboration with world-leading antibody manufacturers including Abcam, GeneTex, Bio-Rad and Thermo-Fisher. For this project we will also collaborate with manufacturers of recombinant antibodies to develop libraries of antibodies to peptide antigens.

Dr. Lund-Johansen will be the main supervisor and Dr. Greiff will be co-supervisor for the successful candidate.

The main purpose of the fellowship is to qualify researchers for work in higher academic positions within their disciplines.

## Qualification requirements

- Applicants must hold a PhD in immunology or proteomics. Experience with antibody characterization or engineering is considered an advantage. Doctoral dissertation must be submitted for evaluation by the closing date. Appointment is dependent on the public defence of the doctoral thesis being approved.
- The candidate should be motivated to learn to work with bead-based antibody arrays and flow cytometry.
- The candidate will work in a very ambitious interdisciplinary setting which will require high flexibility.
- Fluent oral and written communication skills in English.

The Faculty of Medicine has a strategic ambition of being a leading research faculty. Candidates for these fellowships will be selected in accordance with this, and expected to be in the upper segment of their class with respect to academic credentials.

## We offer

- salary NOK 523 200 to NOK 594 400 per annum depending on qualifications in position as Postdoctoral Research Fellow (position code 1352)
- An exciting research environment with opportunities for academic development.
- 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:

- Application letter describing the applicant's qualifications and motivation for the position
- CV (summarizing education, positions, and academic work - scientific publications)
- A complete list of publications
- Masters thesis
- Code samples (e.g. link to own github repository)
- Copies of educational certificates and transcript of records
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Letters of recommendation or names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number)

The application with attachments must be delivered in our electronic recruiting system, please follow the links "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).

Applicants, who are invited for an interview, are asked to provide educational certificates, diploma or transcript of records.

## 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

- Associate Professor Victor Greiff, e-mail: [victor.greiff@medisin.uio.no](mailto:victor.greiff@medisin.uio.no)
- Senior Scientist Fridtjof Lund-Johansen, email: [fridtjol@gmail.com](mailto:fridtjol@gmail.com)
- HR-adviser Karoline Berg-Eriksen, (questions regarding the online application form), e-mail: [Karoline.berg-eriksen@medisin.uio.no](mailto:Karoline.berg-eriksen@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 Clinical Medicine (Klinmed) is one of three institutes under the Faculty. Klinmed is responsible for the Faculty's educational and research activities at Oslo University Hospital and Akershus University Hospital. With about 800 employees spread over approximately 425 man-labour years, Klinmed is the university's largest institute. Our activities follow the clinical activity at the hospitals and are spread across a number of geographical areas.

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