Postdoctoral Fellowship in Computational Structural Immunology Research

Job description

A 2-year full-time Postdoctoral Research Fellowship position code 1352 in Computational Immunology, 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 May 2020 with a flexible start between May and October 2020. The position will be located in the laboratory of Dr. Greiff (Lab for Computational and Systems Immunology, greifflab.org). The position is funded by the

The candidate will develop and employ a variety of computational structural biology techniques to study and predict antibody-antigen recognition and explore avenues to build large-scale synthetic datasets for benchmarking, developing and employing machine-learning tools for predicting antibody-epitope binding. Computational prediction of antibody-epitope binding is a long-standing computational and immunological problem. Improving computational methods for antibody recognition is crucial for the development of personalized and precision medicine approaches such as next-generation infection, cancer, and autoimmune immunodiagnostics and immunotherapeutics. The candidate will be expected to closely collaborate with machine learning experts, statisticians, computational and experimental immunologists as well as clinicians.

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 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 degree in computational biology, bioinformatics, informatics, statistics or a related field. Prior knowledge of biology or immunology is a must.
- Experience in computational structural biology is an advantage.
- Experience in computational modeling of antibody responses is an advantage.
- Experience in large-scale computer simulations and high-performance parallel computing is an advantage.
- Experience with machine learning and or other mathematical approaches used in immune repertoire analysis is considered an advantage.
- 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.

The position is also open for candidates who have completed a Postdoctoral Research Fellow period at UiO. These candidates will be evaluated for a two years position as a Researcher (SKO 1109).

We offer

- An exciting research environment with opportunities for academic development.
- Salary NOK 523 200 to NOK 583 900 per annum depending on qualifications in position as Postdoctoral Research Fellow (SKO1352) or Researcher 1109 (SKO1109).
- 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
- Favorable pension arrangements

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
• 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
• 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.

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 of 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
- Associate Professor Geir K. Sandve, e-mail: geirksa@ifi.uio.no
- HR-adviser Karoline Berg-Eriksen, (questions regarding the online application form), e-mail: 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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