Postdoctoral Research Fellow position

At the Faculty of Medicine, Department of Global Public Health and Primary Care, a full-time temporary position as postdoctoral research fellow (100%) is available for a period of four (4) years. The position is part of the project "DRONE - Drug Repurposing for NEurological diseases", funded by the University of Bergen and the Norwegian Research Council (NRC). The goal of the project is the development of new and effective treatments for the neurological diseases Parkinson's disease (PD), multiple sclerosis (MS), amyotrophic lateral sclerosis (ALS) and Alzheimer's disease (AD). We will analyse big data from the Norwegian health register, including the Prescription Register, to identify medicines and mechanisms that can provide candidates for new treatment for the diseases. These candidates will be validated in experimental studies in collaboration with researchers in the basic research environment at Harvard University in Boston, USA.

The project is also part of the NRC initiative for the treatment of neurological disease, NeuroSysMed (Research Center for Clinical Treatment) at the University of Bergen and Haukeland University Hospital.

About the project/work tasks:

The overall task for the position will be to build up competence in using machine learning and artificial intelligence for analysis of big data from Norwegian health registries.

Specific tasks include:

1. Using machine learning (ML) techniques on data from the Norwegian Prescription Database (NorPD) to identify combinations of drugs that are associated with reduced/increased risk of developing Parkinson's disease (PD), amyotrophic lateral sclerosis (ALS) and multiple sclerosis (MS).
2. ML techniques for prediction of disease onset according to timing of exposure (drug use).
3. Comparison of efficiency between various ML techniques and modelling approaches in the mentioned analyses
4. ML-techniques for identifying such associations based on clustering of chemical structures
5. Cheminformatics approach for "hit expansion"
6. Visualization of data (data exploration)

Qualifications and personal qualities:

- the applicant must hold a Norwegian PhD or an equivalent degree within the fields of mathematics, statistics, informatics, bioinformatics, computational biology, computational biophysics, or similar. It is a condition of employment that the PhD has been awarded.

Other required skills:

- experience in developing new methods and implementation of algorithms
- experience in applying statistical methods/machine learning methods to heterogenous datasets
- programming experience (R or python is a plus)
- working independently and in a structured manner, and having the ability to cooperate with others
- proficiency in both written and oral English

Valued skills:

- experience in code development in a team
- experience with parallelization of the code and running jobs on a CPU cluster
- some knowledge about Norwegian registries
- independent thinking

About the position of postdoctoral research fellow:

The position of postdoctoral research fellow is a fixed-term appointment with the primary objective of qualifying the appointee for work in top academic positions. Postdoctoral fellowships are fixed term positions. You cannot be employed as a postdoctoral fellow for more than one fixed
Upon appointment, applicants must submit a project proposal for the qualifying work including a work schedule. It is a requirement that the project is completed in the course of the period of employment.

The employee may be assigned required duties in the form of teaching and similar work at the department.

**We can offer:**

- exciting development opportunities as part of your role in a strong professional environment
- salary level 62 (code 1352/pay framework 24.4) at present NOK 552 800 gross p.a., with a degree in Medicine or Dentistry level 63 (code 1352/pay framework 24.7) at present NOK 563 700, with a medical specialization level 65 (code 1352/pay framework 24.9) at present NOK 583 900, gross p.a. on the government salary scale. Further promotion will be after service seniority in the position
- enrolment in the Norwegian Public Service Pension Fund
- good welfare benefits

**Your application must include:**

- a brief account of the applicant’s research interests and motivation for applying for the position
- transcripts and diplomas (applicants with education from other countries than Norway must enclose witnessed diplomas in both the original language and authorized translations) and documentation of approved doctoral thesis
- complete list of publications
- publications (PDF) it is important that each of the scholarly works on which the committee should place special emphasis, is attached in its entirety
- two referees (name and contact information)

**General information:**

For further information, please contact Professor Trond Riise, e-mail: Trond.Riise@uib.no, phone: + 47 55 58 61 13, Associate Professor Jannicke Igland, e-mail: Jannicke.Igland@uib.no, phone: + 47 55 58 85 28 or researcher Kjetil Bjørnevik, e-mail: Kjetil.Bjornevik@uib.no, phone: + 47 976 56 517

The state labour force shall reflect the diversity of Norwegian society to the greatest extent possible. People with immigrant backgrounds and people with disabilities are encouraged to apply for the position.

The University of Bergen applies the principle of public access to information when recruiting staff for academic positions. Information about applicants may be made public even if the applicant has asked not to be named on the list of applicants. The applicant will be notified if their request is not met.

Further information about our employment process can be found [here](#).

**About The University of Bergen (UiB)**

The University of Bergen (UiB) is an internationally recognised research university with more than 14,000 students and close to 3,500 employees at six faculties. The university is located in the heart of Bergen.

Our main contribution to society is excellent basic research and education across a wide range of disciplines.

Jobbnorge-ID: 194477, Søknadsfrist: 8. november 2020