

## Bioinformatics / Data scientist position

Are you interested to work on datasets related to health, agriculture and drug development? Are you interested to work on projects that are guaranteed to generate scientific publications?

Liisa Holm's bioinformatics group in Viikki, Helsinki develops various novel methods for bioinformatics. These vary from protein function prediction to quality control measures for RNA-seq datasets. We are looking for bioinformatician, data scientist or statistician to assist us with various RNA-seq data sets and with other potential research tasks. The position is suitable for an advanced master's student or to recently graduated MSc. The appointment will be first for a six-month period, with test period of two months. This work period would preferably start between 1.6. and 1.7. 2021.

Our collaborations include PI Minna Nyström (colorectal cancer research), PI Ville Paavilainen (peptide transport and secretion), Faba bean research with PI's Alan Schulmann and Fred Stoddard (agriculture, plant-based food) and PI Juha Saarikangas (changes in protein structure). Colorectal cancer is the second most common cancer in Finland and often diagnosed at rather late stage. This project looks for new biomarkers for increased cancer risk. Peptide transport and secretion looks how human cells direct peptides and proteins into different cell compartments and outside the cell. This helps to understand certain diseases and improves the manufacturing of bioactive peptides. Faba bean project has sequenced the genome of faba bean, a relevant plant protein source. This project aims to improve the suitability of faba bean to food industry. Saarikangas group looks at the changes in protein structures in living cells. They are particularly interested in how dynamic alterations in different protein conformations give rise to phenotypes associated with aging and memory formation.

Although the research topics vary, all these projects generate similar RNA-seq datasets that need to be analyzed for differences between the compared sample groups. We have already existing analysis pipelines for most of these datasets. We are planning the use of state of the art classifiers that can perform feature selection on the datasets and addition of various functional classes to process.

We require good understanding of R, python and unix. We expect background knowledge on bioinformatics, statistics and data mining methods. We look for personality that is interested in scientific work, is willing to evaluate work steps and is able to work also independently. Work will be done mostly remotely and meetings will be held mostly via zoom.

To apply, send CV, letter of motivation and optionally names of two references to [liisa.holm@helsinki.fi](mailto:liisa.holm@helsinki.fi) or [petri.toronen@helsinki.fi](mailto:petri.toronen@helsinki.fi) by 15<sup>th</sup> May 2021. Feel free to contact us for more information, if you are interested.

