

INVITATION FOR APPLICATIONS

The Institute for Molecular Medicine Finland (FIMM) is an international research institute focusing on human genomics and personalised medicine at the University of Helsinki. In the beginning of 2017 FIMM joined the University of Helsinki's new life science research centre, Helsinki Institute of Life Science HiLIFE, as an operational unit. FIMM integrates molecular medicine research, technology centre and biobanking infrastructures under one roof, promoting translational research in grand challenge projects, specifically, the impact of genome information from the Finnish population in personalised health and medicine, individualised cancer medicine, and digital molecular medicine. FIMM is part of the Nordic EMBL Partnership for Molecular Medicine, composed of the European Molecular Biology Laboratory (EMBL) and the centres for molecular medicine in Norway, Sweden and Denmark, and the EU-LIFE Community.



FIMM is currently seeking outstanding candidates for the position of a

PhD student in the Quantitative Systems Pharmacology Research Group

Description: The [Quantitative Systems Pharmacology research group](#) led by Dr. Jing Tang focuses on developing mathematical and informatics tools to tackle biomedical questions that may potentially lead to breakthroughs in drug discovery. We are developing network pharmacology modelling methods, aiming at a systems-level understanding of how cancer cells can be inhibited by synergistic drug combinations through multi-target perturbations. As part of the [Individualized Systems Medicine Grant Challenge Program](#) at FIMM, we offer an improved efficiency to identify more effective cancer treatments for personalized medicine.

The PhD student will be involved in the ERC funded project [DrugComb](#) (2017-2022) in the field of cancer drug discovery research. The student is expected to develop novel network pharmacology models to predict synergistic drug combinations for individual cancer patients. The models shall integrate genotypic, phenotypic and clinical data of cancer patients to establish biomarkers predictive of drug or drug combination responses. Such network models should also include the cancer signalling pathways to elucidate the mechanisms of action, by which a quantitative prediction of a multi-targeted drug or drug combination can be made and tested in follow-up biological experiments.

Qualifications and experience:

A successful candidate should have solid data science background with a Master's degree in bioinformatics, physics, statistics, or computer science. Proficient programming skills (Python, Perl, Java, R, or C) are required. Experience in statistical and machine learning method development is an advantage. Capabilities on developing efficient algorithms and software tools to solve data-intensive problems are essential. We expect you to be creative, adaptive and collaborative in a multi-disciplinary research environment.

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Salary & contract: A one-year contract will be initially made, followed by a three-year contract pending successful review. The salary will be commensurate with qualifications based on the Finnish university salary (YPJ) system depending on the credentials and previous experience. Standard Finnish pension benefits and occupational health care are provided.



How to apply:

Application deadline is 15.11.2017 at 23.59 EEST. Applications are submitted by completing the application form and submitting a cover letter, study transcripts and CV including contact information for two references as a single PDF file in English at: <https://elomake.helsinki.fi/lomakkeet/83696/lomake.html>. If possible please also attach a “work sample” (e.g., a technical report on a course project, or a link to a github repo) suitable to demonstrate your coding or data analysis skills. Applicants will be notified of the results of the preliminary review by end-November. For further information please visit our website at <http://www.fimm.fi> and/or contact Dr. [Jing Tang](#).

Useful links:

[FIMM Research](#)

[University of Helsinki Research](#)

[The International Staff Office of the University of Helsinki](#)

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