

University of Turku, Finland

Postdoctoral Researcher in the Computational Systems Pharmacology Research Group at the Turku Collegium for Science and Medicine, University of Turku

The **Computational Systems Pharmacology** research group (<http://cosphar.utu.fi/>) led by Dr. Jing Tang focuses on developing and applying mathematical and computational tools to tackle biomedical questions that may potentially lead to breakthroughs in drug discovery, such as 1) how to identify drug combinations that can be used to provide more effective therapeutic strategies for cancer and other diseases, 2) how to understand the mechanisms of action of drugs by combining the drug-target interaction data and molecular profiles of the disease models and 3) how to facilitate the visualization and interpretation of high-throughput drug screening data. The new research group is seeking outstanding candidates for one postdoctoral researcher position.

Description:

The open position is in the field of personalized cancer drug discovery research. This project will involve the development of mathematical and informatics approaches to understand, predict and test drug combinations at an individual-patient level by answering the following research questions:

- How to predict accurate and comprehensive target profiles for clinical and preclinical compounds?
- How to model the interactions underlying drug perturbations and cancer signaling pathways?
- How to develop rigorous statistical testing methods to quantify the drug combination experimental data?

The position will be placed at the Center of Statistics (<http://www.utustats.fi/about/>) at the Department of Mathematics and Statistics and will be linked to the BioCity research program 'Computational and Molecular Methodologies for Life Sciences'

<http://www.biocity.turku.fi/research-programmes/computational-and-molecular-methodologies-for-life-sciences/>

Qualification and experience:

A successful candidate is expected to have a doctoral degree in a suitable field (computational biology, bioinformatics, computer science, mathematical modelling, statistics or other relevant field). Strong data analysis and biological network modeling skills are required. Capabilities on solving biological and medical problems through close collaborations with biologists and clinicians are essential. Strong motivation to promote open access to the developed tools and methodologies for the science community is highly appreciated.

Salary & contract:

Three year contract is available for the position with preferred start as soon as possible and before October 1, 2016. The salary is defined in accordance with the University salary system for teaching and research personnel, level 5 and a component based on personal performance, level 4. Normal starting salary is 3,326 euros. There will be a trial period of 4 months.

Inquiries:

About the position: Dr. Jing Tang (jing.tang@utu.fi), or the recruitment process related questions HR-coordinator Heli Vilhonen (heli.vilhonen@utu.fi).

For further information about the Tang Group, see: <http://cosphar.utu.fi/>

How to apply:



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Application details

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Application deadline: 2016-07-31

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Applications must be submitted 31st of July 2016 at the latest via the electronic application form of the University of Turku; the link to the application system at the beginning of this announcement (Apply for the job).

The application should include a cover letter, CV, degree certificates, a list of publications and also include contact information for 2–3 references and other relevant documents that may influence the filling of position, e.g. research proposals.

References

[1] Tang, J. et al. (2013) Target inhibition networks: predicting selective combinations of druggable targets to block cancer survival pathways. PLoS Comput. Biol., 9, e1003226

[2] Tang, J. et al. (2014) Making sense of large-scale kinase inhibitor bioactivity data sets: a comparative and integrative analysis. J. Chem. Inf. Model., 54, 735-743

[3] Tang, J. and Aittokallio, T. (2014) Network pharmacology strategies toward multi-target anticancer therapies: from computational models to experimental design principles. Curr. Pharm. Des., 20, 20-36

[4] Tang, J. et al. (2015) What is synergy? The Saariselkä agreement revisited. Front. Pharmacol., 6, 181

[5] Yadav, B. et al. (2015) Searching for drug synergy in complex dose-response landscapes using an interaction potency model. Comput. Struct. Biotechnol. J., 13, 504-513.

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