UNIVERZITA PARDUBICE

HR EXCELLENCE IN RESEARCH

UNIVERSITY OF PARDUBICE

The Faculty of Chemical Technology

is hiring :

Bioinformatic position – multiomics data integration

Duration

Up to 4 years (the end of projects is December 2028).

Where

Lipidomics group of Michal Holčapek, University of Pardubice, Faculty of Chemical Technology, Department of Analytical Chemistry, Czech Republic.

Salary

The salary will be set according to the internal university rules taking into account the level of previous skills and experience.

Grant projects

You will work within the framework of the ERC Advanced project “Oncolipidomics: Why is lipidomic dysregulation pattern in blood similar for various cancers? (ONCOLIPID)” funded by the European Research Council and/or the OP JAK project “Saving lives through research in early cancer detection and prevention: Molecular, genomic and societal factors (SALVAGE)” funded by Ministry of Education, Youth, and Sports, Czech Republic.

Work description

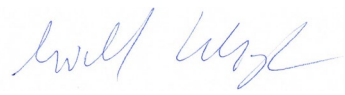
We are collecting large data sets containing individual layers from particular omics methods, such as lipidomics, glycomics, metabolomics, proteomics, and transcriptomics. The key part of this research is the integration of data using a multiomics approach with the purpose of deeper investigation of the dysregulation of lipids in patients with pancreatic cancer or other types of cancer. Then, the connections among individual omics layers should be visualized and metabolic pathways related to lipid metabolism should be thoroughly analyzed. These tasks require the appropriate bioinformatic skills and knowledge of the programming language(s) needed for such tasks. We anticipate the use of methods like Multi-Omics Factor Analysis (MOFA) or Data Integration Analysis for Biomarker discovery using Latent cOmponents (DIABLO).

Expectations
1/ Ph.D. or master degree in bioinformatics or biostatistics.
2/ Multiomics data integration – at least basic knowledge is advantageous.
3/ Programming skills, preferably in R or Python.
3/ Passion for science, ambition to achieve difficult goals, reliability, and teamwork.

Additional skills and experience
It would be advantageous to know, but it is not required.
4/ At least basic knowledge of biology and metabolic pathways is welcome.

Lipidomics research group
Our international group consists of around 15 young postdoctoral researchers and students. The work environment is friendly and open to anyone interested in cutting-edge research, high-end instrumentation, and ambitious goals. We are passionate scientists who also enjoy informal group activities. We focus on lipidomic analysis by mass spectrometry coupled with chromatographic techniques, and now also on metabolomic and glycomic analyses. Our key application is in lipid cancer biomarkers, where the translation of our patented methodology for the early detection of pancreatic cancer or other types of cancer is in progress within the activity of the spin-off company Lipidica. We are working on the investigation of the biological mechanism of lipidomic dysregulation in cancer.

What you should do
If you meet the requirements and feel enthusiastic about joining our group, then please write a motivation letter and send it by email along with your CV that contains a description of your skills and previous experience. The best candidates will be invited to the Zoom interview. The job call will remain open until the best candidates are selected.



Prof. Michal Holčapek, Ph.D.
University of Pardubice
Faculty of Chemical Technology, Department of Analytical Chemistry
Studentská 573, 53210 Pardubice, Czech Republic
Phone: +420 466 037 087
Email: Michal.Holcapek@upce.cz
http://holcapek.upce.cz/