PhD student position- Bioinformatics / Translational Medicine (f/m) -

"Using big data from the public domain for in-silico screening compounds with therapeutic potential in PD" (ESR 15)

The **Medical University of Vienna** is hosting a highly motivated PhD in collaboration with the digital drug development startup Delta4. The PhD Project will be part of **"IMPROVE-PD"** (**Identification and Management of Patients at Risk – Outcome and Vascular Events in Peritoneal Dialysis**), an EU H2020 Marie Skłodowska-Curie ITN, and will be jointly supervised by computational biology experts and translational researchers from the academic and private sector.

The IMPROVE-PD consortium connects leading academic and industrial researchers, for understanding the mechanisms of inflammation-driven cardiovascular disease in PD patients, developing individualized approaches to identify those at risk, and testing new therapies.

The goal of this project will be to apply the Delta4 in-silico platform for generating **novel candidates of additives or drugs** with the potential to counteract the inflammatory phenotype and lower CV risk in PD patients, integrating other relevant pathomechanisms forwarded from WP1 and WP2. The ESR will explore non-obvious mechanistic links in the **big data platform** utilizing information on protein coding genes and exploiting public domain data on multiple levels (text mining, omics data, protein interaction). In close collaboration with the ESRs in WP1 and WP2, ESR15 will generate entry points for precision medicine approaches and in-vivo testing of novel compounds.

The Candidate

We search for a highly motivated candidate, holding Master degree in bioinformatics/computational biology or equivalent, who has a solid understanding of cellular and molecular biology.

Required skills:
- Experience with extracting data from key biological databases (NCBI, Ensembl, UniProt, GEO, ArrayExpress, …)
- Knowledge of key biological ontologies/vocabularies (Medical Subject Headings, Gene Ontology, Anatomical Therapeutic Chemical Classification, …)
- Statistical analysis of large biological datasets (e.g. Omics data)
- Fluent in either R or Python for data wrangling, explorative analysis and data visualization
- Knowledge of basic graph theory

Add-on skills (nice-to-have):
- Experience with biological network modelling and visualization with e.g. Cytoscape or igraph
- Dashboard construction with e.g. RShiny or Dash
- Knowledge in text mining techniques
- Scientific writing skills

Candidates will be required to meet the Marie Skłodowska-Curie Early Stage Researcher eligibility criteria.

Send your application directly to cdl-msrpd@meduniwien.ac.at.

Deadline: September 13, 2020. Applications will be reviewed until the position is filled.