

## Post-doctoral position: Biomedical Informatics for Personalized Medicine and Pharmacogenetics (Medical University of Vienna)

For a new, 3-year research project funded by the Austrian Science Fund (FWF), a **full-time post-doctoral researcher position** at the Center for Medical Statistics, Informatics and Intelligent Systems at the Medical University of Vienna, Austria is offered.



### The Project:

A sizable fraction of patients undergoing drug treatment experiences adverse events or a lack of positive effects. A part of this variability in drug response can be explained by genetic differences between patients – the focus of a discipline called pharmacogenetics. The goal of this project is to investigate how information technologies, ontologies and automated reasoning systems can help establish pharmacogenetics in medical routine and realize the vision of personalized medicine. The project is organized around three driving research questions:

- How can **pharmacogenetic knowledge** about common medications be **represented in a standardized, OWL ontology-based format that enables automated processing, consistency checking and reasoning**? What insights can be gained when such a representation is created?
- How can individual pharmacogenetic patient data be **made available at the point-of-care**? Can **2D barcode technologies** be used for providing pharmacogenetic data to medical professionals?
- How can computational **clinical decision support** be structured and made available to help medical doctors and pharmacists interpret pharmacogenetic data at the point-of-care?

The project will be conducted in cooperation with international partners and the Health Care and Life Science Interest Group of the World Wide Web Consortium (W3C).

### The Position:

Candidates should fulfil **AT LEAST THREE** of the criteria listed below.

- Experience with semantic technologies (OWL, RDF, SPARQL), biomedical ontologies and automated reasoning
- Good biomedical and pharmacological background knowledge (ideally experience in working with genetic knowledge and data)
- Outstanding scientific track record (in relation to time spent working in academia; applicants with a strong background in industry are also welcome)
- Programming skills (at least moderate skills in Java programming)
- Experience with designing, deploying and evaluating clinical decision support systems or mobile health applications

Candidates need to have a doctoral / PhD degree or should expect to finish their doctoral studies very soon. Enthusiasm, self-motivation, creativity as well as a proactive stance on solving problems and developing new ideas are welcome. We seek candidates who are able to connect different scientific disciplines and who are enthusiastic about translating basic research into practical applications that directly benefit patients and medical professionals. Speaking German is not required, but fluency in English (written and spoken) is a must. Willingness to learn German is a plus for foreign applicants.

The minimum gross salary is 3410 Euros (14 times per year). The position is limited to three years, but may be prolonged depending on availability of funding.

### The Workplace:

The project will be carried out at the Section for Medical Expert and Knowledge-Based Systems, which is part of the Center for Medical Statistics, Informatics and Intelligent Systems at the Medical University of

Vienna. The Medical University of Vienna is associated with the Vienna General Hospital, one of the largest university clinics in the world, facilitating the scientific collaboration with a large number of co-located clinics and laboratories. The city of Vienna has the highest quality of life in the world according to Mercer's 2012 Quality of Living Index and offers a vibrant cultural scene.

**Applicants should submit:**

Please submit a single document describing your motivation, how you could fit into the project, other research ideas you have and are interested in (optional), a curriculum vitae, list of publications and contact details of at least two referees. Please send your application as an e-mail with the title "Job application" to the PI: **Dr. Matthias Samwald**, [matthias.samwald@meduniwien.ac.at](mailto:matthias.samwald@meduniwien.ac.at). If available, a link to your LinkedIn page is also helpful.

**Deadline for Applications:**

We accept applications until the position is filled, but no later than August 30, 2013. The position can be filled immediately, and interested applicants are urged to respond as soon as possible.

**Links:**

- Center for Medical Statistics, Informatics and Intelligent Systems: <http://cemsii.meduniwien.ac.at/en/>
- Medicine Safety Code project: <http://safety-code.org/>
- „Pharmacogenomics in the pocket of every patient? A prototype based on Quick Response (QR) codes“ (JAMIA): <http://dx.doi.org/10.1136/amiajnl-2012-001275>

