Career development position for Senior Postdoctoral Fellow in bioinformatics and applied systems biology

The Division of Nuclear Medicine at the Medical University of Vienna is recruiting a senior postdoctoral fellow for bioinformatics and applied systems biology. The successful applicant will develop an ambitious research program as a strategic commitment towards strengthening the scientific focus of the unit. This is a unique opportunity for an exemplary scientific mind to become integrated into a dynamically growing division in an exciting field of research.

We are seeking individuals who share our vision to exploit access to extensive data of high complexity from patients and pre-clinical models to make fundamental discoveries in inter-organ crosstalk. Our common goal will be to translate these discoveries into advanced models to incorporate complex imaging data into clinical decision making for precision medicine approaches.

The Research Unit

The Division of Nuclear Medicine is one of the largest in Europe and located in the Vienna General Hospital. Besides comprehensive clinical services in the field of PET and SPECT diagnostics as well as radionuclide treatment, nuclear medicine operates a preclinical imaging unit with small animal imaging and an experimental nuclear medicine track. The unit maintains a collaborative network with physicists, chemists, biologists and clinicians. We continuously generate large data sets from our imaging approaches, which need to be better incorporated into the physiological context as described by genomic, proteomic and biochemical analysis. Our research increasingly focuses on inter-organ crosstalk, systems networks building on our traditional core competencies: cancer, cardiovascular and metabolic disorders, inflammation/infection as well as drug discovery. The successful applicant will strengthen our expertise in the analysis of inter-organ crosstalk as revealed by time-resolved whole-body PET.

The advertisement is online here: https://radnuk.meduniwien.ac.at/en/home/science-research/pre-clinical-research/open-position-for-senior-postdoc/


Further information on career development and scientific careers at the Medical University Vienna:

https://www.meduniwien.ac.at/web/en/career/career-development-at-meduni-vienna/

Dynamic FDG-PET Imaging displays fast dispersion through the heart (red) and cardiovascular system with subsequent accumulation in the kidneys (turquoise) before excretion into the bladder (purple).
What we offer:

- Freedom to explore your own projects and research ideas to develop a distinct research portfolio within the scientific focus of the unit
- Personnel resources to be guided by you with the perspective to build your own research team
- Perspective to become a principle investigator within the unit to advance our profile in applied systems biology
- International unit of highly collaborative colleagues that support you in your ambitious scientific and career goals
- Top-notch environment with continuously developing resources, infrastructure and collaborations for ground-breaking research
- Stimulating interdisciplinary setting connecting biology with medicine, experiments with computation, and discovery with translation
- Unique opportunity to engage in close interactions with physicians and clinical researchers at the Medical University of Vienna on one of Europe’s largest medical campuses
- Integration into a thriving academic and social community in Vienna, a city with acknowledged high quality of life
- Position initially for six years with a postdoc salary (starting annual gross salary EUR 54,000), with the opportunity to enter the MUW internal career scheme (see “New Qualification Agreement” https://www.meduniwien.ac.at/web/fileadmin/content/serviceeinrichtungen/personalabteilung/personalentwicklung/Career_scheme_99_5.pdf equivalent to tenure track)
- Effective career development through dedicated mentoring
- Access to the MUW training program on research-related and transferable skills

What we are looking for:

- Exemplary scientific quality and proven originality of thinking, paired with a collaborative and interdisciplinary mindset
- Ambition to pursue innovative biomedical research with the perspective to substantially advance your scientific career within academia
- Motivation, skills, and initial achievements enabling you to build your own research portfolio around your growing team
- Excellent communication skills to support your developing collaborative network within the MUW, Vienna and internationally
- Readiness to support your expanding research focus with extra-mural funding from national and international sources (grant writing support available)

Eligibility requirements

- Completed PhD (natural sciences, computer sciences) and 3 years of post-doctoral research in the field of systems biology and bioinformatics
- International research experience
- At least two first-author publications or manuscript published on bioRxiv or arXiv.
- Strict adherence to the application requirements
Application requirements
Scientific excellence and early signs of independence are necessary for this strategic position. We seek a talented scientist of any nationality to conduct ambitious research projects of international visibility, interdisciplinary scope and translational character.

Applications are submitted by email to Stefan.gruenert@meduniwien.ac.at by December 15, 2020.
Interested applicants are welcome to contact Stefan Grünert by email for further details about shaping their research project to match the scientific focus of the unit.

- CV with details of education, scientific training and full publication list
- PDFs of transcripts and certificates
- Concise appraisal (1,000 char) of your contribution to the field of the anticipated research project based on two most relevant publications
- A scientific project proposal (25,000 char) matching the research focus outlined above (containing background, hypothesis, aims, objectives, work program, impact)
- A summary (3,000 char) of the proposed project written for the interested general public
- Contact details of two referees and their letters of recommendation
- Submit your application as separate pdf files entitled <applicant_name>_CV; <applicant_name>_transcripts; <applicant_name>_appraisal; <applicant_name>_proposal; <applicant_name>_summary; <applicant_name>_references;
**Selection procedure**

Applications will be checked formally for eligibility and the qualified applications will be reviewed by at least three members of the selection committee (Beyer, Hacker, Haug, Kenner, Mitterhauser). Applicants will be ranked in step 1 by

- Achievements including assessment of reference letters and manuscript(s) (50% of total score)
- Scientific proposal (50% of total score)

Applicants will be initially informed by email about their eligibility status by December 31, 2020 and the results of the evaluation will be distributed to all eligible applicants by February 28, 2021. Candidates who did not pass the Step 1 evaluation will be informed of their numerical score and the cut-off score. We regret to inform that there is no appeal procedure.

In Step 2 the top scoring applicants will be interviewed remotely by the selection committee

- 15 minutes presentation by the applicant about research proposal
- 10 minutes Q&A about presentation
- 15 minutes Q&A previous research
- 10 minutes Q&A career perspectives

The interview will be scored (1-10) by all panel members resulting in a ranking of the applicants. Within three weeks after the interview the successful applicant will be informed with organisational details of the potential appointment. The successful applicant is expected to provide a written statement to accept the offer in principle within 2 weeks of the initial notice and enter contract negotiations subsequently. All applicants will receive within 4 weeks of their interview a ranking of their interview by email.
Medical University of Vienna - Research institution of international acclaim

Excellent research work of outstanding quality makes us what we are today - one of the world’s leading medical universities. MedUni Vienna is a state-of-the-art research organisation with historic roots, of which we have been justifiably proud for over 600 years.

Largest and longest-standing medical research institution in Austria

MedUni Vienna is not only the largest medical organisation in Austria, it is also one of the most important top-level research institutions in Europe and provides Europe's largest hospital, the AKH in Vienna, with all of its medical staff. With its long history and tradition, which covers 640 years, MedUni has developed into a highly modern research institution that covers an area of 40,000 m². It employs a staff of 5,000, of which 1,800 are researchers and 1,600 are medical doctors. Each year 100,000 patients are treated as inpatients in 31 university clinics, 48,000 operations are conducted and 605,000 outpatients receive initial treatment in the day-clinics.

Mission Statement

In its structuring and alignment MedUni Vienna relies on the "triple track" strategy. Research, education and patient care represent the three cornerstones of the university's system. This enables medical science to respond flexibly to the continually changing demands of the state and society. In the process, maintenance of health as well as therapy, abatement of symptoms and prevention of diseases stand in the foreground. International competition in relation to medical research and the development of innovative solutions to issues relevant to society such as healthcare or age pyramids are among MedUni Vienna's core tasks. Also the disciplines of ethics, medical law, care related research, palliative medicine and health economics are of central importance.

Tasks and Objectives - Triple Track Strategy

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Excellent Qualification

MedUni Vienna is Austria's largest medical training centre. Under the guidance of 1,000 teachers, some 8,000 students are currently completing their studies in human medicine and dentistry. The attractive spectrum, which includes doctoral and PhD programmes, makes MedUni Vienna one of the most important centres for postgraduate training and the promotion of young researchers in the international vocational training market. Special university training courses such as tumour biology, care management, medical physics or toxicology round off the comprehensive teaching programme.
Division of Nuclear Medicine
The Division of Nuclear Medicine focuses on nuclear medicine treatments of thyroids, liver, prostate or neuroendocrine tumours using beta and alpha radiation emitters. In addition, the department has PET/CT and PET/MR scanners, which are used in combination with a wide range of radiopharmaceuticals for individual and customised diagnosis and therapy concepts. This is of crucial importance for the close cooperation with the Comprehensive Cancer Center (CCC) and the numerous university hospitals.

The division builds on a continuously expanding portfolio of clinically approved and investigational radiotracers for both PET and SPECT. All these tracers are at disposal for research at the PIL for new clinical applications and performing innovative mechanistic research in disease models. Through mechanistic research into pathomechanisms the division aims to become a national hub in applied systems medicine. The unifying theme is to understand communication patterns in the whole body leading to different types of diseases or modifying the expression of diseases. This ambitious goal relies on close interactions with the Quantitative Imaging and Medical Physics group, which supports the data integration and post processing. Access to mathematical modelling and quantification of tracer uptake is an additional asset for the holistic approach of whole body pathophysiological crosstalk.

Preclinical research is conducted in the Preclinical Imaging Lab (PIL, Directors: Marcus Hacker, Thomas Helbich) belonging to the Department of Biomedical Imaging and Image Guided Therapy and combines state-of-the-art infrastructure for translational in vitro, ex vivo and in vivo (small animal) imaging. Its declared aim is to further develop translational multimodal nuclear medicine and radiological imaging. The established main research areas of the Preclinical Imaging Laboratory are

- Oncology (angiogenesis, hypoxia, proliferation, apoptosis, metabolism, antigens, receptors)
- Cardiovascular disease (inflammatory atherosclerosis, heart failure, myocardial ischemia)
- Neurology (neuro-oncology, epilepsy, Alzheimer’s or Parkinson’s disease)
- Musculoskeletal (arthritis, pain and inflammation)

Within the Austrian innovation system, PIL has a unique position with regards of infrastructure, expertise and instrumentation. Intramural and extramural cooperation partners are already an essential part of this efficient infrastructure. We are closely cooperating with the AustrianBioimaging consortium and participate in the EU-funded COST action COMULIS that fuels collaborations in the field of correlated multimodal imaging (CMI).