

Hosting offer for Marie Skłodowska-Curie Postdoctoral Fellowships (PF) 2022 at University of Antwerp, Experimental Neurobiology Unit

[MSCA Postdoctoral Fellowships](#) are individual research grants offering excellent postdoctoral researchers the chance to develop their skills by means of international mobility. Through the implementation of an original and personalised research project, MSCA Postdoctoral Fellowships aim to foster excellence through training and mobility and to equip researchers with new skills and competences in order to identify solutions to current and future challenges.

The Experimental Neurobiology Unit (ENU), located at the University of Antwerp (Belgium), invites motivated postdoctoral researchers to jointly prepare an application for the [MSCA-PF-2022 call Marie Skłodowska-Curie Postdoctoral Fellowships](#) call ([MSCA-PF-2022](#)) with them as host organisation.

Description of Hosting organisation/group

Our research unit aims to unravel the **neurobiological mechanisms supporting complex behaviours** such as movement, cognition and emotion in both experimental models and human participants. A major focus in our unit is elucidating the cellular and circuit mechanisms that give rise to neurological disorders in order to provide early diagnosis, improve treatment options and ultimately to prevent these debilitating conditions. **By combining different areas of expertise within our different research teams, we are able to study the brain at various levels**, ranging from single cells to neural circuits to whole brains and behaviour using combinations of techniques including electrophysiology, neurochemistry, neuroimaging and computational modelling. The candidate will have direct access to state-of-the-art neurophysiological recording equipment for rodents and humans and recent Microelectrode Array systems (MEA's). On the same campus, MRI and PET imaging in humans and small animals can be performed. Combined, ENU's three PI's have a large international network and are open to collaborations with top neuroscientists from all over the world.

<http://www.uantwerpen.be/enu>

Topics/expertise

We encourage the potential candidate to contribute from their own specific expertise and are open to working on various topics related to neurodegenerative diseases (dementia/movement disorders) and/or epilepsy and/or neurodevelopmental disorders in rodents or humans. We are particularly interested in hearing from candidates looking for opportunities to perform **cross-species research with both rodents and humans** to develop and validate novel translational methods and to advance translational biomedical research.

Depending on the nature of the project, multiple of the following PI's can be involved:

Rose Bruffaerts (Computational Neurology): Expertise: Neuroimaging and neurophysiology in human participants (healthy and patient populations), computational modelling of representations of knowledge in the human brain, Artificial intelligence for diagnostic use in the Memory Clinic

Tommas Ellender (Neuronal Circuit Research): Expertise: Instrumentation (multi-neuron patch-clamp electrophysiology, interface electrophysiology, multi-electrode arrays, silicon probes) and data

processing software for in vitro and in vivo molecular, anatomical and neurophysiological investigations. A recent focus are the basal ganglia.

Debby Van Dam (Neurochemistry and Behavior): Expertise: Animal modelling of disorders with neurological symptomatology, Cognitive and behavioral alterations in Alzheimer's disease and related neurodegenerative disorders, Neurochemical and neuropathological correlates of behavioral alterations, In-depth phenotyping of rodent models via assessment of various levels of learning and memory, behavioral alterations (BPSD), motor performance, EEG-based sleep or epilepsy studies. Rodent surgery including stereotactic procedures (non)pharmacological interventions with symptomatic or disease-modifying procedures, Behavioral and biochemical biomarkers of Alzheimer's disease in Down syndrome.

Your profile

- We are looking for a postdoc candidate with a PhD in (bio)medical sciences, bioengineering, bioinformatics. Solid experience with either rodent research or research with human participants is requested, and combined experience is a plus. Strong programming skills in a major computing language (Matlab, R, Python, ...) are a plus. Experience with electrophysiology is a plus.
- The candidate needs to be a FELASA certificate holder at the time the project starts.
- Highly motivated candidate with an excellent research track record appropriate to career stage, as evidenced by peer-reviewed publications and other scientific output (grants etc).
- Candidate must be able to work autonomously but also be able to function as part of a diverse multidisciplinary research team. Fluency in spoken and written English is a must.
- You must have a completed PhD at the time of the call deadline (14 September 2022).
- Candidates must have a maximum of 8 years full-time research experience from the PhD award date until September 14, 2022. Periods of inactivity in research (e.g. unemployment, periods of employment outside research, parental or sick leave) do not count towards the time of research experience.
- For European fellowships, candidates can be of any nationality and must not have resided or carried out their main activity (work, studies, etc.) in Belgium for more than 12 months in the 36 months immediately before September 14, 2022.

What we offer

- Support and guidance for the preparation of your MSCA PF proposal
- An interdisciplinary environment for innovative research with high-quality infrastructure.
- Mentorship from the PI's w.r.t. research and/or career planning
- We particularly encourage applications from underrepresented groups in science.

How to apply?

Indicate your interest by contacting the host institution as follows:

Please contact Prof.Dr. Rose Bruffaerts (rose.bruffaerts@uantwerpen.be) by e-mail with a short CV and motivation to indicate your interest to prepare a MSCA-PF application.

After the supervisor agrees to support you as a MSCA-PF candidate, you can start preparation of MSCA PF project proposal and will be supported further by the supervisor and the Research Support Office of the host university.

For more information on the MSCA PF scheme or the host institution, you can contact the MSCA coordinator of the University of Antwerp: Dr. Liesbet Cockx (Research, Innovation & Valorisation Antwerp, Grants Office): Liesbet.cockx@uantwerpen.be