

Hosting offer for Marie Skłodowska-Curie Postdoctoral Fellowships (PF) 2022 in computational approaches for preclinical neuroimaging

[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 [Bio-Imaging Lab](#) (BIL) and the [Molecular Imaging Center Antwerp](#) (MICA) of the μ NEURO Research Centre of Excellence invites motivated postdoctoral researchers to jointly prepare an application for the [Marie Skłodowska-Curie Postdoctoral Fellowships](#) call ([MSCA-PF-2022](#)) with them as host organisation.

Description of Hosting organisation/group

The [Bio-Imaging Lab](#) (BIL) and the [Molecular Imaging Center Antwerp](#) (MICA) house a **large state-of-the-art preclinical infrastructure platform focused on neuroimaging**, consisting of 4 high-field MRI systems (9.4T, two 7T, and 4.7T) with dedicated RF coils, 2 microPET/CT systems, and 1 microSPECT/PET/CT. Our dynamic and multidisciplinary collaborative team focuses on early detection and understanding of the mechanisms underlying neurological conditions, including Huntington's and Alzheimer's disease, to identify novel candidate biomarkers to monitor disease progression, predict disease outcome, and evaluate the efficacy of innovative therapeutics.

BIL and MICA are part of the [\$\mu\$ NEURO Research Centre of Excellence](#), an interdisciplinary consortium that strives to conduct top-level translational neuroscience research on a cell-to-organism wide scale. Our consortium is a unique combination of experts in fundamental, preclinical and clinical research on neurological diseases and quantitative multimodal ((pre)clinical) imaging and analysis. The μ NEURO professors have a strong experience in research projects with both academic and private partners, including European-funded projects.

Topics/expertise

For this MSCA Postdoctoral Fellowships (MSCA PF) call, we are seeking postdoctoral candidates with strong interest in applying novel **computational approaches for the analysis of multimodal preclinical neuroimaging datasets**. This will include (but not limited to) static and dynamic resting state fMRI, PET imaging (synaptic density, receptor distribution, misfolded protein accumulation), structural MRI, DTI, and DKI.

The goal of this project is to advance our understanding of the underlying disease mechanisms, develop novel computational-based biomarkers, and evaluate the prognostic utility of such biomarkers. Finally, the candidate will analyse the predictive capacity of these biomarkers in the context of therapeutic intervention efficacy. Depending on the exact topic, the candidate will be matched with the expertise of one of the BIL/MICA professors (Profs. [Verhoye](#), [Bertoglio](#), [Staelens](#) or [Verhaeghe](#)).

Your profile

We are looking for a candidate with expertise in developing and employing computational approaches for the analysis of clinical or preclinical neuroimaging datasets. Candidates must have a **PhD degree** in (Biomedical) engineering, (medical) physics, biomedical sciences or a closely related discipline with excellent publication record and a strong interest in conducting research from an **interdisciplinary perspective**.

- Expected qualifications:
 - Strong interest in (pre)clinical neuroimaging
 - Excellent programming knowledge (e.g Python, MATLAB)
 - Strong team player with the ability to succeed in a dynamic international environment
 - Strong experience with neuroimaging data preprocessing and modelling analysis
 - Work independently at a multidisciplinary level, you are pragmatic, creative and deadline-resistant
 - Fluent in written and spoken English
- 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 this time.
- 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.
- Highly motivated candidate with an excellent research track record appropriate to career stage, as evidenced by academic publications and other scientific output.

What we offer

- A stimulating, interdisciplinary environment for high-level neuroscience research, with state-of-the-art imaging infrastructure.
- Support and guidance for the preparation of your MSCA PF proposal from your future supervisor and the μ NEURO research manager.
- An informative MSCA-PF starter package, a dedicated training session (June 2022), advice on institutional aspects and horizontal issues and administrative support.
- Advice and comprehensive support from the International Staff Office of the University of Antwerp for incoming international researchers.

How to apply?

You can submit your application via e-mail to Liesbeth.vanherp@uantwerpen.be with subject line “ μ NEURO MSCA PF – preclinical neuroimaging”. Your application must include your academic CV, (including a complete list of your publications) and short motivation letter.

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 about the hosting offer, you can contact Liesbeth Vanherp (μ NEURO Research Manager, Liesbeth.Vanherp@uantwerpen.be) or Daniele Bertoglio (daniele.bertoglio@uantwerpen.be). 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.