

## PhD position (Doctoral Candidate 3) in ‘Frontier Research Competences for Neuro-modulation and Oscillations in Pain

Apply for EU funded support to undertake cutting edge research within a high-level European Training Network consortium of seven research intensive institutions and universities. You will benefit from a team approach, integrated international mobility, high level subject and transferable skills development oriented to your future employment in research and the wider economy. Frontier Research Competences for Neuro-modulation and Oscillations in Pain (FRESCO4NoPain) is an EU-funded Doctoral Network (DN) under the Marie Skłodowska-Curie Actions (MSCA) - (Grant number 101167856 - HORIZON-MSCA-2023-DN-01). More information about the project can be found on [www.fresco4nopain.com](http://www.fresco4nopain.com). FRESCO4NoPain offers 17 Doctoral Candidates positions to begin on 1<sup>st</sup> of September 2025 or soon before and a list of all available position can be found on the website. Please consult the ‘[Guide for Applicants](#)’ document for further details.

This specific PhD/DC position is for Individual research Project (IRP) 3: ‘*Exploiting cortical circuitry for pain relief using neurostimulation and elucidating underlying mechanisms*’. Doctoral Candidate 3 will employ non-invasive neuromodulation (tDCS/tACS) during local brain oscillatory activity in specific structures at specific time points of pain development and investigate whether these paradigms will alleviate pain-related behaviours in animal models of pain. Neuronal circuitry will be interrogated in acute and chronic pain in mice using whole-brain activity mapping and *in vivo* electrophysiology. The most promising circuits will be tested for functional relevance using optogenetic and chemogenetic techniques and viral tracing. Insights gained will be fed back into designing neurostimulation paradigms for optimal translation.

**Supervisory team:** Main supervisor Professor Rohini Kuner, Heidelberg University Hospital, Germany. Co-supervisor: Professor André Mouraux, UCLouvain - University of Louvain, Belgium. Mentor: Professor Sam Kynman, European Pain Federation EFIC®, Belgium.

**Workplace:** Main workplace will be the Department of Molecular Pharmacology, Heidelberg University Hospital, Germany. Two secondments are planned for UCLouvain - University of Louvain, Belgium and European Pain Federation EFIC®, Belgium.



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### Candidate eligibility

The DC position is open for highly motivated candidates with a master's degree. Applicants should not be in possession of a doctoral degree at the time of the call deadline. Furthermore, applicants must not have resided or carried out your main activity (e.g. work, studies) in the country where you have been recruited, for more than 12 months in the 3 years immediately before the recruitment date. Applicants must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.

### Application deadline

7<sup>th</sup> of April 2025.

### How to apply

The application is only to be submitted online by sending it to [fresco4nopain@pharma.uni-heidelberg.de](mailto:fresco4nopain@pharma.uni-heidelberg.de).

Please be aware, that your application must include the following:

- Motivation letter (max. 2 pages) including the following:
  - Brief presentation of the DC
  - The main reasons for choice of DC project
  - General knowledge on the research topic
  - Main research and training goals
  - Future plans
  - Complimentary skills
- Curriculum Vitae:
  - A CV (e.g. using the EU model) which states your educational background, experience, techniques, language skills and other skills or experiences relevant for this position. In accordance with mobility rules, it is crucial to provide detailed information about your employment and academic history, including residence details for at least the past three years.
- Certificate of academic degree:
  - A copy of the original master's degree with full transcripts. In case the master's degree has not been obtained at the call closing date applicants must upload their BSc degree/diploma in English and upload the transcript of the exams sustained so far during their master course, with a clear indication of the conclusion of the studies.
- Recommendation letter:
  - Attesting to the academic standing and potential of the applicant. Must be from an academic supervisor or collaborator, line manager, and/or



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company CEO. Must contain referees' contact details (will only be contacted upon prior agreement) and name of applicant.

### Selection process

The Selection Committee will oversee and manage the entire selection process to ensure fairness, transparency, and compliance with the established criteria and MSCA guidelines. This committee is responsible for reviewing applications, shortlisting candidates, and conducting interviews. The Selection Committee will consist of the supervisory team.

By 5<sup>th</sup> of May 2025, the candidates will be shortlisted based on their applications. The evaluation criteria for shortlisting applications can be found in the '[Guide for Applicants](#)'. Shortlisted candidates will be invited for an online interview which will take place in the period 5<sup>th</sup> of May to 2<sup>nd</sup> of June 2025. Please refer to the '[Guide for Applicants](#)' for details on the process and evaluation criteria for the interview.

### About the workplace

Heidelberg University Hospital (UKHD) with its 43 specialized clinical departments and its 13 medical institutes is one of the leading medical centers in Europe <https://www.heidelberg-university-hospital.com>. Every year, hundreds of thousands of patients from all over Germany and many other countries come here to make use of our modern treatment facilities. The highest standards of medical care are guaranteed by our world-renowned professors, distinguished physicians and committed nursing staff. Heidelberg University Hospital is constantly developing new methods of diagnosis and treatment at the forefront of biomedical science for the benefit of all patients. All levels of neurosciences ranging from molecular and cell biology, genetics and genomics, networks & systems neuroscience, functional anatomy, pathophysiology, psychology and clinical science are pursued at UKHD with pain being a key topic and prominently represented at the Medical Faculty of the University including the CRC 1158 'Collaborative Research Centre 1158: From nociception to chronic pain', comprising over 40 independent research units.

The pharmacology department is fully equipped with molecular, behavioural, surgical, electrophysiological and imaging technologies to conduct the project. The UKHD provides several Core facilities including the Central animal facility (IBF) for breeding and maintaining transgenic mice, the Interdisciplinary Neurobehavioral Core unit (INBC) for detailed behavioural analysis, in vivo electrophysiology, surgeries and optogenetic measurements and the Nikon imaging centre (NIC) harbouring several challenging microscopes and guided assistance. We welcome applications from highly qualified students of all nationalities joining a vibrant, inspiring, and productive cross-



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disciplinary research community including staff with internationally recognized track records.

### Terms of employment and salary

Appointment and salary as a PhD Fellow are in accordance with the MSCA and UKHD regulations for DCs, the applicable laws and the provisions of the 'Collective Agreement for the Public Service of the Federal States - Science' (TV-L) in its current version as well as with the FRESCO4NoPain Grant agreement for Horizon Europe, based on the European Commission's General Model Grant Agreement and its Annexes, and made on 1 February 2025.

The successful candidate will be enrolled as a PhD student at the graduate program of the UKHD and will receive access to shared office space and access to laboratory facilities. The Department of Molecular Pharmacology also provides administrative assistance to relocate to Heidelberg. Please find more information about working and living in Heidelberg at the following websites:

[https://www.graduateacademy.uni-heidelberg.de/international/index\\_en.html](https://www.graduateacademy.uni-heidelberg.de/international/index_en.html)

<https://www.medizinische-fakultaet-hd.uni-heidelberg.de/studium-lehre/studiendekanat/mediss-promotionsprogramm>

<https://www.uni-heidelberg.de/en/research/international-research/working-researching-in-heidelberg/visas-and-entrance-formalities/researchers-directive-forscherrichtlinie>

### Contact

Director, Institute of Pharmacology, Medical Faculty Heidelberg, Professor Rohini Kuner:  
[fresco4nopain@pharma.uni-heidelberg.de](mailto:fresco4nopain@pharma.uni-heidelberg.de)



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