



Conducting research for a changing society: This is what drives us at Forschungszentrum Jülich. As a member of the Helmholtz Association, we aim to tackle the grand societal challenges of our time and conduct research into the possibilities of a digitized society, a climate-friendly energy system, and a resource-efficient economy. Work together with around 7,500 employees in one of Europe's biggest research centres and help us to shape change!

The scientific focus of the Institute of Neuroscience and Medicine (INM-1) is on the organization of the human brain at its various spatial and temporal scales. To enable the multimodal analyses necessary to shed light on its organizational principles, scientists at the INM-1 are developing a 3D model of the human brain with highest spatial resolution that integrates cytoarchitecture, connectivity, molecular organization, and genetic and functional measurements. Within the INM-1, members of the research group “Receptors”, headed by Prof. Palomero-Gallagher, have a particular focus on the comparative analysis of the relationship between receptor architectonic and functional segregation patterns in the brain.

**We are looking to recruit a**

## **Postdoc – Multimodal image registration**

### **Your Job:**

- Combine multimodal brain imaging with advanced image-processing, data science, and AI techniques to perform image alignment, segmentation, and classification to construct and validate unique three-dimensional maps of neurotransmitter receptor distributions in the human, non-human primate and rodent brain
- Develop efficient processing pipelines enabling the spatial integration of functional datasets (e.g. functional magnetic resonance imaging data or electrophysiological recordings) with the neurotransmitter receptor maps
- Work closely with an interdisciplinary team of neuroscientists, computer scientists and physicists to combine our extensive expertise in neuroscience, imaging and AI into viable solutions
- Publish your results in high-quality scientific articles
- National and international travel to present at scientific conferences and strengthen inter-lab cooperations

### **Your Profile:**

- University degree (Master) in computer science, physics or a comparable scientific

We look forward to receiving your application until 14.05.2025 via our

**Online-Recruitment-System!**

**Questions about the vacancy?**

Get in touch with us by using **our contact form.**

Please note that for technical reasons we cannot accept applications via email.

[www.fz-juelich.de](http://www.fz-juelich.de)

field

- PhD in one of the above fields
- Solid methodological background in image processing and AI
- Strong publication record in relevant fields
- Hands-on programming experience in Python for data science, image processing, and using brain imaging data (volumetric and surface-based)
- Neuroscientific knowledge is welcome but not necessary
- Ability to work independently and self-driven in a team
- Enjoy working in a productive multidisciplinary, international team
- Good communication skills and high-quality writing in English

#### **Our Offer:**

We work on the very latest issues that impact our society and are offering you the chance to actively help in shaping the change! We support you in your work with:

- Exciting working environment on an attractive research campus with excellent infrastructure, located between the cities of Cologne, Düsseldorf, and Aachen
- Comprehensive training courses and individual opportunities for personal and professional further development
- Extensive company health management and a variety of sports activities (e.g. beach volleyball court, running groups, yoga classes, and much more)
- Ideal conditions for balancing work and private life, as well as a family-friendly corporate policy supported by our Equal Opportunities Bureau
- Flexible work (location) arrangements, e.g. remote work
- Targeted services for international employees, e.g. through our International Advisory Service
- 30 days of annual leave and provision for days off between public holidays and weekends (e.g. between Christmas and New Year)
- Capital-forming benefits and an employee pension scheme

In addition to exciting tasks and a collaborative working atmosphere at Jülich, we have a lot more to offer: <https://go.fzj.de/benefits>

You will be initially employed for a fixed term of 2 years but with the prospect of longer-term employment. Salary and social security benefits will conform to the provisions of the Collective Agreement for the Public Service (TVöD-Bund), pay group 13, depending on your current qualifications and the precise nature of the tasks assigned to you. All information about the Collective Agreement for the Public Service (TVöD-Bund) can be found on the BMI website: <https://go.fzj.de/bmi.tvloed>. The monthly salaries in euros can be found on page 66 of the PDF download.

We particularly welcome applications from people from a diverse range of backgrounds (e.g. regardless of age, gender, disabilities, sexual orientation/identity, as well as social, ethnic, and religious background). We strive to offer a diverse and inclusive working environment in which people enjoy equal opportunities and are able to fulfill their potential.

Further information on diversity and equal opportunities: <https://go.fzj.de/equality>