**Jobbnorge ID:** 279667
**Deadline:** 5/14/2025
**Website:** http://www.ntnu.no
**Scope:** Fulltime
**Duration:** Temporary

The Kavli Institute for Systems Neuroscience is recruiting a

# PhD Candidate in Neuroscience

## This is NTNU

NTNU is a broad-based university with a technical-scientific profile and a focus in professional education. The university is located in three cities with headquarters in Trondheim.

At NTNU, 9,000 employees and 43,000 students work to create knowledge for a better world.

You will find more information about working at NTNU and the application process here.

Video: https://youtu.be/Xt-yHCN5QS0

## About the position

We are looking for a motivated PhD Candidate for our project entitled, Plastbrain: Impact of plastic chemicals on brain health (https://biotox.de/?page_id=1272 )

Are you motivated to take a step towards a doctorate and open up exciting career opportunities? As a PhD Candidate with us, you will work to achieve your doctorate, and at the same time gain valuable experience that qualifies you for a further career in higher education and research, in and outside academia.

Your immediate leader will be the Head of Department.

## About the project

This is a collaborative project between an enviorenmental plastics team (at NTNU Biology) and a neuroscience team (NTNU, Kavli Institute for Systems Neuroscience). The successful candidate will be a part of the Yaksi lab (www.yaksilab.com) at the Kavli Institute, under the mentorship of Dr. Emre Yaksi (https://www.ntnu.edu/employees/emre.yaksi).

In brief, the successful candidate will identify the locations and types of cells in vertebrate brains (zebrafish, rodent, human) that express GPCRs interacting with plastics pollutants. This will be achieved using a combination of bioinformatics and evolutionary comparison software tools, making experience in bioinformatics, programming, and evolutionary comparison essential for this part of the project. Next, the candidate will verify the expression of these receptors through a combination of histology, RNA staining, immunohistochemistry, tissue clearing, and confocal microscopy. Following this, the candidate will assess the impact of plastic pollutants, as well as relevant GPCR agonists and antagonists, on these specific brain regions and cell types. This will involve studying the effects of acute and chronic exposure on brain activity and development using two-photon calcium imaging, confocal microscopy, and relevant image processing and data-analytical tools. Therefore, this project requires a truly multidisciplinary approach, where the candidate will utilize both experimental and computational methods to uncover the impact of plastic chemicals on brain activity and health.

## Duties of the position

- Complete the doctoral education until obtaining a doctorate
- Carry out research of good quality within the framework described above
- Academic publications and popular science dissemination
- Participate in the research group: the Yaksi lab (www.yaksilab.com) at the Kavli Institute
- Participate in international activities such as conferences and/or research stays at foreign educational institutions
- Teaching (contribute to undergraduate teaching)
- Other career-promoting work (seminars, journal clubs)

Be prepared for changes to your work duties after employment.

## Required selection criteria

1. You must have an academically relevant background within Neuroscience.
2. You must have a Master's degree in neuroscience, biomedical sciences or equivalent. Your course of study must correspond to a five-year Norwegian course, where 120 credits have been obtained at master's level. Master's students can apply, but the master's degree must be obtained and documented before starting the position.
3. You must have a strong academic background from your previous studies and have an average grade from your Master's degree study, or equivalent education, which is equal to B or better compared to NTNU's grading scale. If you do not have letter grades from previous studies, you must have an equally good academic foundation.
4. You must meet the requirements for admission to the faculty's Doctoral Programme.
5. You must be ready to start your position latest by Sept 1, 2025.
6. You must have experience working with zebrafish model.
7. You must have passed the exam and obtained necessary certification from Course in Animal Research in Norway, Laboratory animals, theoretical, Function A,B, and D (https://www4.uib.no/en/studies/courses/carein). This certification must allow you to work with zebrafish animal model in Norway.
8. You must have experience with confocal microscopy and light microscopy.
9. You must have experience with histology, tissue clearance and fluorescence RNA staining (e.g. HCR and others).
10. You must have experience with two-photon calcium imaging and associated data analysis.
11. You must have experience in bioinformatics and evolutionary comparison (across zebrafish and mammals), and strong data analysis/programming skills to analyze such data.
12. Good written and oral skills in English.

The appointment is to be made in accordance with Regulations for the Universities and Colleges Act (university and colleges regulations) and Regulations for the degrees philosophiae doctor (ph.d.) and philosophiae doctor (ph.d.) in artistic development work at the Norwegian University of Science and Technology (NTNU) for general criteria for the position.

## Preferred selection criteria

13. Excellent oral presentation skills.

14. Experience in preparing figures using adobe illustrators or similar graphic design programs.

## Personal characteristics

To complete a doctoral degree (PhD), it is important that you are able to:

- Work independently
- Work in a structured way, set goals and make plans to achieve them
- Present and discuss your research with other professionals
- Get involved and contribute constructively with feedback
- Work constructively under pressure or in the face of adversity
- Show curiosity and a strong motivation for the subject
- Analyze data, assess different perspectives and draw well-founded conclusions
- Be flexible and open to adjusting the plan for the project as needed

Emphasis will be placed on personal qualities.

## We offer

- An exciting job with an important mission in society
- Developing tasks in a strong and international professional environment
- Career guidance and follow-up during the PhD period
- Open and inclusive working environment with committed colleagues
- Working capital that can be used to implement the project
- Mentor programme as a new employee at NTNU
- As a public employee, you have favourable benefits as a member of the Norwegian Public Service Pension Fund (SPK)

You will be employed as a PhD Candidate at NTNU and will have access to employee benefits and discounts.

## Diversity

Diversity is a strength, and at NTNU we aim to be an employer that reflects the diversity in society and that makes use of the potential of the population's collective skills. Our vision is Knowledge for a better world and our values are creative, critical, constructive and respectful. We believe that an organization that is equal, diverse and gender-balanced is essential for us to achieve our goals.

We strive to attract employees with different skills, life experiences and perspectives to contribute to even better problem solving of our societal mission in research and education.

If you think this position is relevant and interesting, we encourage you to apply, regardless of gender, functional ability and cultural background, or whether you have been out of work for a period of time.

At NTNU we want to increase the proportion of women in scientific positions. We have a number of measures to promote equality.

## Salary and conditions

In the position of PhD Candidate, code 1017, your gross salary will normally be NOK 536 200,- per annum depending on qualifications and seniority. A 2% statutory contribution to the State Pension Fund is deducted from the salary.

The employment period is 3 years for the doctoral work in addition to 4 months of career promotion work. (A minimum of three work years of the total term period must be dedicated to doctoral work.)

For employment as a PhD Candidate, it is a prerequisite that you gain admission to the PhD programme in medicine within three months of your employment contract start date, and that you participate in an organized doctoral programme throughout the period of employment.

As an employee at NTNU, it is important that you keep yourself up to date with academic and organizational changes and adapt to them.

For the necessary academic and social interaction, it is a prerequisite that you are physically present and available to the institution on a daily basis.

The appointment is carried out in accordance withthe principles of the State Employees Act, and Export control (legislation that regulates the export of knowledge, technologyand services). Candidates who, after assessment of the application and attachments, are considered to be in conflict with the criteria in the latter act, will not be able to be employed.

The position is conditional on external funding.

## About the application

The attachments (including a description of your scientific work) must accompany the application as these documents form the basis of the application assessment. The documents must be in Norwegian/a Scandinavian language or English.

**Please note:** the application will only be assessed on the basis of the information we have received by the application deadline. Therefore, make sure that your application clearly shows how your skills and experience meet the criteria described above. The application and all attachments must be sent electronically via Jobbnorge.no. If you are invited to an interview, you must bring certified copies of certificates and diplomas upon request.

The application must include:

1. Transcripts and diplomas for Bachelor's and Master's degrees
2. Certification proving the sucessfull completion of Course in Animal Research in Norway, Laboratory animals, theoretical, Function A, B and D (https://www4.uib.no/en/studies/courses/carein), which will allow you to work with zebafish model in Norway
3. CV and publications list (**maximum 2 page**)
4. Letter of motivation explaining how your past experience fullfill selection criteria #6-14 (see above specific criteria). After a short introduction of your motivation, please list each selection criteria from 6 to 14 and explain one by one, how your past experience fullfill these criteria and can this contribute to PlastBrain project (**maximum 2 page**)
5. If available copy of publications and preprints
6. Copy of Master's thesis. If you have recently submitted your Master's thesis, you can attach a draft of the thesis. Documentation of a completed Master's degree must be presented before taking up the position.
7. Names and contact information of two relevant referees

If all, or parts, of your education has been taken abroad, we also ask you to attach documentation of the scope and quality of your entire education, both Bachelor's and Master's education, in addition to other higher education. If your institution uses “diploma supplement” (normal for most European institutions), you must attach this. A description of the documentation required can also be found here. If you already have a statement from Norwegian Directorate for Higher Education and Skills (HK-dir), please attach this as well.

Joint works will be considered. If it is difficult to identify your contribution to joint work, you must attach a brief description of your participation.

When assessing the best qualified, we emphasize necessary qualifications such as education, experience and personal suitability. Motivation for the position, ambitions and potential for research will also count when assessing the candidates.

NTNU recognizes a wide range of academic contributions and has committed itself to The San Francisco Declaration on Research Assessment and CoARA (responsible assessment of research and recognition of a greater breadth of academic contributions in accordance with NTNU's social mission).

## General information

A public list of applicants with name, age, job title and municipality of residence is prepared after the application deadline. If you wish to be exempt from entry on the public applicant list, this must be justified. Assessment will be made in accordance with current legislation. You will be notified if the exemption is not granted.

f you think this position looks interesting and in line with your qualifications, you are welcome to apply.

If you have any questions about the position, please contact Professor Emre Yaksi, emre.yaksi@ntnu.no.

If you have any questions about the recruitment process, please contact HR Advisor Sissel Sollien, sissel.sollien@ntnu.no

**Application deadline: 14.05.2025**

For practical information about working at NTNU, please visit this webpage.

**The city of Trondheim** is a modern European city with a rich cultural scene. Trondheim is the tech capital of Norway with a population of 200,000. The Norwegian welfare state, including healthcare, schools, kindergartens and overall equality, is probably the best of its kind in the world. Professional subsidized day-care for children is easily available. Furthermore, Trondheim offers great opportunities for education (including international schools) and possibilities to enjoy nature, culture and family life and has low crime rates and clean air quality.

## NTNU - knowledge for a better world

**NTNU - knowledge for a better world**
The Norwegian University of Science and Technology (NTNU) creates knowledge for a better world and solutions that can change everyday life.

The Kavli Institute for Systems Neuroscience is part of the Faculty of Medicine and Health Sciences at NTNU. It was established as a Centre of Excellence in 2002, and designated as a Kavli Foundation Institute in 2007 (www.kavlifoundation.org). The scientific goal of the Institute is to increase the understanding of neural circuits and systems along with their role in generating psychological functions.Today, the Institute consists of the Centre for Neuronal Computation (CNC) as well as the Egil and Pauline Braathen and Fred Kavli Centre for Cortical Microcircuits. In 2014, the Nobel Prize in Physiology or Medicine was awarded to two of the Institute's professors, Edvard Moser and May-Britt Moser. The Institute is responsible for an international master's programme and is affiliated with a doctoral programme in medicine. Through our widespread network of international collaboration, we offer unique career opportunities. For further information, see: www.ntnu.edu/kavli.

## Additional information

### Place of service:
Øya 7030 Trondheim (Trondheim Municipality)