Job description

In the brain, neurons communicate across highly specialized synaptic contacts. At synaptic sites, electric impulses trigger the release of neurotransmitter from the presynaptic terminal that activate the neurotransmitter receptors retained in the postsynaptic membrane. The molecular organization of the postsynaptic membrane is highly dynamic, and the adaptation of synaptic structure to changes in activity patterns allows neuronal networks to process new information. In particular, the dynamic regulation of receptor trafficking at synapses is broadly held to mediate the long-term changes in synaptic strength that underlie learning and memory. Insight in the molecular mechanisms that govern these processes is key for a fundamental understanding of brain function, and the etiology of diseases such as autism spectrum disorders and schizophrenia.

This project, “Balancing excitability: spatiotemporal control of receptor trafficking at the neuronal synapse”, funded by NWO-ALW, aims to identify the molecular mechanisms that control the spatially and temporally restricted recycling of glutamate receptors at excitatory synapses. In this project, you will use live-cell fluorescence imaging techniques to track the dynamics of receptor trafficking in hippocampal cultures. In addition, you will develop novel molecular and pharmacological tools to manipulate the expression or function of candidate regulators of synaptic receptor trafficking. The research will be carried out in the group of Dr. MacGillavry embedded in the Division Cell Biology, Department of Biology, Faculty of Science at Utrecht University.

Requirements

We are looking for a motivated candidate with a strong background in, or affinity with molecular neuroscience. Candidates should have an MSc in Biology, Biomedical Sciences, Biophysics, Neuroscience or a related field in Life Sciences. Preferably, the candidate has prior experience with molecular biology and/or live-cell imaging. The candidate should be fluent in English (written and spoken), and have good communication skills.

Conditions of employment

We offer a temporary position 1.0 FTE for four years. The gross salary - depending on previous qualifications and experience - ranges between €2,191 and €2,801 (scale P/0 according to the Collective Labour Agreement Dutch Universities). Salaries are supplemented with a holiday bonus of 8 % and a year-end bonus of 8.3 % per year. We offer a pension scheme, a partially paid parental leave, collective insurance schemes and flexible employment conditions (multiple choice model). For further information: working at Utrecht University.

Employer

A better future for everyone. This ambition motivates our scientists in executing their leading research and inspiring teaching. At Utrecht University, the various disciplines collaborate intensively towards major societal themes. Our focus is on Dynamics of Youth, Institutions for Open Societies, Life Sciences and Sustainability.

The city of Utrecht is one of the oldest cities in the Netherlands, with a charming old center and an internationally oriented culture that is strongly influenced by its century-old university. Utrecht city has been consistently ranked as one of the most livable cities in the Netherlands.

The Faculty of Science consists of six departments: Biology, Pharmaceutical Sciences, Information and Computing Sciences, Physics and Astronomy, Chemistry and Mathematics. The Faculty is home to 5,600 students and nearly 1,500 staff and is internationally renowned for the quality of its research. The Faculty's academic programmes reflect developments in today's society.

The division of Cell Biology of the Biology Department at the Faculty of Science of Utrecht University aims to gain insight into basic cellular processes and in this way to provide mechanistic basis for devising therapies for cancer, metabolic and neurological diseases. Research topics within the division include: mechanisms underlying cytoskeletal dynamics, membrane transport and signaling pathways that underlie cell proliferation and differentiation, neuronal development and synaptic plasticity. We investigate cellular processes at a broad range of levels, from single molecules and protein networks to cells, tissues, and whole organisms.

Additional information

Additional information about the vacancy can be obtained from: Dr. Harold MacGillavry, h.d.macgillavry@uu.nl.

Application deadline is 06/03/2017

To apply, click here, and attach a letter of motivation, curriculum vitae and (email) addresses of two referees.

Met opmerkingen [MG1]: Link naar: http://ssl1.peoplexs.com/Peoplexs22/CandidatesPortalNoLogin/ApplicationForm.cfm?&PortalID=4362&VacatureID=884412