What? Internship position available for project "Exploring the effects of noradrenaline on memory accuracy and strength using FosTRAP2 mice with iDISCO+ technique"

Emotionally stimulating experiences can form strong memories however, the accuracy of those memories are questionable. The project's question comes from an everyday occurrence such as; Did I park my bike in location X or location Y, when I am rushing to get to my important exam? And goes deep in to the neuronal/molecular level to see, the neuronal signature of the formed memory in an arousing situation and memory recall. There are few studies done to explore the accuracy component of the memory and in this project, we would like to investigate the different aspects of strength and accuracy for item-context memory. In this internship, you will assist to investigate mechanistic underpinnings of the enhancing effects of noradrenergic activation on memory accuracy. We will explore the effects with stress hormone manipulation (noradrenergic) and use both behavioral and neural display of memory accuracy in a specific behavioral task. The novel part is this project, the use specific mice line that allows us to investigate neural activity during the formation of this memory and the iDISCO+ technique. iDISCO+ is a ground breaking whole brain immunohistochemistry technique which allows us to look at the brain wide immunolabeling in a 3d environment and perform non-biased whole brain analysis. In this internship, you will be practicing; animal behavior, IDISCO+ procedure as well as advanced data analysis.

Main tasks: - Animal behavioral work (optional, plus possibility to obtain article 9 laboratory animal science certificate)
*   - Molecular work: immunohistochemistry, iDISCO image acquisition (light-sheet microscopy), image processing*
Experience with these techniques is not necessary.

Where? CNS department of Radboudumc , TNU department of CDL, Behavioral Neuroscience

When? From Sept 2021 or October 2021 onwards 6 months or more

If you would like to receive more information, please contact: sevgi.bahtiyar@radboudumc.nl