

Job opportunity for Student assistant with engineering skills in Neuroscience lab (Kvitsiani Group, DANDRITE)

We seek a student assistant who can assist us to build an experimental setup to study the neural circuits of animal behavior. We are looking for a student assistant with a background in engineering, physics or similar.

The position is on Fixed-term for 12 months with on average 12 working hours a week with possibility for more working hours during study vacation periods. Starting date: As soon as possible.

Who we want:

The ideal candidate has experience in MATLAB and Arduino programming, PCB design, 3D printing and broad engineering skills (preferably proven by successful previous projects) and a strong sense of creativity. You should be able to work independently and have good communication skills in an interdisciplinary working environment. Our group is very international, so good English skills are essential.

What you should do for us:

You will be developing a setup to deliver nanoliter amounts of sugar solution to fruit flies (bananfluer). The setup will produce a single droplet to be collected by the fly and then remain idle until it is triggered again.

The setup is required to work fully automated, guided by a camera monitoring the flies' motion. MATLAB codes for the tracking system are already available and can be used and extended. We also have to be able to measure the exact amount of liquid delivered to the animal. In the future we wish to scale this experimental setup to simultaneously deliver droplets to 10-100 flies, so the design needs to be suitable for that.

At the end of the project, we expect to have one fully functioning prototype.

Scientific background of the project:

We want to study the strategies fruit flies employ to find a food source in a foraging experiment. Currently our system works with an optogenetic reward delivery, which we wish to expand to more 'natural' rewards. Therefore we are developing a setup to deliver nanoliter amounts of sugar solution to fruit flies as individual rewards.

Any interested student should contact PhD student Sophie Seidenbecher (seidenbecher@dandrite.au.dk) or Group leader Duda Kvitsiani (kvitsi@dandrite.au.dk) for more information regarding the project and the position.