PhD student position in "neuronal circuit organization in piranhas"

Our laboratory is interested in how evolution shapes neuronal circuits to generate adaptive behavior. We take advantage of a variety of animal models to investigate how such changes shape neuronal circuits from single cells to the network level. We are currently looking for a highly motivated student with a strong interest in the function and evolution of neural circuits. The goal of the PhD project is to investigate the range of adaptations that enable similar neuronal circuits to generate different behaviors in piranhas: While some neurons in the piranha spinal cord generate low frequency alternating muscle contraction sequences for locomotion, others generate high frequency discharge patterns for acoustic social communication. The presence of two functionally different spinal systems located in the same spinal segments in one species, provides a unique opportunity to investigate the neuronal modifications that enable diverging motor systems to generate different behaviors, without having to consider species-specific adaptations. The successful candidate will take advantage of a variety of methods including different intracellular (in vivo and slice patch clamp) and extracellular recording techniques, calcium imaging, immunohistochemistry and tract tracing to investigate the differences/adaptations underlying those widely different behaviors.

The deadline for application is the 3rd of February, but applications will be considered until the position is filled.

For information on the job advertisement (https://jobs.uni-graz.at/en/MB/20/99/6570), please contact Boris Chagnaud (https://biologie.uni-graz.at/de/ag-boris-chagnaud/).