A new mouse model for vascular dementia to understand memory formation and degeneration on a cellular resolution level

We are looking for a motivated master student to support us in our project where we study the formation and degeneration of specific memory functions in a mouse model using in-vivo two-photon imaging with sophisticated behavior.

What do we offer?

The possibility to work in an international team; state-of-the-art methods (2photon calcium imaging in the active, behaving animal, optogenetics, chemogenetics, micro-surguries and electrophysiology) and modern lab infrastructure.

Aim of the project?

While our memory determines our thinking and decisions, the deterioration of memory indicates our loss of self-concept and self-determination. Almost 20% of stroke survivors develop symptoms of cognitive decline. Neither suited animal models nor specific treatment options exist for patients suffering from this form of dementia. The project proposed here aims at developing a mouse model, where cognitive decline can be examined over time on a cellular resolution level in brain regions substantially involved in memory formation. By understanding causal relationships between neuronal rewiring and recovery of distinct cognitive features this model opens up new possibilities for targeted novel therapeutic approaches or optimized cognitive rehabilitation strategies for patients suffering from vascular dementia as a long-term consequence of an ischemic insult.

What do you bring in?

A very good Bachelor degree in physics, biology or bioinformatics or related topics; experience in programming (ideally Matlab or Python), ideally some neuroscience background with experience in animal experiments; scientific creativity and ability to work in a team.

The position is available immediately. The starting date is optional.

Applications including CV, research interest and contact information of references (single pdf) should please be sent to:

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For informal enquiries please contact

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