ÁDÁM FALUVÉGI

National Academy of Scientist Education, 2nd year

Semmelweis University
Faculty of Medicine, 3rd year

YEAR OF BIRTH

2003

FORMER SZENT-GYÖRGYI PUPIL

no

SZENT-GYÖRGYI MENTOR

Judit Makara

JUNIOR MENTOR

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SPECIALIZATION

neuroscience

SECONDARY SCHOOL

Városmajori High School

NAME OF TEACHER

András Vizkievicz

LANGUAGES

English/B2-C1

IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

The research group which I had joined specializes in in vitro electrophysiology, their goal is to gain a deeper understanding of the hippocampus region of the brain, to elucidate its mechanisms, and the role it plays in learning and memory functions. The experiments in which I partake are centered around the pyramidal cells of the CA3 hippocampal region, where we aim to research the characteristic regenerative Ca2+ spikes of these cells, to understand their regulation and effects.
According to the most recent findings of the lab, the neuromodulator acetylcholine changes the parameters of these calcium spikes, and with this, the firing pattern of the neuron. This mechanism could be essential to the role hippocampus plays in coding information. The effects of the neuromodulators dopamine and norepinephrine on calcium spikes have not yet been researched. In the experiments, we combine in vitro patch clamp techniques and two photon Ca2+ imaging with pharmacological methods, this is the project that I partake in.

AMBITIONS AND CAREER GOALS

My goal is not to simply learn and study all that knowledge that had meticulously been collected throughout the years by various scientists, research groups in the field of medical sciences, but to also add my, albeit small contribution to this knowledge. Furthermore, I'm interested in familiarizing myself with the process of scientific research early on, the program of NTA is an eccelent opportunity in this regard.

HONORS AND PRIZES

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PUBLICATIONS

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