

GÁBOR JUHÁSZ



National Scientists Academy, 3rd year

University of Szeged,
Albert Szent-Györgyi Medical School, 3rd year

YEAR OF BIRTH:

2000

FORMER SZENT-GYÖRGYI PUPIL:

yes

SZENT-GYÖRGYI MENTOR:

Gábor Juhász

JUNIOR MENTOR:

Tamás Maruzs

SPECIALIZATION:

endosomal system,
membrane contact sites,
drosophila genetics

SECONDARY SCHOOL:

Radnóti Miklós
Experimental Grammar
School, Szeged

NAME OF TEACHER:

Béla Gál

LANGUAGES:

English/intermediate

IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

The existence of membrane contact sites, i.e. permanent physical contacts between organelles of eukaryotic cells has been known for a long time, however, understanding their functions has just begun during the last decade. The most well-characterized function of these contacts is enabling lipid transport between the contacting organelles. Interestingly, recent studies shed light on the direct role of such contacts in the endosomal system as well. During our work, we aim to investigate the function of Snx25, a known membrane contact site protein, which is involved in a human hereditary neurodegenerative disease, a distinctive type of spinocerebellar ataxia. Our results show that the mutation of the fruit fly (*Drosophila melanogaster*) counterpart of this gene leads to severe defects in the endosomal maturation process of the highly endocytic larval nephrocytes. As the exact mechanism of this phenomenon is currently not known, we aim to decipher the role of the *Drosophila* Snx25 protein in endosomal maturation using genetics and light-microscopy and our self-maintained fruit fly stocks' nephrocytes as an experimental model system.

AMBITIONS AND CAREER GOALS

My primary aim is to match the medical and scientific work. In my opinion through knowledge in all natural sciences, especially in regards to modern biology is essential to understand and discover the most effective therapies. In the near future I would like to work in the fields of genetics and cell biology. Later I intend to continue this work during my PhD study, and my task in inland and foreign laboratories in addition to my medical studies.

HONORS AND PRIZES

2019 - National Biology Competition: 11th place
2019 - National Chemistry Competition: 13th place
2018 - Dr. Árokszállásy Zoltán Biology Competition: 9th place
2018 - National Biology Competition: 14th place
2017 - Szent-Györgyi Albert Competition: 3rd place

PUBLICATIONS

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