

ZSIGMOND VIZI



National Academy of Scientist Education, 2nd year

University of Debrecen
Faculty of Medicine, 3rd year

YEAR OF BIRTH:

2003

FORMER SZENT-GYÖRGYI PUPIL:

no

SZENT-GYÖRGYI MENTOR:

Zoltán Varga

JUNIOR MENTOR:

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SPECIALIZATION:

Electrophysiology

SECONDARY SCHOOL:

Kodály Zoltán
Zeneművészeti
Szakgimnázium és
Zeneiskola-Alapfokú
Művészeti Iskola

NAME OF TEACHER:

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LANGUAGES:

English/advanced

IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

Our research is focused on voltage-gated ion channels, which play an important role in excitable cells (nerve and muscle) by generating action potentials but are also involved in many cellular functions in non-excitable cells. Their abnormal function or altered expression levels have been associated with many diseases, neurodegenerative and tumor lesions.

In some non-invasive cell types, changes in the expression of these channels are strongly correlated with cell differentiation. Thus, a detailed understanding of the function of these channels and their role in cellular functions is essential.

Our research is mainly focused on tumors; we aim to elucidate the diverse roles of ion channels and to gain a precise understanding of their mechanism of action in the tumor microenvironment.

Determination of the biophysical parameters of the channels, detection of structural mutations, and observation of other changes may provide valuable information on the adaptive mechanism of tumors. By determining the ion channel expression pattern specific to different tumors, selective inhibitors could be investigated and developed as therapeutic targets.

AMBITIONS AND CAREER GOALS

My long-term goals in the field of electrophysiology are to learn different techniques and try new methods, which will improve my manual skills in the service of science and allow me to perform precise tasks. As a future physician, I believe it is important to perform our daily tasks with humility and to the best of our ability, however, to do this, it is vital to immerse oneself in science, as this will provide the foundations, knowledge, and perseverance that are essential in medicine.

HONORS AND PRIZES

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PUBLICATIONS

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