

## ISTVÁN TÓTH



National Academy of Scientist Education, 4<sup>th</sup> year

University of Szeged,  
Albert Szent-Györgyi Medical School, 2<sup>nd</sup> year

#### YEAR OF BIRTH

2002

#### FORMER SZENT-GYÖRGYI PUPIL

yes

#### RESEARCH UNIT

HUN-REN Biological  
Research Centre

#### SZENT-GYÖRGYI MENTOR

István Krizbai

#### JUNIOR MENTOR

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#### SPECIALIZATION

neuroscience

#### SECONDARY SCHOOL

ELTE Bolyai János Practising  
Primary and Secondary  
School

#### NAME OF TEACHER

Bence Farkas Szabó

#### LANGUAGES

English/intermediate  
German/intermediate

#### IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

Research in recent years supported the idea that both aging and a significant part of age-related diseases of the central nervous system are due to the inadequate functionality of the neurovascular unit that coordinates the interaction between the cerebral circulation and the functioning of the central nervous system. The physiological functioning of the nervous system requires a precisely regulated microenvironment, which is maintained by the aforementioned neurovascular unit through its two main functions (formation of the brain-blood barrier and neurovascular coupling). The main purpose of our research is to understand the functioning of the neurovascular unit more precisely in aging and age-related diseases of the brain. We plan to focus on pericytes and cerebral endothelial cells. In addition, using endothelial precursor cells we are looking for regenerative mechanisms that could provide an opportunity to maintain the functionality of neurovascular unity, thus contributing to the prevention of cognitive disabilities in elderly people.

#### AMBITIONS AND CAREER GOALS

During my undergraduate studies, I want to become a useful member of the research team. After completing my medical studies, I would like to get a PhD and gain experience abroad to gain as much knowledge as possible, which I can later use in my own research to become an internationally recognized researcher and help the development of science.

#### HONORS AND PRIZES

2020 Chemistry OKTV - 29. place  
2021 Chemistry OKTV - 30. place

#### PUBLICATIONS

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