

## TAMÁS SOMA SZALAY



National Academy of Scientist Education, 1<sup>st</sup> year

Semmelweis University  
Faculty of Medicine, 1<sup>st</sup> year

### YEAR OF BIRTH

2004

### FORMER SZENT-GYÖRGYI PUPIL

yes

### SZENT-GYÖRGYI MENTOR

Attila Mócsai

### JUNIOR MENTOR

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### SPECIALIZATION

physiology,  
immunology,  
autoimmune and  
inflammatory diseases

### SECONDARY SCHOOL

Radnóti Miklós  
Experimental Secondary  
School, Szeged

### NAME OF TEACHER

Sándor Bán

### LANGUAGES

English/C1

### IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

Bullous pemphigoid is an autoimmune, inflammatory blistering skin disease that is common in older people. Autoantibodies are produced against the proteins of dermo-epidermal junction (collagen XVII, BP230), and the damaged contact due to inflammation leads to dermo-epidermal separation, which causes fluid to accumulate at the site of separation, causing severe deterioration in the quality of life of patients. It is currently treated with steroids.

An ex vivo human model of this disease has been set up in the laboratory of the Institute of Physiology at SOTE. This is currently being used to study the role of the complement system in bullous pemphigoid disease with different complement inhibitory agents. We hope to be able to demonstrate that our research on agents with other strains for other purposes could also be effective against bullous pemphigoid.

In addition, we are currently looking to test the disease in vitro by producing recombinant BP180 protein.

### AMBITIONS AND CAREER GOALS

After actively participating in the high school part of the NTA programme, I applied to the university segment as a freshman. I would like to observe/experience biomedical research during university, under the guidance of a mentor and junior mentor who I feel in safe hands. I believe that a doctor needs this kind of experience, and I believe it is possible that the insights gained through the programme will make me committed to the world of research.

### HONORS AND PRIZES

2022 International Biology Olympiad silver medal  
2021 European Olympiad of Experimental Science 3<sup>rd</sup> place  
2021 International Genetically Engineered Machine gold medal  
2022 TUDOK grand prize  
2022 Chemistry OKTV 16<sup>th</sup> place  
2023 Chemistry OKTV 12<sup>th</sup> place  
2023 Biology OKTV 5<sup>th</sup> place  
2023 NTA „Év kiváló diákja” award

### PUBLICATIONS

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