

## YAHYA SULOK



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

Semmelweis University  
Faculty of Medicine, 2<sup>nd</sup> year

### YEAR OF BIRTH

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2003

### FORMER SZENT-GYÖRGYI PUPIL

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no

### SZENT-GYÖRGYI MENTOR

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Balázs Hangya

### JUNIOR MENTOR

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Írisz Szabó

### SPECIALIZATION

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neurophysiology

### SECONDARY SCHOOL

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Apáczai Csere János  
Practising High School of  
Eotvos Lorand University

### NAME OF TEACHER

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Judit Bakonyi

### LANGUAGES

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English/B2  
German/B2

### IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

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The brain is capable of employing numerous different learning strategies to adapt to constantly changing environments, thereby enhancing individual fitness. Implicit sequential learning, a form of learning where we unconsciously acquire a particular sequence, is one such strategy. Examples of tasks that result from this type of learning include activities such as cycling, playing basketball, or speaking. Improvement in reaction time during the mastery of such tasks clearly demonstrates learning. In our research, we investigate the neural mechanisms of sequential learning, focusing on the role of important neurotransmitters such as dopamine, acetylcholine, serotonin, and noradrenaline, which are crucial in learning. We measure the release of neurotransmitters in animals during learning using fiber photometry, allowing us to compare their release characteristics. One of the primary aims of our research is to develop an analogous model to human studies, to enable comparison of characteristics measured in humans and animals.

### AMBITIONS AND CAREER GOALS

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Besides my medical studies, I find it crucial to participate in medical research. In my opinion, healthcare and healing rest on two main pillars: treatment and research. Understanding diseases through research enables us to treat them effectively. Later on in my medical career, I would like to do research, because I think that's how I can do the most for healing as a doctor.

### HONORS AND PRIZES

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### PUBLICATIONS

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