

## SZABOLCS NORMAN SZATHMÁRI



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

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

### YEAR OF BIRTH

2003

### FORMER SZENT-GYÖRGYI PUPIL

no

### SZENT-GYÖRGYI MENTOR

Antal Nógrádi

### JUNIOR MENTOR

Krisztián Pajer

### SPECIALIZATION

neuroscience

### SECONDARY SCHOOL

Deák Ferenc High School

### NAME OF TEACHER

Laura Széplaki

### LANGUAGES

English/advanced

### IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

Spinal cord injuries (SCIs) in humans and other mammals lead to permanent, incurable functional and morphological deficits. A major challenge to neurotrophic factor or cytokine therapy after SCI is the short half-life of these molecules and their instability in circulation. In the recent years, transcribed nucleoside-modified messenger RNA has emerged as a very promising therapeutic protein delivery platform. In our previous study we have provided evidence that human IL-10-encoding nucleoside modified mRNA lipid nanoparticles (mRNA-LNP, delivered intraspinally induced significant functional recovery following spinal cord contusion injury. However, compared to intraspinal application of mRNA-LNP, intraperitoneal mRNA-LNP treatment appears to be a less invasive approach. Therefore, the proposed study aims at the evaluation of the efficacy of mRNA translation into the encoded protein following intraperitoneal delivery and the distribution pathway of the mRNA in peripheral immune organs and the injured spinal cord.

### AMBITIONS AND CAREER GOALS

During my studies and research, my goal is to acquire as much knowledge as possible, as well as skills that will be useful in my later research and in my clinical work. Hundreds of thousands of people suffer spinal cord injuries every year. Throughout my research, I would like to deepen my knowledge in the mRNA treatment of spinal cord injuries since this would provide a new method to treat these people.

### HONORS AND PRIZES

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### PUBLICATIONS

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