

## REBEKA GELENCSÉR



National Academy of Scientist Education, 2<sup>nd</sup> year

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

### YEAR OF BIRTH

2003

### FORMER SZENT-GYÖRGYI PUPIL

no

### RESEARCH UNIT

Semmelweis University

### SZENT-GYÖRGYI MENTOR

Anna Sebestyén

### JUNIOR MENTOR

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### SPECIALIZATION

experimental medical  
research,  
pathology,  
oncology,  
tumour biology

### SECONDARY SCHOOL

Alternative Economics  
High School

### NAME OF TEACHER

Gergely Nádori

### LANGUAGES

English/intermediate  
German/intermediate

### IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

The metabolic heterogeneity of tumor tissue, the organization of the most diverse metabolic pathways and signaling pathways have long been a serious challenge in tumor therapy. Current traditional two-dimensional cell cultures do not fully enable the modeling of these complex processes, since the tumor tissue itself is a heterogeneous three-dimensional structure capable of adaptation. Based on more and more research, we can conclude that three-dimensional bioprinting can be a solution to this problem. In our research, our goals include the development of three-dimensional bioprinted tumor models, and then we can investigate the effect of several metabolic inhibitors in them, potentially finding new active pharmaceutical ingredients in order to develop more effective tumor therapy methods.

### AMBITIONS AND CAREER GOALS

In addition to the desire to heal, the desire for a deeper understanding of nature led me to medicine. The research gives me the opportunity not only to develop my way of thinking, but I am confident that I can contribute to the work of my research group in order to advance biomedical research and develop new therapeutic methods by developing new model systems. The program provides me with an excellent framework for this, as they help me with scientific research work that goes beyond the academic framework already during the theoretical years of the training.

### HONORS AND PRIZES

2023 - XXVII Korányi Frigyes Scientific Forum, 3<sup>rd</sup> place

### PUBLICATIONS

Moldvai, D.,<sup>1</sup> Sztankovics, D.,<sup>1</sup> Dankó, T.,<sup>1</sup> Szalai, F.,<sup>1</sup> Miyaura, R.,<sup>1</sup> Petővári, G.,<sup>1</sup> Krencz, I.,<sup>1</sup> **Gelencsér, R.**,<sup>1</sup> Sebestyén, A.,<sup>1</sup> (2024) Effects of 3D tissue structure on drug sensitivity - 3D bioprinted tissue mimetic structures in cancer research. **Magy Onkol.** 37768119.

Sztankovics, D.,<sup>1</sup> Moldvai, D.,<sup>1</sup> Petővári, G.,<sup>1</sup> **Gelencsér, R.**,<sup>1</sup> Krencz, I.,<sup>1</sup> Raffay, R.,<sup>1</sup> Dankó, T.,<sup>1</sup> Sebestyén, A.,<sup>1</sup> (2023) 3D bioprinting and the revolution in experimental cancer model systems-A review of developing new models and experiences with in vitro 3D bioprinted breast cancer tissue-mimetic structures. **Pathol Oncol Res** 36843955.