

GERGŐ PORKOLÁB



Szeged Scientists Academy, 3rd year

**University of Szeged,
Faculty of Science and Informatics, 1st year, MA**

YEAR OF BIRTH:

1996

FORMER SZENT-GYÖRGYI PUPIL:

no

SZENT-GYÖRGYI MENTOR:

Mária Deli

JUNIOR MENTOR:

Szilvia Veszelka

SPECIALIZATION:

cell biology, pharmacology

SECONDARY SCHOOL:

Tömörkény István
Secondary School

NAME OF TEACHER:

Ildikó Vadászné Horváth

LANGUAGES:

English/advanced

IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

The goal of our research group is to develop a novel drug delivery system that is capable of transporting therapeutics into the central nervous system. Most drugs cannot enter the brain via the bloodstream because of the so-called blood-brain barrier. Therefore, central nervous diseases, such as Alzheimer's disease, Parkinson's disease and brain tumors, are extremely challenging to treat pharmaceutically.

We would like to solve this problem with "nanosized Trojan horses", uniquely designed nanoparticles. These are small vesicles, not visible for the naked eye. We load the drugs inside the nanoparticles and coat their surfaces with special targeting molecules. These targeting molecules are then specifically recognized by the blood-brain barrier and can enter the brain with the drugs inside of them.

AMBITIONS AND CAREER GOALS

After my Master's I would like to continue biomedical research as a PhD student. As a scientific researcher I would like to find solutions to relevant problems and have results that could make the quality of lives of people better.

HONORS AND PRIZES

- 2019 – SZTE Talent Scholarship, silver grade
- 2019 – XXXIV. National Scientific Students' Associations Conference, 2nd prize
- 2019 – SZTE József Sófi Foundation, prize of Board of Trustees
- 2019 – SZTE József Sófi Foundation scholarship, biology MSc category, 1st prize
- 2018 – Annual Scientific Students' Associations Conference, University of Szeged, Faculty of Medicine, special prize
- 2018 – New National Excellence Program fellowship for the academic year of 2018/19
- 2018 – National Higher Educational Scholarship for the academic year of 2018/19
- 2018 – Annual Scientific Students' Associations Conference, University of Szeged, Faculty of Science and Informatics, 1st prize
- 2017 – Annual Scientific Students' Associations Conference, University of Szeged, Faculty of Medicine, special prize
- 2017 – National Higher Educational Scholarship for the academic year of 2017/18
- 2015 – Kazinczy-medal

PUBLICATIONS

Mészáros, M., **Porkoláb, G.**, Kiss, L., Pilbat, AM., Kóta, Z., Kupihár, Z., Kéri, A., Galbács, G., Siklós, L., Tóth, A., Fülöp, L., Csete, M., Sipos, Á., Hülper, P., Sipos, P., Páli, T., Rákhely, G., Szabó-Révész, P., Deli, MA., Veszelka, S. (2018) Niosomes decorated with dual ligands targeting brain endothelial transporters increase cargo penetration across the blood-brain barrier. **Eur J Pharm Sci** 123: 228-240.