

TIBOR DONKA



National Academy of Scientist Education, 5th year

University of Szeged
Szent-Györgyi Albert Medical School, 5th year

YEAR OF BIRTH:

1996

FORMER SZENT-GYÖRGYI PUPIL:

no

SZENT-GYÖRGYI MENTOR:

Petra Hartmann

JUNIOR MENTOR:

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SPECIALIZATION:

traumatology,
coagulopathy,
mitochondria

SECONDARY SCHOOL:

László Németh Secondary
School

NAME OF TEACHER:

Mária Szőke

LANGUAGES:

English/advanced
German/intermediate

IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

Trauma-induced coagulopathy is a major cause of mortality in polytrauma patients. During this process, many pathological pathways are activated, including the coagulation cascade. Platelets are a major player in coagulation, with mitochondria being one of their main energy carriers. In our research, we hypothesize that platelets in this study group suffer from mitochondrial dysfunction. Our studies aim at high-resolution respirometric measurements of platelet mitochondria, and in parallel, rotational viscoelastometric and aggregometric measurements. Our research will provide a deeper understanding of maladaptive platelet activations after injury, potentially leading to the discovery of new therapeutic targets in polytrauma care.

AMBITIONS AND CAREER GOALS

In the coming years, I would like to successfully complete the General Medicine degree at the University of Szeged, continue my ongoing research at the Traumatology Clinic with the help of the National Academy of Scientist Education, which I would like to contribute to the expansion of our scientific knowledge and the improvement of the quality of care at my level. From my ongoing research, I would like to publish my first authored article in an English journal of an appropriate level and speciality. Later, after graduation from university, I would like to pursue a Ph.D. degree in my scientific field.

HONORS AND PRIZES

2022 - University of Szeged: Scientific Students' Associations Conference (TDK) - 1. prize
2022 - NNEP (New National Excellence Programme) scholarship
2021 - University of Szeged: Scientific Students' Associations Conference (TDK) - 1. prize

PUBLICATIONS

Baráth, B., Jász, D., K., Horváth, T., Baráth, B., Maróti G., Stifler, G., Varga, G., Sándor, L., Perényi, D., Tallósy, S., **Donka, T.**, Jávör, P., Boros, M., Hartmann, P. (2022) Mitochondrial Side Effects of Surgical Prophylactic Antibiotics Ceftriaxone and Rifaximin Lead to Bowel Mucosal Damage. *Int J Mol Sci* **23**: 5064.

Horváth, T., Sándor, L., Baráth, B., **Donka, T.**, Baráth, B., Mohácsi, A., Jász, DK., Hartmann, P., Boros, M. (2023) Methane Admixture Protects Liver Mitochondria and Improves Graft Function after Static Cold Storage and Reperfusion. *Antioxidants (Basel)* **12**: 271.

Jávör, P., **Donka, T.**, Horváth, T., Sándor, L., Török, L., Szabó, A., Hartmann, P. (2023) Impairment of Mesenteric Perfusion as a Marker of Major Bleeding in Trauma Patients. *J Clin Med* **12**: 3571.