TÍMEA INGRID BÍRÓ

National Academy of Scientist Education, 3rd year

University of Debrecen
Faculty of Science and Technology, 3rd year

YEAR OF BIRTH

2002

FORMER SZENT-GYÖRGYI PUPIL

no

RESEARCH UNIT

University of Debrecen

SZENT-GYÖRGYI MENTOR

Péter Bay

JUNIOR MENTOR

Edit Kapitányné Mikó

SPECIALIZATION

Role of bacterial metabolites in breast tumours.

SECONDARY SCHOOL

Ady Endre Secondary School Nagyvárad

NAME OF TEACHER

Ágnes Puskás

LANGUAGES

English/proficiency
Germany/intermediate
Romanian/proficiency

IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

In several carcinomas, including pancreatic carcinoma, the composition of the local microbiome changes in multiple compartments, a phenomenon referred to as dysbiosis or oncobiosis. The primary objective of my research is to investigate the effects of secondary bile acids (lithocholic acid-LCA, ursodeoxycholic acid-UDCA, deoxycholic acid-DCA) as microbial metabolites on human pancreatic adenocarcinoma cells (CAPAN2 cell line). The dysbiosis associated with pancreatic cancer is an unknown and therapeutically untapped area. Our research group seeks to determine how these bacterial metabolites interfere with tumor development, cell proliferation, epithelial-mesenchymal transition, and oxidative stress processes. In my experiments, I primarily investigate in cellular systems whether bacterial metabolites are capable of influencing the function and efficacy of chemotherapeutic agents.

AMBITIONS AND CAREER GOALS

As a biochemical engineering student, my main goal is to find answers to biomedical questions through biotechnological innovations. It is important for me to be able to participate in research work within a modern and high-performance laboratory during my studies. Mentoring helps me gain an understanding of the scientific community, gradually acquiring in-depth knowledge and becoming an active member.
My aim is to combine theoretical and practical knowledge to carry out useful and successful activities for society. I hope that my research work, which currently focuses on the study of the interaction of bacterial metabolites with chemotherapy drugs, can be utilized in future therapies. I would like to participate in the application of my research results and engage in active development work alongside theoretical research.

HONORS AND PRIZES

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PUBLICATIONS

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