BENJAMIN KOVÁCS

National Academy of Scientist Education, 2nd year

University of Szeged
Faculty of Science and Informatics, 3rd year

YEAR OF BIRTH

2003

FORMER SZENT-GYÖRGYI PUPIL

no

SZENT-GYÖRGYI MENTOR

Attila Hunyadi

JUNIOR MENTOR

Erzsébet Mernyák

SPECIALIZATION

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SECONDARY SCHOOL

Andrássy Gyula High School and Dormitory, Békéscsaba

NAME OF TEACHER

Angéla Steigerwaldné Vári

LANGUAGES

English/advanced

IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

With cancer being one of the leading causes of death today, there is a great need for new, innovative and, where possible, personalised therapeutic strategies. Phototheranostics, as a novel non-invasive method for both diagnosis and treatment, has emerged as a potentional solution in the fight against cancer. As this technique relies on photoirradiaton it needs effective photosensitizers (PSs). Boron-dipyrromethane (BODIPY) and its 8-aza counterparts show exceptional photophysical properties hence are promising PSs. However, their potential use still faces unresolved challenges, e.g., complicated synthesis, low water solubility, only NIR-I absorption/fluorescence window. Our research performed in Attila Hunyadi's research group will aim to find new ways to solve the aforementioned challenges, using a nature-inspired chemical strategy for the design, synthesis, and evaluation of new BODIPY derivatives with enhanced water-solubility and improved phototheranostic potential.

AMBITIONS AND CAREER GOALS

My goal is to attain a high proficiency in the various techniques the research group works with in order to use them in my future projects. I aspire to create compounds, which are valuable to applied medical science.

HONORS AND PRIZES

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PUBLICATIONS

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