

BENCE KONTRA



ACHIEVEMENTS

DIPLOMA

Bsc in Chemistry

Msc in Chemistry

LANGUAGE CERTIFICATE

English C1

DRIVERS LICENCE

B1

INTERESTS

ORGANIC CHEMISTRY

My favorite field in chemistry, I have chosen this as my profession

ANALYTICAL CHEMISTRY

As an organic chemist, I can use various analytical equipment and interpret the results routinely

QUANTUM AND PARTICLE PHYSICS

I am really interested and fascinated by these topics

EDUCATION

DOCTORAL COURSE

Semmelweis University, Budapest | 2021 – Present

I am doing my Doctoral studies at Semmelweis University School of PhD Studies, in the Pharmaceutical Sciences and Health Technologies program, at the Department of Chemistry. The topic of my research: Development and applications of photolabile protecting groups.

CHEMIST BACHELOR AND MASTERS COURSE

Eötvös Loránd University, Budapest | 2015 – 2021

During the course, I specialized in preparative organic chemistry.

The titles of my thesis works:

BSc: Development and synthesis of new, asymmetric fluorescent dyes

MSc: Structure-effect correlations in Ca ion bonding of BAPTA derivatives

EXPERIENCE

CHEMICAL ENGINEER / BRAINVISIONCENTER NONPROFIT LTD.

2022 – Present

I am working as a researcher at the biological chemistry lab at BrainVisionCenter Nonprofit Ltd.

The topic of my research: Development and applications of photolabile protecting groups

PREVIOUS WORKPLACES:

- 2021 – 2022: RESEARCHER / BIONIKAI INNOVÁCIÓS PARK LTD.
- 2017 – 2021: RESEARCHER / FEMTONICS LTD.

TEACHING

- In the fall and spring semesters of the 2022/2023 academic year, I participated as an instructor in the organic chemistry laboratory exercises held for foreign second-year pharmacy students at Semmelweis University.
- In the fall and spring semesters of the 2023/2024 academic year, I am participating as an instructor in the organic chemistry laboratory exercises held for foreign second-year pharmacy students at Semmelweis University.

CONTACTS

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SCIENTIFIC ACHIEVEMENTS

PUBLICATIONS


1. A. Csomos, B. Kontra, A. Jancsó, G. Galbács, R. Deme, Z. Kele, B. J. Rózsa, E. Kovács and Z. Mucsi, A Comprehensive Study of the Ca²⁺ Ion Binding of Fluorescently Labelled BAPTA Analogues, *European J. Org. Chem.*, 2021, **2021**, 5248–5261, DOI: 10.1002/ejoc.202100948.
2. D. Bogdán, B. Kontra, A. Csomos, E. Kovács, Z. Mucsi and P. Dunkel, 3-Aminopropylazetidines: facile synthesis and application for medicinal chemical purposes, *Arkivoc*, 2022, **2022**, 272–287, DOI: 10.24820/ark.5550190.p011.900.
3. E. Kopcsik, Z. Mucsi, B. Kontra, L. Vanyorek, C. Váradi, B. Viskolcz and M. Nagy, Preparation and Optical Study of 1-Formamido- 5-Isocyanonaphthalene , the Hydrolysis Product of the Potent Antifungal 1,5-Diisocyanonaphthalene , *Int. J. Mol. Sci.*, 2023, **24**, 7780, DOI: 10.3390/ijms24097780.
4. B. Kontra, D. Bogdán, B. Alaghehmand, A. Csomos, P. Dunkel, Synthesis and characterization of 8-aminoquinoline photocages for biological applications, *Tetrahedron Lett.*, 2023, **124**, 154587, DOI: 10.1016/j.tetlet.2023.154587

PATENT

1. B. J. Rózsa, G. Katona, D. Máthé, Z. Mucsi, E. Kovács, Sz. Szilágyi, B. Kontra, G. Szalay, Technology for histological detection of sars-cov-2 virus infection using non-linear laser scanning microscopy, 2021, Hungary, HU2100204A1

CONFERENCE PRESENTATIONS

1. Heterociklusos és Elemorganikus Kémiai Munkabizottság ülése (2018. 06.06; Balatonszemes); Fényérzékeny reagensek fejlesztése az agy kutatás számára; Kontra Bence, Mucsi Zoltán, Lukácsné Haveland Csilla, *et. al.*
2. Heterociklusos és Elemorganikus Kémiai Munkabizottság ülése (2019. 06.03.; Balatonszemes); Új típusú kalciumion-kötő fluoreszcens inikátormolekulák tervezése, szintézise és vizsgálata; Csomós Attila, Kontra Bence, Szilágyi Szandra, *et. al.*
3. Kémiai Előadói Napok (KEN)(2019.10.29.; Szeged); Design, synthesis and analysis of novel fluorescent Ca²⁺-sensor compounds; Attila Csomos, Bence Kontra, Zoltán Mucsi.
4. ELTE TDK Conference (2019.12.14) Új, hatékonyabb fluoreszcensen jelölt BAPTA származékok szintézise; Kontra Bence.
5. Komplexkémiai Kollokvium (2021.05.26-27.; Online); Ca(II)-érzékelőkben potenciálisan alkalmazható módosított BAPTA származékok Ca²⁺- és Mg²⁺-kötő sajátságai; Tóth Annamária, Csomós Attila, Kontra Bence, *et. al.*
6. International Symposium on Thermodynamics of Metal Complexes (ISMEC 2021)(2021.06.16.; Białystok, Poland); Metal ion binding and Ca²⁺-promoted fluorescence of ethyl-rosamine labelled BAPTA-analogues; Attila CSOMÓS, Bence KONTRA, Ervin KOVÁCS, *et.al.*; Poster.
7. Fluorescence markers for advanced microscopy. From photophysics to biology – 2022(2022.04.10-15.; Les Houches, France); A comprehensive study of the Ca²⁺ ion binding of fluorescently labelled BAPTA analogues; Bence Kontra, Attila Csomos, Attila Jancsó, Gábor Galbács, Ruth Deme, Zoltán Kele, Balázs József Rózsa, Petra Dunkel, Ervin Kovács, Zoltán Mucsi; Poster.
8. PhD Scientific Days, Semmelweis University(2022.07.06-07.; Budapest); Synthesis and Characterization of Novel Quinoline Photoremovable Protecting Groups; András Karajos, Bence Kontra, Tekla Abonyi, Attila Csomos, Ervin Kovács, Zoltán Mucsi, Petra Dunkel; Poster.

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9. Selye Picnic with BVC(2023.05.17.; Budapest); Innovative molecular tools for sensing and effecting: Photocages and Chemosensors; Bence Kontra.
 10. Heterociklusos és Elemorganikus Kémiai Munkabizottság ülése (2023. 05.31-06.02.; Balatonszemes); Kinolin photocagek fejlesztése és a működési mechanizmusuk vizsgálata; Kontra Bence.
 11. PhD Scientific Days, Semmelweis University(2023.06.22-23.; Budapest); A Novel, Straightforward Synthetic Approach for the Preparation of Quinoline Photocages; Bence Kontra.
 12. European School of Medicinal Chemistry, 42nd Advanced Course of Medicinal Chemistry and Seminar for PhD students(2023.07.02-06.; Urbino, Italy); Development and mechanistic studies of quinoline photocages; Bence Kontra, Zoltán Mucsi, Petra Dunkel; Poster.
 13. 22nd European Symposium on Organic Chemistry(2023.07.9-13.; Gent, Belgium); Development of quinoline photocages for biological applications; Bence Kontra, Zoltán Mucsi, Petra Dunkel; Poster.
 14. IX EFMC International Symposium on Advances in Synthetic and Medicinal Chemistry(2023.09.03-07.; Zagreb, Croatia); Development of quinoline photocages for biological applications; Bence Kontra, Zoltán Mucsi, Petra Dunkel; Poster.

FELLOWSHIPS

1. New National Excellence Program (ÚNKP-22-3-I); 2022.09.01-2023.08.31
2. Richter short term research fellowship (2023)
3. Fellowship for the participation of PhD students in a conference or scientific continuing education course organized in Hungary (Semmelweis University, 2023)

OTHER ACTIVITIES

1. In 2022, I was the supervisor of two students during their mandatory internship.
 2. During the 2022 Researchers' Night, I participated in the organization and conduct of an organic chemistry laboratory exercise (Department of Organic Chemistry, Semmelweis University); The title of the exercise: Bővebben az aszpirinról
 3. During the 2023 Researchers' Night, I participated in the organization and conduct of an organic chemistry laboratory exercise (Department of Organic Chemistry, Semmelweis University); The title of the exercise: Kémia más megvilágításban.
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