

CURRICULUM VITAE

• PERSONAL INFORMATION

Family name, First name: BENCZE, László Csaba

Researcher unique identifier: ORCID ID: [0000-0003-0956-9749](https://orcid.org/0000-0003-0956-9749)

Nationality: Romanian, Hungarian

Affiliation: Enzymology and Applied Biocatalysis Research Center, Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University, Str. Arany Janos, nr. 11, Cluj-Napoca, Romania

E-mail: laszlo.bencze@ubbcluj.ro

Webpage: www.chem.ubbcluj.ro/~cslbencze

• CURRENT POSITION(S)

2022 –... *Associate Professor* - teaching (Advanced Enzymology, Biochemistry, Genetic Engineering- courses and seminars/practical courses) and research activities (enzymology, protein engineering) Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University, Romania

• EDUCATION

2007-2011 PhD in Chemistry, Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University, Romania,
“Biocatalytic approach towards enantiomerically enriched heteroaryl-1,2-ethanediols”
- PhD Supervisor: Prof. Dr. Florin Dan Irime

2006-2007 Master’s Degree, specialisation: Advanced Techniques in Chemical Synthesis, top of the class (average grade: 10.00/10)
Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University, Romania,

2002-2006 Bachelor’s Degree in Chemistry, top of the class & merit scholarship (9.64/10)
Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University, Romania

• PREVIOUS POSITIONS

2016 – 2022 *Lecturer* - teaching (Advanced Enzymology, Introduction to Biochemistry, Bioinformatics, Genetic Engineering, Metabolism of xenobiotics, Applied/Clinical Biochemistry - courses and seminars/practical courses) and research activities (enzymology, protein engineering)
Faculty of Chemistry and Chemical Engineering, Department of Chemistry, Babeş-Bolyai University, Romania

2014 – 2016 *Assistant Professor* - teaching (Introduction to Biochemistry, Biochemistry, Metabolism of nutrients - practical courses and seminars) and research activities (biocatalysis, enzymology)
Faculty of Chemistry and Chemical Engineering, Department of Chemistry, Babeş-Bolyai University, Romania

2014 – 2015 *Post-doctoral fellow*- biocatalytic synthesis of unnatural amino acids through lipase mediated dynamic kinetic resolutions and ammonia-lyase catalyzed processes for the development of new peptidomimetics (16 months)
Faculty of Chemistry and Chemical Engineering, Department of Chemistry, Enzymology and Applied Biocatalysis Research Centre, Babeş-Bolyai University, Romania

2011 – 2014 *Post-doctoral researcher* - identifying the mechanism of action of novel peptide antibiotics, determination of the binding site of the in-house developed novel peptide antibiotic murepavadin to the target protein (LptD) (33 months)
Research group of Prof. Dr. John A. Robinson, Department of Chemistry, University of Zürich, Switzerland

• FELLOWSHIPS AND AWARDS

- 2021 *Young Researcher Award - Life Sciences category*, Hungarian Academy of Sciences, Regional Committee in Cluj-Napoca/Hungary
- 2019 *Research Excellence Award*, STAR-UBB Institute, Babeş-Bolyai University/Romania
- 2016 *Excellentia Prize 2016 – Excellence Award in the Professor category*, Student Council Babeş-Bolyai University/Romania
- 2014-2015 *Post-doctoral fellowship* (16 months), Enzymology and Applied Biocatalysis Research Centre, Babeş-Bolyai University/ Romania
The fellowship included Postdoctoral Mobility stage of 4 months at the Hungarian Academy of Science/Institute of Enzymology -Prof. Dr. Beáta Vértessy/ Hungary
- 2008 Doctoral fellowship (12 months), Eurotrans Foundation/Romania
- 2007 Erasmus (6 month) and Agora Fellowships (2 months) - Stereoselective synthesis of various pheromones at Research group of Prof. Dr. Lajos Novák, Department of Organic Chemistry and Technology, Budapest University of Technology and Economics/ Hungary

• INSTITUTIONAL RESPONSIBILITIES

- 2016 –... supervisor for the diplomawork of graduate (BSc and MSc) students – annually 6-8 students, Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University, Romania
- 2018 –... Member of the Evaluation Committee of Diplomaworks of the Faculty of Chemistry and Chemical Engineering (BSc and MSc level), Babeş-Bolyai University, Romania
- 2019 –... vice-director and scientific committee member of the Enzymology and Applied Biocatalysis Research Center, Babeş-Bolyai University, Romania
- 2022 –... faculty level responsible/expert for Horizon Europe programme, Faculty of Chemistry and Chemical Engineering (BSc and MSc level), Babeş-Bolyai University, Romania

• REVIEWING ACTIVITIES

- 2014 Evaluator for the national research project applications at the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), Romania
- 2019 –2021 Member of the Evaluation Committee of Diplomaworks for the Genetic Engineering Specialisation (annually ~10 diplomaworks), Sapientia- Hungarian University of Transylvania, Romania
- 2019 –2022 External evaluator for >10 Diplomaworks within the Bioengineering specialisation of the Faculty of Chemical Technology and Biotechnology, Budapest University of Technology and Economics, Hungary
- 2016 –2022 Review panel member for > 10 scientific journals, e.g. *Nature Communications*, *BBA-General subjects*, *ChemCatChem*, *ChemBioChem*, *PLoS ONE*, *Organic Letters*, *Journal of Agricultural and Food Chemistry* *Applied Biochemistry and Biotechnology*, *Biochemical Genetics*, *Archiv der Pharmazie*, *Current Perspectives in Chemical Biology*, *Scientific Reports*

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

- 2015 – member of the External Representatives Committee of the Hungarian Academy of Science
- 2016 – member of the Chemical Science committee within the Academic Committee of Cluj-Napoca,

- RESEARCH GRANTS**

| <i>Project Title</i> | <i>Funding source</i> | <i>Period</i> | <i>Role</i> |
|---|--|---------------|---|
| Exploring bacterial protein-protein interactions for antibiotic research – BACPROBIO – PNRR-III-C9-I8-2023/2024 | Ministry of Higher Education and Research, National Resilience Plan and EU. Budget: 1.500.000 EUR | 2024-2026 | Project responsible from UBB / Experienced researcher |
| RARE-PAL - Rational redesign of phenylalanine ammonia-lyases for reversing their natural selectivity PN-III-P1-1.1-TE-2019-2118 | UEFISCDI (Executive Agency for Higher Education, Research, Development and Innovation Funding, ~100 000 EUR) | 2020-2022 | Director |
| MIO-enzyme toolbox for the synthesis of non-natural amino acids PROMYS, IZ11Z0_166543/1 | SNSF (Swiss National Science Foundation, ~625 000 CHF) | 2016-2021 | Director |
| MIO-enzyme toolkit with expanded and defined targetability PN-II-RU-TE-2014-4-1668 | UEFISCDI (Executive Agency for Higher Education, Research, Development and Innovation Funding, ~125 000 EUR) | 2015-2017 | Director |
| Developing novel peptidomimetics based on unnatural amino acids, post-doctoral project POSDRU/159/1.5/S/137750 | POSDRU (Sectoral Operational Programme for Human Resources ~20 000 EUR) | 2014-2015 | Director |
| Stereoselective biotransformations of homo- and heteroaromatic diols BD 384/2008 | CNCSIS (National Council of Scientific Research in Higher Education ~20 000 EUR) | 2008-2010 | Director |
| Novel approaches to bacterial target identification, validation and inhibition NABATIVI | FP7-HEALTH | 2011-2013 | Member |
| Biocatalysis Engineering–Selective Magnetic nanoparticles-based Reactor Technology (BE-SMART)- PN-III-P2-2.1-PED-2019-5031 | UEFISCDI | 2020-2022 | Member |
| Integrated green technology system for producing advanced biofuels PN-II-PT-PCCA-2013-4-1006; 65/2014 | UEFISCDI | 2014-2016 | Member |
| Continuous flow enzymatic dynamic kinetic resolutions for stereoselective bioorganic processes PCE-2011-3-0775 | UEFISCDI | 2011-2016 | Member |
| Biocatalyst - click chemistry down streaming tandem based innovative kit for optically pure fine chemicals synthesis PN-II-PT-PCCA-2013-4-0734 | UEFISCDI | 2014-2016 | Member |
| Technology based on enzymatic transesterification process in order to obtain 2 nd generation biofuels CARENZI; Nr. 22094/01.10.2008 | CNCSIS | 2008-2011 | Member |

2024. 05.06. Cluj-Napoca