CURRICULUM VITAE



- **PERSONAL INFORMATION**

Family name, First name: BENCZE, László Csaba

Researcher unique identifier: ORCID ID: 0000-0003-0956-9749

Affiliation: Department of Chemistry Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, Str. Arany Janos, nr. 11, Cluj-Napoca, Romania

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- **CURRENT POSITION(S)**

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

- **EDUCATION**

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

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, Babeș-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, Babeș-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, Babeș-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, Babeș-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**

2023 *Research Excellence Award*, STAR-UBB Institute, Babeș-Bolyai University/Romania

2021 *Young Researcher Award - Life Sciences category*, Hungarian Academy of Sciences, Regional Committee in Cluj-Napoca/Hungary

2019 *Research Excellence Award*, STAR-U BB Institute, Babeș-Bolyai

University/Romania

2016 *Excellentia Prize 2016 – Excellence Award in the Professor category*, Student Council Babeș-Bolyai University/Romania

2014-2015 *Post-doctoral fellowship* (16 months), Enzymology and Applied Biocatalysis Research Centre, Babeș-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, ACS Catalysis, ChemCatChem, ChemBioChem, PLoSONE, Organic Letters, Journal of Agricultural and Food Chemistry Applied Biochemistry and Biotechnology, Biochemical Genetics, Archiv der Pharmazie, Current Research in Chemical Biology, etc.*

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

2015 – member of the External Representants Committee of the Hungarian Academy of Science

- **LANGUAGES: english, romanian, hungarian**
- **SKILLS AND COMPETENCES:**

Advanced skills in enzymology and applied biocatalysis, including enzyme kinetics, enzyme expression, isolation, purification, molecular cloning, enzyme engineering by semi-rational and

directed evolution based tehniques, enzyme assay developments, enzyme immobilisations, protein-ligand interaction studies

Experience in NMR spectroscopy of small organic molecules, reverse-phase, normal-phase and chiral HPLC, GC, SDS-PAGE, Western-Blot, BN-PAGE, 2D-PAGE, PCR, RT-PCR, fluorescence polarisation, isothermal calorimetry, differential scanning fluorimetry, CD-spectroscopy, photoaffinity labelling, FPLC, UPLC, Fmoc-peptide chemistry, fine organic synthesis

Computational skills: basic MS Office, Snapgene, Chemoffice, Gaussian, PyMOL, Topspin, MestreNOVA, Chemstation, GraphPad, etc.

- **RESEARCH GRANTS**

Project Title	*Funding source*	*Period*	*Role*
Multilateral Academic Projects Programme (MAPS) Combinatorial synthesis of cyclic peptide libraries and their application against emerging therapeutic targets No. IZ11Z0_230109	SNSF (Swiss National Science Foundation) and UEFISCDI (Executive Agency for Higher Education, Research, Development and Innovation Funding;~360 000 EUR/UBB)	2025-2029	Director UBB / Principal Investigator
Industrial Contract Research Agreement for enzyme engineering	Third Rock Venture/Enzyme Design (Massachussets, USA; ~190 000 USD)	2025-2026	Director
BACPROBIO - Exploring bacterial protein-protein interactions for antibiotic research PNRR-III-C9-I8-CF 92/31.07.2023, contract nr. 760251/28.12.2023	National Authority for Scientific Research and Innovation (ANCSI) (~1 300 000 EUR)	2024-2026	Project responsible UBB
EUTOPIA_HEALTH HORIZON-WIDERA-2023-ACCESS-03	HORIZON-CSA (Coordination and Support Actions – European Union; 6 000 000 EUR)	2024-2029	Management board member (1 of 4) of the coordinator UBB team
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	2008-2010	Director

	Education ~20 000 EUR)		
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 producingadvanced 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 2nd generation biofuels CARENZI; Nr. 22094/01.10.2008	CNCSIS	2008-2011	Member

2025.10.16. Cluj-Napoca **Dr. Laszlo Csaba BENCZE**