

CURRICULUM VITAE

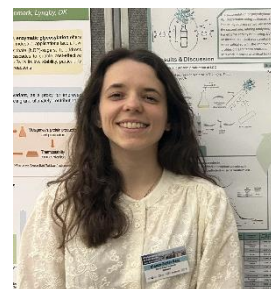
Personal Information

Family name, First name: **Nagy Blanka-Eszter**

Nationality: Romanian

Affiliation: Enzymology and Applied Biocatalysis Research Center,
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Education

- 2024 – present **PhD student** – Faculty of Chemistry and Chemical Engineering, Institute for Doctoral Studies, Doctoral School of Chemistry, Babeş-Bolyai University, Romania
Main topic: Development of high-throughput assays for screening enzyme inhibitors with antimicrobial activity
PhD Supervisors: Prof. Dr. Monica Ioana Tosa and Assoc. Prof. Dr. László-Csaba Bencze
- 2022- 2024 **MSc** – Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University, Romania
Specialisation: Chemistry and Engineering of Nano- Biomaterials
(average grade: 10/10, top of the class)
- 2022- 2024 **MSc** – Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University, Romania
Specialisation: Psychopedagogical Training Program
- 2018-2022 **BSc** – Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University, Romania
Specialisation: Chemistry and Engineering of Organic Substances, Petrochemistry and Carbochemistry (average grade: 9.87/10, top 5%)
- 2018-2022 **BSc** – Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University, Romania
Specialisation: Psychopedagogical Training Program

Work experience

- 01.07.2025- ongoing *Research Assistant* within research project PN-IV-P1-PCE-2023-2007, contract nr. 79PCE/01.07.2025, Immobilized PET-degrading enzymes for microplastic control (detection and removal) – EnzImPet (Director: Prof. Dr. Eng. Monica Ioana TOŞA), Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University, Romania
- 01.03.2025-ongoing *Research Assistant* within research project PNRR I8, contract nr. 760251/28.12.2023, Exploring bacterial protein-protein interactions for antibiotic research – BACPROBIO (Director: Dr. Jürgen Brem), Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University, Romania
- 05.03.2024-01.03.2025 *Chemist* within research project PNRR I8, contract nr. 760251/28.12.2023, Exploring bacterial protein-protein interactions for antibiotic research – BACPROBIO (Director: Dr. Jürgen Brem), Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University, Romania

- 01.11.2023-14.12.2023 *Consultant for students* within the ROSE project "Chimia non-formală"-
Competențe de succes pentru o carieră în chimie și inginerie chimică" - project
nr. 315/SGU/PV/III from 18.06.2021, Faculty of Chemistry and Chemical
Engineering, Babeș-Bolyai University, Romania
- 19.07.2021-08.08.2021 *Intern* at the European Drinks SRL., Stei, Romania

Scholarships and Awards

- 2024 CEEPUS Mobility Grant - Short Term Student- Teaching and Learning Bioanalysis, at
the Department of Inorganic and Analytical Chemistry, University of Debrecen - RO-
0010-2324-178419 - awarded by the National CEEPUS Office (NCO) of Hungary
- 2023-2025 *Talent management scholarship* – offered through the Collegium Talentum
Programme of Hungary (scholarship program supporting the professional
development of young Hungarians and advancing their intellectual careers)
- 2023-2024 *Special scholarship for scientific activity* – STAR-UBB Institute, Babeș-Bolyai
University, Romania
- 2023 1st place at the XXIX. International Conference of Chemistry - poster session
- 2023 Márton Áron Talent Scholarship – awarded by Balassi Scholarship, financed by the
Ministry of Foreign Affairs and Trade of Hungary
- 2022 Certificate - ETDK Award for Hungarian Higher Education – awarded by the Bolyai
Society
- 2022 1st place at the XXV. Transylvanian Students Scientific Conference (ETDK), Cluj-
Napoca, Romania

Conferences/seminars/workshops

- 2025 Mobility to study Cryo-EM technique at Diamond Light Source, United
Kingdom
- 21.09.2025-24.09.2025 The 14th International Conference on Protein Stabilization 2025, Timișoara,
Romania (Poster session)
- 21.03.2025-25.03.2025 Novel Enzymes 2025. Budapest, Hungary (Poster session)
- 29.06.2024-03.07.2024 European Congress on Biotechnology, ECB2024. Rotterdam, Netherlands
(Poster session)
- 25.10.2023-28.10.2023 XXIX. International Conference of Chemistry, Targu-Mures, Romania
(Poster session)
- 26.04.2023-30.04.2023 XIX. International Conference ‘Students for Students’, Cluj-Napoca,
Romania (Oral presentation)
- 12.04.2023-15.04.2023 36th National Scientific Students' Associations Conference (OTDK),
Biochemistry section, Szeged, Hungary (Oral presentation)
- 19.05.2022-22.05.2022 25th Transylvanian Students Scientific Conference (ETDK), Cluj-Napoca,
Romania (Oral presentation)

Publication

2025 Boros, K., Nagy, B.E., Tomoiagă, R.B., Tótós, R., Toşa, M.I., Paizs, Cs., Bencze, L.Cs., Fine tuning enzyme activity assays for monitoring the enzymatic hydrolysis of PET, Sci Rep 15, 1877 (2025). <https://doi.org/10.1038/s41598-024-84177-7>

Job related skills

Proper knowledge in: biocatalysis, enzymology, protein and genetic engineering with *competences in:* molecular cloning, primer design, expression and purification of enzymes and *skills related to different techniques:* High Performance Liquid Chromatography (HPLC), Fast Protein Chromatography (FPLC), UV-VIS spectroscopy, gel electrophoresis (SDS-PAGE, agarose gels), Western-Blot (WB), Polymerase Chain Reaction (PCR)

Computer and computational skills: Microsoft Office, ChemOffice, GraphPad, PyMOL, SnapGene, MatLab, ChemCAD, AspenPlus, Jupyter Notebook – Anaconda, SolidEdge, EndNote

Good organizational and teamwork skills, good time management and good communication abilities.

Language skills

Mother tongue: Hungarian; proficient user (C1) in Romanian and (C1) in English, and (B1) intermediate in Spanish.

Volunteering

2018-2022 active member of the faculty's students associations (Kolozsvári Magyar Ifjú Kémikusok Szövetsége-KOMIX - Organisation of young hungarian chemists of Cluj-Napoca))

06.03.2021-08.03.2022

President - Organisation of young hungarian chemists of Cluj-Napoca

08.02.2022-06.03.2021

Executive Vice President - Organisation of young hungarian chemists of Cluj-Napoca

17.01.2020-18.11.2021

Student representative - Faculty of Chemistry and Chemical Engineering

Cluj-Napoca, Romania