



Anca-Elena Anghel

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Address: Lucian Blaga Boulevard, no. 34, -I, 515800, Sebes, Romania (Home)

● WORK EXPERIENCE

08/2023 – CURRENT, Cluj-Napoca, Romania

ASSISTANT RESEARCHER - RESEARCH PROJECT PNRR-760042/23.05.2023, Advanced (multi)-enzymatic synthesis and purification processes for bio-based furan derivatives – ASPIRE (PROJECT DIRECTOR: PROF. DR. ANTON ALEXANDRU KISS)

FACULTY OF CHEMISTRY AND CHEMICAL ENGINEERING, BABEȘ-BOLYAI UNIVERSITY

Address Arany Janos Street, no. 11, 400028, Cluj-Napoca, Romania

10/2020 – 09/2021 Cluj-Napoca, Romania

CHEMIST (PART-TIME) - RESEARCH PROJECT TE-2019-1396 (PROJECT DIRECTOR: LECT. DR. AUGUSTIN MOȚ) FACULTY OF CHEMISTRY AND CHEMICAL ENGINEERING, BABEȘ-BOLYAI UNIVERSITY

UNIVERSITY

- **Main responsibilities:**
- HPLC and UV-Vis analyses;
- attempts to characterize native and recombinant squalene epoxidase from *Rhodotorula mucilaginosa*;
- extraction of active ingredients from topical creams.

Address Arany Janos Street, no. 11, 400028, Cluj-Napoca, Romania

10/2020 – 06/2021 Cluj-Napoca, Romania

TEACHER OF CHEMISTRY - MIDDLE SCHOOL (PART-TIME) TRANSYLVANIA COLLEGE

- planning and teaching chemistry lessons (Romanian and British curriculum) for middle school students, evaluation, grading, feedback.

● EDUCATION AND TRAINING

27/09/2021 – CURRENT Cluj-Napoca, Romania

PHD STUDENT FACULTY OF CHEMISTRY AND CHEMICAL ENGINEERING, BABEȘ-BOLYAI UNIVERSITY

- **Main responsibilities:**
- introducing mutations in the active site of phenolic acid decarboxylase from *Bacillus subtilis* (*BsPAD*) to develop mutant variants that are specific towards lignin-derived cinnamic acid derivatives.
- using whole-cell biocatalysts for the production of enantiopure *D*-aminoacids via a chemoenzymatic cascade;

- **Techniques learned:** gene cloning, bacterial cell transformation, recombinant enzyme purification, SDS-PAGE, Western blot, kinetic characterization of purified enzymes, site-directed mutagenesis, PCR, enzyme immobilization on different supports, HPLC method development, chemical synthesis of cinnamic acid derivatives.

Address Arany Janos Street, no. 11, 400028, Cluj-Napoca, Romania

Field of study Chemistry |

10/2018 - 07/2020 Cluj-Napoca, Romania

MASTER'S DEGREE IN ADVANCED CHEMISTRY Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University

Main responsibilities:

- chemical lysis of the yeast cell wall of *Rhodotorula mucilaginosa*; using column chromatography to purify the pigments biosynthesized by the yeast; using Principal Component Regression to simultaneously quantify the pigments from UV-Vis spectra of their mixtures.

Address Arany Janos Street, no. 11, 400028, Cluj-Napoca, Romania **Website** <http://chem.ubbcluj.ro/> |

Field of study Chemistry |

Thesis Simultaneous determination of torulene, torularhodin and beta-carotene in *Rhodotorula mucilaginosa* using molecular absorption spectroscopy and chemometric approaches

10/2020 - 09/2022 Cluj-Napoca, Romania

MASTER'S DEGREE IN MOLECULAR BIOTECHNOLOGY Faculty of Biology and Geology, Babeş-Bolyai University

- Main responsibilities:
- optimization of the purification process for recombinant squalene epoxidase;
- testing different yeast cell lysis methods in an attempt to isolate the native enzyme from *Rhodotorula mucilaginosa*;
- developing a TLC-based assay to test the activity of the obtained protein fractions.

Address Republicii Street, no. 44, 400015, Cluj-Napoca, Romania **Website** <https://biogeo.ubbcluj.ro/> |

Field of study Biochemistry |

Thesis Purification and activity assessment of recombinant and native squalene epoxidase from *Rhodotorula mucilaginosa*

10/2013 - 02/2018 Cluj-Napoca, Romania

BACHELOR'S DEGREE IN BIOCHEMICAL ENGINEERING Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University

Address Arany Janos Street, no. 11, 400028, Cluj-Napoca, Romania **Website** <http://chem.ubbcluj.ro/> |

Field of study Chemical engineering **Thesis** Production and stability of hemoglobin polycondensation products

● LANGUAGE SKILLS

Mother tongue(s): **ROMANIAN**

Other language(s):

	Understanding		Speaking		Writing
	Listening	Reading	Spoken production	Spoken interaction	
English	C2	C2	C2	C2	C2
German	B2	B2	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● DIGITAL SKILLS

ChemDraw | PyMOL | MEGA | Microsoft Office |

● ADDITIONAL INFORMATION

PUBLICATIONS

[Conventional versus Extended Standard Addition Method: Determination of Capsaicinoids in Topical Creams by High-Performance Liquid Chromatography – Diode Array Detection \(HPLC-DAD\)](#)

- 2022

A. E. Anghel, I. Balazs, A. C. Mot, 2023, Analytical Letters, 56:2, 200-215.

MetaboAge DB: a repository of known ageing-related changes in the human metabolome - 2020

T. Bucaciuc Mracica, A. E. Anghel, C. F. Ion, C. V. Moraru, R. Tacutu, G. A. Lazar, 2020, Biogerontology, 21:6, 763-771.

Chemistry Outreach – Reaching Out to Students and Laypeople - 2021

A. E. Anghel, R. Timofte, 2021, Chemistry Outreach - Reaching Out to Students and Laypeople, Journal of Innovation in Psychology, Education and Didactics, 25, 75-86.

CONFERENCES AND SEMINARS

07/2021 - 07/2021 - Young Researchers in Biosciences, July 2021, Cluj-Napoca, Romania

Simultaneous determination of torulene, torularhodin and β -carotene in *Rhodotorula mucilaginosa* using UV-Vis spectroscopy and chemometric approaches / Oral presentation Authors: A. E. Anghel, I. Grosu, A. C. Moț

09/2021 - 09/2021 - Processes in Isotopes and Molecules, September 2021, Cluj-Napoca, Romania

Determination of capsaicin and dihydrocapsaicin in topical creams using HPLC and extended standard addition calibration/Poster presentation Authors: A. E. Anghel, A. C. Moț

HOBBIES AND INTERESTS

Running, reading, learning foreign languages.

COMMUNICATION AND INTERPERSONAL SKILLS

Special Prize for Humor - Games of Science (local phase of the competition, Cluj-Napoca, 2023)

Games of Science is a contest that encourages students and researchers to explain their research topic of interest in terms that are accessible to the public. After receiving a public speaking training, the participants compete in elimination rounds of science presentations, ranging from 15 seconds to 3 minutes.

VOLUNTEERING

10/2015 - 12/2016 Cluj-Napoca, Romania

Growing GREAT Educational Programme I was involved in the „Share your passion" project, that brings teams of volunteers in foster care centers so that they can share their knowledge of a school subject they are passionate about with children and youth from disadvantaged environments.