



Ion Brînză

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WORK EXPERIENCE

"Lucian Blaga" University of Sibiu, Faculty of Sciences – Sibiu, Romania

City: Sibiu | Country: Romania

University Assistant Professor, Field: Histology, Animal Anatomy and Physiology

[25/02/2025 – Current]

- Teaching and research activities in Histology, Anatomy, and Animal Physiology.
- Preparation and delivery of lectures and practical laboratory sessions.
- Mentoring students in laboratory activities and research projects

"Alexandru Ioan Cuza" University of Iași – Iasi, Romania

City: Iasi | Country: Romania

PhD Student – Research Project "NICAGREG"

[01/01/2022 – 30/12/2024]

- Conducting experiments and analyzing data according to the objectives of the PN-III-P4-PCE-2021-1692 project.
- Performing literature reviews to provide a theoretical foundation for the research.
- Designing and implementing experimental protocols.
- Optimizing laboratory methods to obtain relevant results.
- Collaborating actively with research team members.
- Contributing to the writing of scientific publications and reports for funding bodies.
- Participating in national and international conferences to disseminate research results.
- Presenting results at internal project seminars.
- Attending relevant courses and workshops in the field of the project.
- Expanding theoretical and practical knowledge to support high-quality research.

"ANGELMED" SRL Medical Analysis Laboratory, Iași – Iasi, Romania

City: Iasi | Country: Romania

Biologist – Medical Analysis Laboratory

[17/07/2019 – 30/09/2023]

- Performing hematology medical analyses.
- Analyzing and interpreting hematology test results.
- Complying with standard operating procedures and quality regulations.

Faculty of Biology, "Alexandru Ioan Cuza" University of Iași – Iasi, Romania

City: Iasi | Country: Romania

Volunteer – Neurophysiology Laboratory

[01/10/2018 – 31/07/2019]

- Testing plant extracts with potential beneficial effects on neurodegenerative diseases.
- Participating in experimental research projects.

 **"ANGELMED" SRL Medical Analysis Laboratory, Iași** – Iași

City: Iași

Volunteer – Medical Analysis Laboratory

[01/12/2018 – 16/07/2019]

- Supporting laboratory staff in performing medical analyses.
- Gaining experience with laboratory workflows and standard procedures.

EDUCATION AND TRAINING

PhD in Neurobiology

Doctoral School of Biology, "Alexandru Ioan Cuza" University of Iași [01/10/2019 – 30/09/2024]

City: Iași | Website: <https://www.uaic.ro/en/studies/doctoral-schools/scoli-doctorale/>

Master's Degree in Molecular Genetics

Faculty of Biology, "Alexandru Ioan Cuza" University of Iași [01/10/2017 – 30/07/2019]

City: Iași | Website: <https://www.bio.uaic.ro/>

Bachelor's Degree in Biology

"Alexandru Ioan Cuza" University of Iași [01/10/2014 – 30/07/2019]

City: Iași | Website: <https://www.bio.uaic.ro/>

High School Diploma

Alexei Mateevici Theoretical High School [01/09/2011 – 01/08/2014]

City: Șoldănești | Country: Moldova

LANGUAGE SKILLS

Mother tongue(s): Romanian

Other language(s):

English

LISTENING B1 READING B2 WRITING B1

SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1

Russian

LISTENING C2 READING C1 WRITING C1

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

French

LISTENING A2 READING B1 WRITING A2

SPOKEN PRODUCTION A2 SPOKEN INTERACTION A2

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

DRIVING LICENCE

Driving Licence: B

CONFERENCES AND SEMINARS

[09/2019] Chișinău, Moldova

The impact of Agathisflavone on memory processes. Studies on an animal model of dementia. Life Sciences in the Dialogue of Generations, Chişinău, Moldova.

[06/07/2020 – 09/07/2020] 12th FENS Forum of Neuroscience, Glasgow, UK.

Impact of Baicalin and Rhoifolin on scopolamine-induced memory decline and brain oxidative stress in a zebrafish model (Danio rerio).

Brînză I., Boiangiu R.S., Omayma E., Hritcu L., Singab A.B.

[07/07/2021 – 09/07/2021] FEBS OPEN BIO, vol. 11.

Baicalin and Rhoifolin prevent scopolamine-induced memory impairment and brain oxidative stress in zebrafish (Danio rerio).

Brînză I., R.S. Boiangiu, L. Hritcu, O. Eldahshan, A.N. Singab

[21/11/2021] Student Scientific Communications Session, XIX Edition, Arad, Romania.

Impact of Rhoifolin, Baicalin and Agathisflavone on scopolamine-induced memory decline and brain oxidative stress in a zebrafish model (Danio rerio).

Brînză I., Hriţcu L., Omayma E.

[23/10/2021] SSFB, Iaşi, Romania.

Sweroside can prevent scopolamine-induced memory impairment and brain oxidative stress in zebrafish (Danio rerio).

Brînză I., Hriţcu L., Omayma E.

[10/04/2021] SSBF, Iaşi, Romania.

Evaluarea efectelor Rhoifolinei, Baicalinei şi a Agatisflavonei asupra performanţelor cognitive şi a statusului oxidativ la modelul de peşte zebură al bolii Alzheimer.

Brînză I., Hritcu L.

[20/08/2021] FENS Regional Meeting, Kraków, Poland.

Evaluation of the effects of Sweroside on cognitive performance and oxidative status in the zebrafish (Danio rerio) model of Alzheimer's disease.

Brînză I., Omayma E., Hritcu L.

[26/06/2021] International Congress of Geneticists and Breeders from the Republic of Moldova.

Quantification of neurotrophin expression in the hippocampus of an oil-treated dementia model volatile Pimpinella peregrina.

Brînză I., Hritcu L.

[04/07/2022 – 12/07/2022] YSF Congress, Vimeiro, Portugal.

Sweroside supports memory function by increasing mRNA expression of BDNF, CREB, NPY and decreasing AChE activity and brain oxidative stress in the scopolamine-induced zebrafish model (Danio rerio).

Brînză I., Stache A.B., Omayma E., Gorgan D.L., Mihăşan M., Hriţcu L.

[04/10/2022] RSBMB Conference, Cluj-Napoca, Romania.

Sweroside supports memory function in the scopolamine-induced zebrafish model (Danio rerio) of Alzheimer's disease.

Brînză I., Stache A.B., Omayma E., Gorgan D.L., Mihăşan M., Hriţcu L.

[21/09/2022] Life Sciences in the Dialogue of Generations, Chişinău, Moldova.

Baicalein prevents scopolamine-induced memory impairment in zebrafish by increasing the CREB protein level and the mRNA expression of BDNF and CREB gene.

Brînză I., A.B. Stache, O. Eldahshan, L. Gorgan, M. Mihasan, L. Hritcu

[05/10/2023] Studia Universitatis Babes-Bolyai, Cluj-Napoca, Romania.

Baicalein 5,6-dimethyl ether prevents scopolamine-induced memory impairment in zebrafish by increasing the CREB1 protein level and the mRNA expression of BDNF and CREB1 gene.

Brînză I., Stache A.B., Boiană R.S., Omayma E., Gorgan D.L., Mihăşan M., Hriţcu L.

[28/10/2024 – 01/11/2024] 35th National Biochemistry Congress of Balkan Clinical Laboratory Federation.

Neuroprotective Effects Of Ethanol Extracts From Solanum Macrocarpon Plant In A Zebrafish Model Of Alzheimer's Disease-Related Dementia Induced By Scopolamine.

Guliev C.I., Brînză I., Erdogan I.O., Hritcu L.ription...

[17/09/2024] Life Sciences in the Dialogue of Generations (VIIth Edition), Chişinău, Moldova.

Exploring the therapeutic potential of Coriandrum sativum essential oil in mitigating cognitive impairment and oxidative stress: insights from a zebrafish model.

Brînză I., Boiană R.S., Dumitru G., Hritcu L.

[07/03/2025] Cells and tissues transplantation. Actualities and perspectives, Chisinau, Moldova.

Neuroprotective effects of ethanolic extracts from solanum macrocarpon in a zebrafish model of scopolamine-induced Alzheimer's disease-related dementia

Brînză I., Guliev GI, Erdogan I.O., Hritcu L.

TECHNICAL AND LABORATORY SKILLS

Digital skills:

- Advanced proficiency in Microsoft Office Suite (Word, Excel, PowerPoint)
- Statistical analysis using *MedCalc* and *GraphPad Prism*
- Use of ANY-maze software for animal behavior analysis
- Image acquisition and analysis of gels and blots using Image Lab software

Experimental techniques:

- Assessment of oxidative stress (biochemical marker analysis)
- Agarose gel electrophoresis and SDS-PAGE
- Western blot technique for protein expression analysis
- PCR (Polymerase Chain Reaction) – detection and amplification of DNA/RNA
- Molecular modeling (molecular docking) for studying ligand-receptor interactions

AFFILIATIONS

Current Affiliations

- Romanian Aikikai Aikido Foundation — <https://www.aikikai.ro/index.php?lang=en>
- Order of Biochemists, Biologists and Chemists in the Romanian Healthcare System (OBBCSSR) — <https://www.obbcssr.ro/>
- Romanian Society of Biochemistry and Molecular Biology (SRBBM) — <http://srbbm.biochim.ro/SRr.php>
- Federation of European Biochemical Societies (FEBS) — <http://www.febs.org/>
- International Union of Biochemistry and Molecular Biology (IUBMB) — <http://www.iubmb.org/>
- Federation of European Neuroscience Societies (FENS) — <https://www.fens.org/>
- Romanian Society of Neuroscience (SNN) — <http://info.snn.ro/>

COURSES AND TRAINING

Courses and Training

- IT Essentials: PC Hardware and Software — Cisco Financial-Banking College Academy, 2012
- First Steps to Stock Market (*Primii pași spre bursă*) — Profit Point Iași, 2016
- Management and Entrepreneurship — Alison, 2017
- Outplacement Support of Doctorates in Emerging Areas — *Erasmus+ and European TEamsCHallenges+*, 2021
- Current Approaches in Neurological Disorder Research: From Animal Models to Human Brain-on-a-Chip — Nencki Institute of Experimental Biology, Warsaw, Poland, 2023
- Training Course within the IUS-SMART Project: *Legal and Entrepreneurial Education – The Key to Business Success!* — 15 March – 1 April 2024

GRANTS

Scholarships Awarded

- **2nd Dan Black Belt Diploma**, awarded upon passing the grading examination — Romanian Aikikai Aikido Foundation, 16 December 2024
- **Diploma of Outstanding Results**, awarded for exceptional performance during the doctoral studies — 30 October 2024
- **IUBMB-FEBS-PABMB Congress Travel Grant** — Lisbon, Portugal, 9–14 July 2022
- **YSF (Young Scientists' Forum) Congress Travel Grant** — Vimeiro, Portugal, 6–9 July 2022
- **FEBS Open Bio Congress Travel Grant** — 4–9 July 2021
- **The 12th FENS Forum of Neuroscience Travel Grant** — Glasgow, UK, 11–15 July 2020

2024

- **Rhoifolin, baicalein 5,6-dimethyl ether and agathisflavone prevent amnesia induced in scopolamine zebrafish (*Danio rerio*) model by increasing the mRNA expression of BDNF, NPY, EGR-1, NRF2 α , and CREB1 genes**
- Brinza, I., Boianiu, R. S., et al.
- *European Journal of Pharmacology*, 984, 177013. <https://doi.org/10.1016/J.EJPHAR.2024.177013>

2021

- **Baicalein 5,6-dimethyl ether prevents memory deficits in the scopolamine zebrafish model by regulating cholinergic and antioxidant systems**
- Brinza, I., Ayoub, I. M., et al.
- *Plants*, 10(6), 1245. <https://doi.org/10.3390/plants10061245>

2020

- **Ameliorative effects of rhoifolin in scopolamine-induced amnesic zebrafish (*Danio rerio*) model**
- Brinza, I., Abd-Alkhalek, A. M., et al.
- *Antioxidants*, 9(7), 580. <https://doi.org/10.3390/antiox9070580>

EDITORIAL ACTIVITIES

[03/2025 – Current]

Guest Editorial Activities

Guest Editor, *Pharmaceuticals* (MDPI) (ISSN 1424-8247, Impact Factor 4.3, indexed in SCIE, Scopus, PubMed, PMC)

Special Issue: *Therapeutic Potential of Scopolamine and Its Adverse Effect*

- Responsibilities include drafting the Special Issue scope, inviting potential contributors, pre-screening submissions, overseeing the peer-review process, and making editorial decisions.
- Actively promoting the Special Issue across academic networks, conferences, and social media.

Link: https://www.mdpi.com/journal/pharmaceuticals/special_issues/X7S5L69Q6B