

Diseri Aikaterini

Specialty: Chemist, PhD in Biochemistry

Address: Panepistimiou 3, Biopolis, Larissa, Greece, 41500

Phone: +302410565297

E-mail: adiseri@uth.gr

Date of birth: 01/04/1995

Nationality: Greek

EDUCATION

- 5/2019 – 2/2025* PhD Degree, Laboratory of Biochemistry, Faculty of Medicine, School of Health Sciences, University of Thessaly, Larissa
Grade 10/10 (Excellent)
Thesis title: Structural and functional analysis of the protein interactions of the hypoxia inducible factor HIF-2 α and study of their role in the adaptation of cells to oxygen deprivation.
Supervisor: Panagiotis Liakos, Professor of Medical Biochemistry
- 10/2017 – 10/2018* MSc Degree, Laboratory of Biochemistry, Faculty of Medicine, School of Health Sciences, University of Thessaly, Larissa
Postgraduate Program "Clinical Applications of Molecular Medicine" Grade: 9.6/10 (Excellent)
Thesis title: Study of the molecular mechanisms of regulation of the hypoxia inducible factor HIF-2 α .
Supervisor: Panagiotis Liakos, Professor of Medical Biochemistry
- 10/2013 – 07/2017* BSc in Chemistry, Laboratory of Biochemistry and Organic synthesis, Department of Chemistry, School of Sciences, University of Ioannina, Ioannina, Greece
Grade: 8.18/10 (Very Good)
Thesis title: Synthesis and study of the natural and a peptide analogue of the cationic antimicrobial peptide Crabrolin.
Supervisor: Panou Eugenia, Associate Professor of Biochemistry

SCHOLARSHIPS AND AWARDS

- 12/2022* Travel scholarship for participation in the 72nd Panhellenic Conference of the Hellenic Society of Biochemistry and Molecular Biology.
- 10/2020- 10/2023* Scholarship from the Research, Innovation and Excellence Structure of the University of Thessaly in the framework of the three-year scholarship program for PhD candidates.
- 10/2019- 10/2020* Scholarship from the Research, Innovation and Excellence Structure of the University of Thessaly in the framework of the scholarship program for PhD candidates.

RESEARCH EXPERIENCE

- 05/2024 – 11/2025* Researcher in the framework of a research project at the Laboratory of Structural and Functional Biochemistry, Department of Biochemistry and Biotechnology, University of Thessaly, Larissa.
Description: Participation in a research project of HFRI with the aim of investigating and using polysaccharides derived from mealworms as biodegradable packaging material under the supervision of Professor Mr. Matthiopoulos Konstantinos.
Main responsibilities: Organization and execution of laboratory experiments, data collection and analysis, collaboration with other researchers to develop new methods and approaches, publication of results in scientific journals and conferences.

LABORATORY TECHNIQUES

Biochemistry: SDS-PAGE and Western blot, staining with Coomassie and silver nitrate, immunoprecipitation, indirect and direct immunofluorescence, subcellular fractionation.

Biotechnology: bacterial transformation, overexpression and purification of proteins by affinity chromatography, isolation of protein from inclusion bodies and folding, protein purification via Äkta-FPLC system and isothermal titration calorimetry. Extraction and nutritional analysis of polysaccharides from mealworms, gel preparation and characterization of their properties as packaging material.

Cell biology: extensive cell culture experience, 2D and 3D culture methods (e.g. methylcellulose), transfection of cells through chemical media/liposomes

Molecular biology: isolation and analysis of DNA and RNA from various samples (cells, tissues, plants, water), primer design, PCR, qPCR, molecular cloning of plasmids, DNA sequencing analysis, ChIP.

Cell assays: cell proliferation measurement assay, cell cycle/apoptosis analysis with ELISA and fluorimetric assays: Luciferase, wound healing assay.

IT: Image J, GraphPad Prism, AdobePhotoshop, SnapGene, Serial Cloner, I-TASSER, BeStSel, NanoAnalyse, Canvas

TEACHING EXPERIENCE

10/2025- present Participation in the teaching of the laboratory exercises of the course "Enzymology" (Compulsory, 4th semester) of the Department of Biochemistry and Biotechnology of the University of Thessaly, Larissa.

Description: Participation in the training of undergraduate students of Biochemistry and Biotechnology in isolation techniques and enzyme activity analysis under the supervision of Ass. Professor of Biochemistry Mr. Balatsou Nikolaos.

Main responsibilities: Organization and preparation of the laboratory for the conduct of experiments, supervision and training of undergraduate students in the use of new laboratory techniques and machinery, assistance in the collection and analysis of results. Supervision of the conduct of the examinations.

10/2023- 01/2024 Participation in the teaching of the laboratory exercises of the course "Biochemistry (I) of Human Enzymes and Metabolism" (Compulsory, 2nd semester) of the Department of Medicine of the University of Thessaly, Larissa.

Description: Participation in the training of undergraduate medical students in biochemical techniques and analyses under the supervision of Professor of Medical Biochemistry Mr. Panagiotis Liakos.

Main responsibilities: Organization and preparation of the laboratory for the conduct of experiments, supervision and training of undergraduate students in the use of new laboratory techniques and machinery, assistance in the collection and analysis of results.

10/2021- 09/2024 Participation in the supervision of diploma theses of postgraduate and undergraduate students, at the Biochemistry Laboratory, Department of Medicine, University of Thessaly, Larissa.

Description: Participation in the supervision of diploma theses on the regulation of cancer cells under conditions of hypoxia and stress under the supervision of Professor of Medical Biochemistry Mr. Panagiotis Liakos.

Main responsibilities: Supervising and organizing the execution of laboratory experiments by students, training students in the use of new laboratory techniques and machines, assisting in data collection and analysis.

PUBLICATIONS IN PEER-REVIEWED SCIENTIFIC JOURNALS

1. **Aikaterini Diseri**, Ioanna-Maria Gkotinakou, Christina Befani, Ioannis Pappas, Martina Samiotaki, Georgios Panayotou, Panagiotis Liakos. HIF-2 α Interaction with Ataxin-10 Enhances HIF-2 α Binding to Its Target Gene Promoters. *Int. J. Mol. Sci.* **2025**, *26*, 10417. <https://doi.org/10.3390/ijms262110417>

2. **Aikaterini Diseri**, George Stravodimos, Aikaterini Argyriou, Georgios A. Spyroulias, Demetres D. Leonidas, and Panagiotis Liakos. "Expression, purification, and biophysical analysis of a part of the C-terminal domain of human hypoxia inducible factor-2 α (HIF-2 α)." *Biochemical and Biophysical Research Communications*, 739 (2024): 150965. doi: 10.1016/j.bbrc.2024.150965

3. Christina Befani, Persephoni Giannouli, **Aikaterini Diseri**, Anastasia Bari, Chrysoula Apostologamvrou, Chryssanthi Antoniadou, Panagiotis Liakos, and Dimitris Vafidis. "Holothuria tubulosa extract represses proliferation and HIF- α activity by inhibiting Erk1/2 phosphorylation in liver cancer cell line under hypoxia." Journal of Food Biochemistry (2024). <https://doi.org/10.1155/2024/9278021>

4. Evangelia Kourouniotou, Nikoleta Karagianni, Anastasia Bari, **Aikaterini Diseri**, Marianthi Hatzioannou, Persephoni Giannouli. "Effects of Guarana Aqua Extracts on Fermentation Kinetics and Quality Properties of Set-Type Yogurts." Journal of Food Processing and Preservation, vol. 2023, Article ID 4504541, 10 pages, 2023. <https://doi.org/10.1155/2023/4504541>

LANGUAGES AND SKILLS

Languages: Greek: Mother tongue, English: Certificate of Proficiency in English, University of Michigan, German: Zertifikat B2, Goethe Institut

Information Technology: Certified computer user by ACTA (MS Word, Excel, Powerpoint & Outlook)

First Aid: Certified first aid provider, Chalkiopoulos Filippos Lifelong Learning Center - Seminar Center.

Special Education: Training seminar in Special Education by the Center for Special Education, Training and Lifelong Learning of the University of the Aegean.

SCIENTIFIC ACTIVITIES

Member of the Union of Greek Chemists

Member of the Hellenic Society of Biochemistry and Molecular Biology