



Georgia-Persephoni Voulgaridou

MSc, PhD.

ASSISTANT PROFESSOR OF PHYSIOLOGY

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Georgia-Persephoni Voulgaridou, PhD

EDUCATION

MSc,
"HUMAN REPRODUCTION"
Department of Medicine,
Democritus University of Thrace,
Greece
2022 - 2023

PHD,
**"THE ROLE OF ALDEHYDE
DEHYDROGENASE 3A1
(ALDH3A1) IN CORNEAL
HOMEOSTASIS"**
Department of Molecular Biology
& Genetics. Democritus University
of Thrace, Greece
2008 - 2013

**BACHELOR'S DEGREE,
MOLECULAR BIOLOGY &
GENETICS**
Democritus University of Thrace,
Greece
2002 - 2007

PROFESSIONAL DEVELOPMENT

ASSISTANT PROFESSOR OF PHYSIOLOGY

06/2025 - Now | Department of Medicine, Democritus University of Thrace, Greece

SENIOR SCIENTIST – FACILITY MANAGER

06/2021 - 06/2023 | Department of Molecular Biology and Genetics, Democritus University of Thrace, Greece

Operational Program Entrepreneurship, Competitiveness and Innovation (EPANEK) project: "InTechThrace: Integrated Technologies in biomedical research: multilevel biomarker analysis in Thrace"

POSTDOCTORAL RESEARCHER

06/2016 - 02/2019 | Department of Molecular Biology and Genetics, Democritus University of Thrace, Greece

HORIZON 2020, EU Research and Innovation programme:

"MARISURF- Novel sustainable marine bio-surfactant/bio-emulsifiers for commercial exploitation"

POSTDOCTORAL RESEARCHER

04/2014 - 09/2015 | Faculty of Medicine, University of Ioannina, Greece

Greece-China Bilateral R&D Cooperation 2013-2015 grant:

"Bee-based natural products as potential cosmeceutical agents with health-promoting properties against UV-induced skin photo-ageing"

POSTDOCTORAL RESEARCHER

09/2013 - 03/2014 | Department of Electrical & Computer Engineering, University of Patras, Greece |

THALIS, Reinforcement of the Interdisciplinary and/or Inter-institutional Research and Innovation programme:

"Multilevel assessment on biological effects of radiofrequency electromagnetic waves"

TEACHING AS A FACULTY MEMBER

UNDERGRADUATE COURSES

2025-Now | Department of Medicine, Democritus University of Thrace, Greece

-Physiology I (3 ECTS)

-Physiology II (6 ECTS)

-Physiology III (5 ECTS)

-Neuroscience Physiology – Elective Course (2 ECTS)

2025-Now | Department of Nursing, Democritus University of Thrace, Greece

-Physiology (5 ECTS)

SCIENTIFIC ACHIEVEMENTS

PUBLICATIONS & CONFERENCES:

- Original articles in peer-reviewed journals: **16**
- Review articles: **5**
- Citations in peer-reviewed journals: **784**
- h-index: **14**
- Presenting research findings in conferences: **16**

Full list of publications:

ORCID: <https://orcid.org/0000-0003-0173-8560>

REVIEWER

- Biomedical and Environmental Sciences
- International Journal of Molecular Sciences
- Plos One
- Molecules
- Antioxidants

EDITOR

Guest Editor: Life (IF 3.817, ISSN 2075-1729) special issue "*Origins, Properties, and Therapeutic Perspectives of Cancer Stem Cells*"

Guest Editor: Pharmaceuticals (IF 4.3, ISSN 1424-8247) special issue "*Therapeutic Potential of Aldehyde Dehydrogenases*"

TEACHING AS A FACULTY MEMBER - CONTINUED -

POSTGRADUATE COURSES

2025-Now | Invited Lecturer in the following postgraduate Master's programmes:

- Translational Research in Biomedicine (DUTH)
- Didactics of Biosciences (DUTH)
- Applied Bioinformatics and Data Analysis (DUTH)

TEACHING AS A FIXED TERM LECTURER

UNDERGRADUATE COURSES

2019-2021 | Department of Molecular Biology and Genetics, Democritus University of Thrace, Greece

- Molecular Biology I (6 ECTS)
- Pharmaceutical Chemistry and Chemistry of Natural Products (3 ECTS)
- Molecular Ecology (3 ECTS)
- Plant Molecular Biology (3 ECTS)

2017| Department of Agricultural Development, Democritus University of Thrace, Greece

- Molecular Biology (4 ECTS)

FELLOWSHIPS

PHD FELLOWSHIP

Research Funding Program: Heracleitus II. Investigating in knowledge society through the European Social Fund / Democritus University of Thrace, Greece
2010 - 2013 (Budget: 42.000 €)

EMBO SCIENTIFIC EXCHANGE GRANTS.

Receiving Institute: Department of Clinical Sciences, Lund University, Sweden
(15/10/2022-22/10/2022) (Budget: ~1100 €)

SELECTED PUBLICATIONS

- O. Pagonopoulou et al. (2025). Protective Effect of Aromatic Plant Essential Oil Administration on Brain Tissue of PTZ-Treated and Non-Treated Mice. *Int. J. Mol. Sci.*
- **G.P. Voulgaridou***, et al. (2023). Investigating the Functional Roles of Aldehyde Dehydrogenase 3A1 in Human Corneal Epithelial Cells. *Int J Mol Sci.* (***corresponding author**)
- **G.P. Voulgaridou**, et al. (2023). Identification of a peptide ligand for human ALDH3A1 through peptide phage display: Prediction and characterization of protein interaction sites and inhibition of ALDH3A1 enzymatic activity. *Front. Mol. Biosci.*
- I. Tsochantaridis, A. Roupas, S. Mohlin, A. Pappa and **G.P. Voulgaridou*** (2023) The Concept of Cancer Stem Cells: Elaborating on ALDH1B1 as an Emerging Marker of Cancer Progression. *Life.* (***corresponding author**).

RESEARCH SKILLS

Cloning
Real time PCR
Immunofluorescence
Cell cultures
Transfection
Fluorescence Microscopy
Bacterial Cell Cultures
Molecular Cloning
Protein Purification
Phage Display
Western Blotting
Flow Cytometry
Next Generation Sequencing
CRISP/cas9 Knockout

PROFESSIONAL

AFFILIATIONS

-Hellenic Society of Biochemistry
and Molecular Biology
- Hellenic Society of Physiology

SELECTED PUBLICATIONS - CONTINUED -

- I. Tsochantaridis, et al. (2022) Aldehyde Dehydrogenase 1B1 is implicated in DNA damage response in human colorectal adenocarcinoma. *Cells*.
- I. Tsochantaridis, et al. (2021). Profiling of Aldehyde Dehydrogenase Isoforms in In Vitro Formed Tumorspheres. *Int Anticancer Res*.
- **G.P. Voulgaridou**, et al. (2021). Toxicity profiling of biosurfactants produced by novel marine bacterial strains. *Int J Mol Sci*.
- E. Spanidi, et al. (2021) new controlled release system for propolis polyphenols and its biochemical activity for skin applications. *Plants (Basel)*.
- V. Xanthis, et al. (2021) Antioxidant and cytoprotective potential of the essential oil Pistacia lentiscus Var. chia, and its major components, myrcene and α -pinene. *Antioxidants (Basel)*.
- I. Tsochantaridis, et al. (2021) Aldehyde dehydrogenase 1B1 is associated with altered cell morphology, proliferation, migration and chemosensitivity in human colorectal adenocarcinoma cells. *Biomedicines*
- A. Karapetsas **G.P. Voulgaridou** et al. (2020) Honey extracts exhibit cytoprotective properties against UVB-induced photodamage in human experimental skin models. *Antioxidants (Basel)*.
- **G.P. Voulgaridou**, et al. (2020). Aldehyde dehydrogenase 3A1 confers oxidative stress resistance accompanied by altered DNA damage response in human corneal epithelial cells. *Free Radic Biol Med*.
- A. Karapetsas*, **G.P. Voulgaridou*** et al. (2019) Propolis extracts inhibit UV-mediated photodamage in human experimental in vitro skin models. *Antioxidants (Basel)*. (*equal contribution).
- **G.P.Voulgaridou**, et al. (2017) Human aldehyde dehydrogenase 3A1 (ALDH3A1) exhibits chaperone-like function. *Int J Biochem Cell Biol*.
- **G.P.Voulgaridou**, et al. (2016) Aldehyde dehydrogenase 3A1 promotes multi-modality resistance and alters gene expression profile in human breast adenocarcinoma MCF-7 cells. *Int J Biochem Cell Biol*.
- **G.P.Voulgaridou**, et al. (2013) Efficient E.coli expression strategies for production of soluble human crystallin ALDH3A1. *Plos One*.
- **G.P.Voulgaridou**, et al. (2011) DNA damage induced by endogenous aldehydes: current state of knowledge. *Mutat.Res*.

WORKSHOPS & SPECIALIZED TRAINING

5TH LABORATORY ANIMAL SCIENCE EUROPEAN UNION FUNCTIONS COURSE
FELASA accredited Course 056/16-ABCD modules/Rodent Animal Models
National & Kapodistrian University of Athens, Greece
30/09/2019-10/10/2019

WORKSHOP ON BIOMOLECULAR INTERACTIONS

(CIBIT Unit)/Department of Molecular Biology & Genetics, Democritus University
of Thrace, Greece
11/10.2010-14/10/2010

SEMEN ANALYSIS AND PROCESSING COURSE

Hellenic Society of Clinical Embryology and Biology of Human Reproduction
Laboratory of Physiology, Medical School of Democritus University of
Thrace, Alexandroupolis, Greece
14/06/2025-16/07/2025