

PERSONAL INFORMATION

Efsthia Ioannou



Section of Pharmacognosy and Chemistry of Natural Products, Department of Pharmacy, School of Health Sciences, National and Kapodistrian University of Athens, Panepistimiopolis Zografou, Athens 157 71, Greece

+30 210 7274592

eioannou@pharm.uoa.gr

Sex Female | Date of birth 01/03/1979 | Nationality Greek

WORK EXPERIENCE

09/2025 – present

Professor in the discipline “Pharmacognosy and Chemistry of Natural Products with an emphasis on the study of metabolites from marine organisms”

Section of Pharmacognosy and Chemistry of Natural Products, Department of Pharmacy, School of Health Sciences, National and Kapodistrian University of Athens

EDUCATION AND TRAINING

12/2005 – 03/2009

Ph.D. in Pharmacy

Section of Pharmacognosy and Chemistry of Natural Products, Department of Pharmacy, School of Health Sciences, National and Kapodistrian University of Athens

Thesis: Isolation and structure elucidation of bioactive secondary metabolites from the brown alga *Dilophus spiralis* and investigation of its endophytic bacteria

10/2003 – 11/2005

M.Sc. in “Isolation, Development, Production and Evaluation of Bioactive Natural Products”

Section of Pharmacognosy and Chemistry of Natural Products, Department of Pharmacy, School of Health Sciences, National and Kapodistrian University of Athens

09/1996 – 07/2003

B.Sc. in Agricultural Biotechnology (recognized as an integrated M.Sc.)

Department of Agricultural Biotechnology, Agricultural University of Athens

RESEARCH INTERESTS

- Isolation and structure elucidation of secondary metabolites from marine and terrestrial macroorganisms aiming at the assessment of their biological activity or their ecological role.
- Isolation of symbiotic, endophytic or epiphytic, as well as free-living microorganisms (bacteria and fungi) from the marine environment (sediments or macroorganisms) aiming at the isolation and structural characterization of their secondary metabolites.
- Biotransformations of bioactive natural products using marine-derived microorganisms aiming at the production of analogues and their biological activity evaluation thereof, as well as their structure-activity relationship study.
- Application of synthetic biology tools for the exploration of the uncharted chemical space aiming at the discovery of new bioactive natural products.
- Development of methodology based on LC-DAD-MS and NMR and in-house databases aiming at the metabolomic fingerprinting of marine organisms.
- GC-MS analyses of volatile constituents of essential oils from congener plant taxa aiming to distinguish chemotypes for chemotaxonomic analyses.
- Chemical interconversions of secondary metabolites aiming at the production of semisynthetic analogues for structure elucidation purposes or/and their biological activity evaluation.
- Evaluation of the biological (e.g. antibacterial, antifungal, antioxidant, antifouling) activity of extracts and / or secondary metabolites.
- Isolation of marine polysaccharides and other biopolymers and development of methodology aiming at the production of new biomaterials for biomedical applications.

RESEARCH EXPERIENCE

Publications

114 publications in peer-reviewed journals, including 107 original research publications and 7 review articles, citations (excluding self-citations) 3.056, h-index 30 (according to scopus database on 02/2026)

Selected recent publications:

- Duan Y.T., Zhang C., Koutsaviti A., Tammam M.A., Harizani M., Roussis V., Zhao Y., **Ioannou E.**, Kampranis S.C. Biosynthesis of 17-carbon terpenoids in bacteria. *J. Am. Chem. Soc.*, **2026**, 148, 640-651.
- Wang L., Rosenfeldt M., Koutsaviti A., Harizani M., Zhao Y., Leelahakorn N., Frachon A., Raadam M.H., Miettinen K., Pateraki I., **Ioannou E.**, Kampranis S.C. Systematic biotechnological production of isoprenoid analogs with bespoke carbon skeletons. *Nat. Commun.*, **2025**, 16, 2098.
- Tammam M.A., Tsoureas N., Diakaki D.I., Duarte C.M., Roussis V., **Ioannou E.** Thuwalamides A–E: polychlorinated amides from the marine sponge *Lamellodysidea herbacea* collected from the Saudi Arabian Red Sea. *Phytochemistry*, **2025**, 230, 114315.
- Kikionis S., Iliou K., Karra A.G., Polychronis G., Choinopoulos I., Iatrou H., Eliades G., Kitraki E., Tseti I., Zinelis S., **Ioannou E.**, Roussis V. Development of bi- and tri-layer nanofibrous membranes based on the sulfated polysaccharide carrageenan for periodontal tissue regeneration. *Mar. Drugs*, **2023**, 21, 565.
- Duan Y.T., Koutsaviti A., Harizani M., Ignea C., Roussis V., Zhao Y., **Ioannou E.**, Kampranis S.C. Widespread biosynthesis of 16-carbon terpenoids in bacteria. *Nat. Chem. Biol.*, **2023**, 19, 1532-1539.

Conference Presentations

248 oral and poster presentations in international and national conferences

Additional Research Work

3 monographs, 4 chapters in books, 9 international and national patents

Funding

as Coordinator or Principal Investigator: 10 national and international competitive research grants (>1.700.000 €)
participation in the preparation, submission, implementation and management: 17 national and international competitive research grants

TEACHING EXPERIENCE

Courses for Undergraduate Students (at present)

- compulsory course **Pharmacognosy II Laboratory** for the 3rd-year students of the Department of Pharmacy, NKUA
- compulsory course **Pharmacognosy III** for the 4th-year students of the Department of Pharmacy, NKUA

Courses for Postgraduate Students (at present)

- compulsory course **Marine Pharmacognosy – Synthesis of Natural Products** at the Programme of Postgraduate Studies on “Isolation, Development, Production and Evaluation of Bioactive Natural Products” of the Department of Pharmacy, NKUA
- compulsory course **Bioactive Natural Products** at the Programme of Postgraduate Studies on “Isolation, Development, Production and Evaluation of Bioactive Natural Products” of the Department of Pharmacy, NKUA
- compulsory course **Analysis of Natural Products I** at the Programme of Postgraduate Studies on “Isolation, Development, Production and Evaluation of Bioactive Natural Products” of the Department of Pharmacy, NKUA
- compulsory course **Spectroscopy II** at the Programme of Postgraduate Studies on “Isolation, Development, Production and Evaluation of Bioactive Natural Products” of the Department of Pharmacy, NKUA
- compulsory course **Marine Resources** at the Interinstitutional Programme of Postgraduate Studies on “Oceanography and Management of the Marine Environment”
- elective course **Natural Products from Marine Organisms and their Applications** at the Interinstitutional Programme of Postgraduate Studies on “Oceanography and Management of the Marine Environment”
- compulsory course **Laboratory Techniques II** at the Programme of Postgraduate Studies of the Department of Food Quality and Chemistry of Natural Products, Mediterranean Agronomic Institute of Chania as Invited Professor

Supervision	19 B.Sc. students, 22 M.Sc. students, 6 Ph.D. students, as well as 13 Ph.D. students as a member of the advisory committee
Co-supervision	27 M.Sc. students, 11 postdoctoral researchers, a high number of visiting researchers from abroad

ADMINISTRATIVE EXPERIENCE

Selected positions held:

- Member of the Steering Committee of the Programme of Postgraduate Studies on "Isolation, Development, Production and Evaluation of Bioactive Natural Products" (Section of Pharmacognosy and Chemistry of Natural Products, Department of Pharmacy, NKUA)
- Member of the Committee for the Curriculum of the Programme of Undergraduate Studies of the Department of Pharmacy (2023-present)
- Member of the Committee for the Internal Mobility Programme of students between different BSc programmes of Greek universities for the Department of Pharmacy (2024- present)
- Member of the Committee for the Practical Training / Internship of the Department of Pharmacy (2025- present)
- Academic coordinator of the Bilateral Inter-Institutional Agreement between the Department of Pharmacy of NKUA and the Faculty of Pharmacy and Biochemistry of the University of Zagreb for the exchange of students and/or staff in the context of the Erasmus+ programme (2025-2029)
- Member of the Committee for the Website and Curriculum & Syllabus Booklet of the Department of Pharmacy (2016-2023)
- Meetings' Secretary (07/2017-06/2022) and Regional Representative (06/2011-03/2015) of Phytochemical Society of Europe
- Member of the European Board of Directors for the European Conferences on Marine Natural Products (ECMNP Meetings) (09/2017-present)

COMMISSION OF TRUST

- Participation in the Organizing and Scientific Committees of scientific conferences, including acting as chair of the organizing committee for the Trends in Natural Products Research: A PSE Young Scientists' Meeting (Crete, Greece, 23-26/05/2022) and chair of the organizing committee for the 10th European Conference on Marine Natural Products (Crete, Greece, 3-7/09/2017)
- Member of the Editorial Board in Phytochemistry (2022-present)
- Member of the Editorial Board in Marine Drugs (2017-present)
- Guest Editor for various special issues in the scientific journals Marine Drugs, Materials, Frontiers in Chemistry, International Journal of Molecular Sciences
- Recurring reviewer for more than 50 scientific journals
- Participation as external member of examination committees of a number of PhD students' theses from abroad (South Africa, Ireland, Italy, Spain)
- Invited speaker in Greece and abroad (eg. The Netherlands, Germany, Slovenia, Portugal, Croatia, Czech Republic, Vietnam, Hong Kong, Saudi Arabia, Brazil, India)
- Member of various COST actions (FA1103, CM1407, CA18238, CA20106, CA22102)