

Dr. Antigoni Cheilari

📞 NMR room: +30210727-4531 / Labs: -4524, -4767, Cell phone: +30 6971883994

✉ Email: cheilarianti@pharm.uoa.gr / nmr.core.facility.ekpa@gmail.com

✂ ResearchGate: <https://bit.ly/3YYPYRz>, • LinkedIn: <http://bit.ly/3KkzBe3>, • Google Scholar: <https://bit.ly/47t2vk6>, • Web of Science: <https://bit.ly/3vkm7cR>, • Frontiers Loop profile: <https://bit.ly/3S3fnJc>, • Academia.Edu: <https://bit.ly/3S853j5>

Brief description: My research interests span a wide range of fields, focusing primarily on **a)** the discovery and study of bioactive natural products, **b)** the application of spectroscopic and spectrometric methodologies, such as Nuclear Magnetic Resonance Spectroscopy (NMR) and Mass Spectrometry (MS), for the structural characterisation of secondary metabolites and potential drug candidates, as well as the evaluation of their interaction with selected targets/biological substrates through biological assays, **c)** the identification of drug-leads from ethnopharmacological sources for drug development; and **d)** the development and application of innovative methodologies for the valorization of by-products generated during the processing of medicinal and aromatic plants. As a postdoctoral researcher in the group of Spectroscopy and Chemometrics (Prof. Morten Arendt Rasmussen), Department of Food Chemistry, University of Copenhagen, Denmark (<https://bit.ly/3TOvJH6>), I have specialized in applying advanced chemometric methods in combination with analytical techniques, biological assays and multivariate statistical tools for the discovery of new bioactive natural products.

I have participated as a Marie Curie Fellow in the R&D departments of *Dermopartners S.L (Sesderma)*, Spain, *Tecminho*, Portugal, *Galen-N Ltd* and *VenusRoses Labsolutions Ltd.*, Bulgaria, *NovaMechanics Ltd*, Cyprus, *Lavipharm S.A.* and *Korres Natural Products S.A*, Greece. I am a member of the Editorial Board of *Frontiers Pharmacology/Ethnopharmacology*, a Certified Assessor - Expert of the GGET and a member of the Board of Directors of the Society for Medicinal Plant and Natural Product Research (GA-<https://bit.ly/3KIZCdb>). I have co-supervised 5 PhD candidates, 8 postgraduate and 3 undergraduate students. I have 28 papers in peer-reviewed international journals, 1 Book chapter, given 12 talks as invited speaker, >30 publications in peer-reviewed international conference proceedings volumes and Short Communications, and >40 posted papers in international and national conferences.

Since January 2022, as a certified user of advanced applications from Bruker, I have been responsible for the installation, maintenance and good operation of the Avance NEO 500 MHz spectrometer at the Horizontal Infrastructure “NMR Core Facility” of NKUA. My responsibilities include user training, spectra acquisition, and pulse sequences installation, to support both educational and research needs across university departments.

Education: • **05/2016 PhD in Pharmaceutical Sciences (Pharmacy/Pharmacognosy)**, Institute of Pharmacy/Pharmacognosy, Faculty of Chemistry and Pharmacy, University of Innsbruck, Center for Chemistry and Biomedicine, Innsbruck, Austria. Supervisor: Prof. Hermann Stuppner. **Thesis title:** NMR and LC-MS-based methodologies for the characterization and quality control of medicinal plants.

• **06/2012 MSc in “Isolation, Development, Production and Evaluation of Bioactive Natural Products”**, Department of Pharmacognosy and Natural Products Chemistry, Faculty of Pharmacy, National and Kapodistrian University of Athens, Greece. Supervisor: Prof. Nektarios Aligiannis. **Thesis title:** Investigation of the phytochemical profile of *Genista* species belonging to the Greek flora.. • **07/2010 BSc in Pharmacy (5-years degree)**, Faculty of Pharmacy, National and Kapodistrian University of Athens, Greece. **State Diploma License for Pharmacists.**

Scholarships: • **State Scholarships Foundation (IKY-32 months)** doctoral scholarship, • **Uni Innsbruck** doctoral scholarship for the promotion of young scientists (11 months), • **Bionorica GmbH** (36

months), • **7 best poster awards and travel grants** in international/national congresses to present scientific results.

European Research Projects: • **2024-2027: ETHCSTWIN** - HORIZON-WIDERA-2023-Twinning: “Reinforcing the Scientific Excellence of the Institute for Ethnopharmacological Studies and Phytotherapy (IESP) through Twinning with Computer Science (CS)”. • **2023-2026: NanoCosmos** - Horizon-TMA-MSCA-2021: “Nanoencapsulation of bioactive compounds from plant by products to produce sensitive skin cosmetics”. • **2020-2024: SECRETed** - H2020-FNR-2020: “Sustainable exploitation of bio-based compounds revealed and engineered from natural sources”. • **2018-2022: EthnoHERBS** - H2020-MSCA-RISE-2018: “Conservation of European biodiversity through exploitation of traditional herbal knowledge for the development of innovative products”. • **2016-2020: EXANDAS** - H2020-MSCA-RISE-2015: “Exploitation of aromatic plants’ by-products for the development of novel cosmeceuticals and food supplements”. • **2013-2017: MICROSMETICS** - FP7-PEOPLE-IAPP-2013: “Exploitation of microbial biodiversity for the discovery and development of novel cosmeceutical agents”. • **2012-2016: NATPROTEC** - FP7-PEOPLE-IAPP-2011 Marie Curie Actions: “Integrated technologies for the discovery and development of cosmeceutical agents from plant biodiversity”.

National Research Projects: • **2020-2022: Saleba** - Operational Program of Western Macedonia 2014–2020/DMR1-0014355, MIS 5069228: “Reproduction and cultivation of Orchidaceae plants for the development of a novel salep beverage”. • **2019-2022: BIOREACT** - EPAnEK 2014-2020/T2EΔK-02927: “Development and optimization of *in vitro* culture methods in bioreactors to produce repeatable and excellent quality plant material for extracts used in food supplements and cosmetics”. • **2018-2021: ANASSA** - EPAnEK 2014-2020/T1EΔK-03187: “Combinatorial discovery of novel medical device and development of bioactive herbal extracts to treat severe acute respiratory system diseases”. • **2018-2021: HELLENOINOS** - EPAnEK 2014-2020/T1EΔK-03719: “Highlighting quality, evaluating and exploiting Greek grape varieties”. • **2018-2021: FeedMAP** - EPAnEK 2014-2020/T1EΔK-05041: “A holistic approach to sustainable use of native medicinal / aromatic plants for the production of innovative bioactive food and feed products for humans and animals”.

Publications: (Full list ORCID: <http://bit.ly/3lz6Wkn>)

- Zoupanou N, Papakyriakopoulou P, Georgiou N, **Cheilari A**, Javornik U, Podbevsek P, Tzeli D, Valsami G, Mavromoustakos T. (2025) Spectroscopic Characterization Using ¹H and ¹³C Nuclear Magnetic Resonance and Computational Analysis of the Complex of Donepezil with 2,6-Methyl-β-Cyclodextrin and Hydroxy Propyl Methyl Cellulose. *Molecules*. 2025; 30(5):1169.
- Amountzias V, **Cheilari A***, Vontzalidou A, Benaki D, Gikas E, Aligiannis N. (2024) Can NMR-HetCA be a reliable prediction tool for the direct identification of bioactive substances in complex mixtures? *Anal Chem* 2024, 96(50): 20090–20097
- Kolvatzis C, Christodoulou P, Kalogiannidis I, Tsiantas K, Tsakiridis I, Kyrkou C, **Cheilari A**, Thomaidis NS, Zoumpoulakis P, Athanasiadis A, Michaelidou AM. (2023) Metabolomic profiling of second-trimester amniotic fluid for predicting preterm delivery: Insights from NMR analysis. *Metabolites* 2023; 13(11):1147.
- Stavropoulou MI, Stathopoulou K, **Cheilari A**, Benaki D, Gardikis K, Chinou I, Aligiannis N. (2021) NMR metabolic profiling of Greek propolis samples: Comparative evaluation of their phytochemical compositions and investigation of their anti-ageing and antioxidant properties. *J Pharm Biomed Anal* 2021; 194: 113814.