Fotakis Charalambos, Chemist, MSc., Ph.D.

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Education

2013: PhD in Chemistry, Department of Chemistry – National and Kapodestrian University of Athens, Greece

2007: M.Sc., Physical Chemistry, Department of Chemistry – National and Kapodestrian University of Athens,

2005: Diploma in Chemistry, Department of Chemistry – National and Kapodestrian University of Athens, Greece

Current Research Interests

Metabolomic profiling of biological fluids and food items by implementing HR NMR spectroscopy and Chemometrics. Structure elucidation of novel bioactive compounds from natural sources; Evaluation of the antioxidant activity of food items (alcoholic beverages, olive oil).

Main achievements

<u>Literature contribution</u>: 35 Peer-reviewed scientific articles; 61 Announcements; 12 Oral presentations

Participation in funding programs:

- **11.2019 –11.2027:** Participation in a LIFE programme «LIFE-IP CEI-Greece Circular Economy Implementation in Greece LIFE18 IPE/GR/000013» co-financed by the European Union (EASME Executive Agency for SMEs), the Green Fund and Greek national funds
- **04.2015 09.2015**: Participation in a THALIS programme "The metabolomics analysis as a diagnostic tool of viability and normal development of embryos before and during pregnancy." cofinanced by the European Union (European Social Fund ESF) and Greek national funds.
- **01.2014 12.2014**: Participation in a THALIS programme–'Study of novel chemiluminescent systems and elaboration of their applications on the development of new automated analytical methods for the determination of food constituents, environmental pollutants, and active pharmaceutical compounds LUMEN' co-financed by the European Union (European Social Fund ESF) and Greek national funds.
- **08.2013 12.2013**: Participation in a THALIS programme "The metabolomics analysis as a diagnostic tool of viability and normal development of embryos before and during pregnancy." cofinanced by the European Union (European Social Fund ESF) and Greek national funds
- **11.2011 06.2013:** Participation in the programme 'Metabolic, Isotopic, Antioxidant and Elemental profiling to characterize Cypriot wines of specific geographical and varietal origin' cofunded by the European Regional Development Fund and the Republic of Cyprus.
- **11. 2010 12.2010**: Participation in the European programme Leonardo da Vinci 'Oeno-mac-2008-1-Gr-LE0005-006351'.

Scholarships:

07.2020-08.2021: Postdoctoral researcher fellowship, in the project "Metabolic fingerprint of mothers with hypothyroidism at lactation stage" (MIS 5049508), through the Operational Program «Human Resources Development, Education and Lifelong Learning 2014–2020», co-financed by Greece and the European Union (European Social Fund-ESF) "

Teaching experience:

09.2015-09.2017: Teaching in the postgraduate course the lesson «Advanced statistics» of the

Department of Food Technology, Technological Educational Institute of Athens.

Awards:

10.2019: 1st Price Award in analytical chemistry "NMR and FT-IR characterization of Pleurotus mushrooms cultivated on agro industrial wastes". 2nd Food Chemistry Conference -Seville 2019.

06.2018: Award for the business plan "CHEFistry" among 6000 applicants in the contest "EGG" (Enter-Grow-Go) promoted by Eurobank and Corallia.

10.2016: 1st Price Award for the study "The metabolic fingerprint of term infants with normal and increased fetal growth". 12th International Workshop on Neonatology, Italy, 10.19-22, 2016.

Editor & Reviewer:

Guest editor in the Special issue "NMR Driven Foodomics Applications" of Foods (MDPI).

Reviewer in: Food Chemistry, Food Research international, MethodsX, Annals of Agricultural Science, Analytical letters, Metabolomics, Molecules, Metabolites, International Journal of Molecular Science, Antioxidants.

Highlighted Publications in Peer Reviewed Scientific Journals

- **1. Fotakis, C.**, Moros, G., Kontogeorgou, A., Iacovidou, N., Boutsikou, T., Zoumpoulakis, P. Uncontrolled Thyroid during Pregnancy Alters the Circulative and Exerted Metabolome. International Journal of Molecular Science, 2022, 23(8), 4248.
- **2.** Fotiou, M., **Fotakis**, C., Tsakoumaki, F., Athanasiadou, E., Kyrkou, C., Dimitropoulou, A., Tsiaka, T., Chatziioannou, A.C., Sarafidis, K., Menexes, G., Theodoridis, G., Biliaderis, C.G., Zoumpoulakis, P., Athanasiadis, A.P., Michaelidou, A.M. ¹H NMR-based metabolomics reveals the effect of maternal habitual dietary patterns on human amniotic fluid profile. 2018, Scientific Reports, 8.
- **3.** Andreou, V., Strati, I.F., **Fotakis**, C., Liouni, M., Zoumpoulakis, P., Sinanoglou, V.J. Herbal distillates: A new era of grape marc distillates with enriched antioxidant profile. 2018, Food Chemistry, 253, 171-178.
- **4.** Filntisi, A., **Fotakis**, C., Asvestas, P., Matsopoulos, G.K., Zoumpoulakis, P., Cavouras, D. Automated metabolite identification from biological fluid 1H NMR spectra. 2017, Metabolomics, 13.
- **5.** Kokkinofta, R., **Fotakis**, C., Zervou, M., Zoumpoulakis, P., Savvidou, C., Poulli, K., Louka, C., Economidou, N., Tzioni, E., Damianou, K., Loupasaki, S., Kefalas, P. Isotopic and Elemental Authenticity Markers: a Case Study on Cypriot Wines. 2017, Food Analytical Methods, 10, 3902-3913.
- **6. Fotakis**, C., Tsigrimani, D., Tsiaka, T., Lantzouraki, D.Z., Strati, I.F., Makris, C., Tagkouli, D., Proestos, C., Sinanoglou, V.J., Zoumpoulakis, P. Metabolic and antioxidant profiles of herbal infusions and decoctions. 2016, Food Chemistry, 211, 963-971.
- **7. Fotakis**, C., Zervou, M. NMR metabolic fingerprinting and chemometrics driven authentication of Greek grape marc spirits. 2016, Food Chemistry, 196, 760-768.
- **8. Fotakis**, C., Zoga, M., Baskakis, C., Tsiaka, T., Boutsikou, T., Briana, D.D., Dendrinou, K., Malamitsi-Puchner, A., Zoumpoulakis, P. Investigating the metabolic fingerprint of term infants with normal and increased fetal growth. 2016, RSC Advances, 6, 79325-79334.
- **9. Fotakis**, C., Kokkotou, K., Zoumpoulakis, P., Zervou, M. NMR metabolite fingerprinting in grape derived products: An overview. 2013, Food Research International, 54, 1184-1194.
- **10. Fotakis**, C., Christodouleas, D., Kokkotou, K., Zervou, M., Zoumpoulakis, P., Moulos, P., Liouni, M., Calokerinos, A. NMR metabolite profiling of Greek grape marc spirits. 2013, Food Chemistry, 138, 1837-1846.