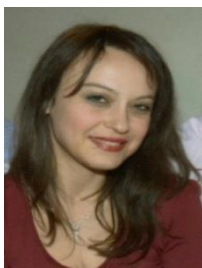


CURRICULUM VITAE



Name: **Sofia**

Surname: **Georgiou**

Father's Name: Kallistratos

Marital Status: Married, 1 child

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STUDIES

- Degree **Biochemistry and Biotechnology (Excellent, 8.81/10)** (July 2008), School of Health Sciences, University of Thessaly, Greece.
- M.Sc. Degree: **Biotechnology and Molecular Diagnostics (Excellent, 9.16/10)** (July 2011), Department of Pharmacy, School of Health Sciences, A.U.Th., Greece.
- **PhD: Pharmacology and Therapeutics (Excellent 10)** (June 2020), Department of Pharmacy, School of Health Sciences, A.U.Th., Greece.

POSTDOCTORAL STUDIES

Development of a novel CAR immunotherapy approach against oral cancer. Scientific Supervisors: Lefkothea C. Papadopoulou and Ioannis S. Pappas (2020-2022).

DOCTORAL THESIS

Doctoral thesis entitled: **EFFECT OF HEME ON THE INFLAMMATORY MICROENVIRONMENT OF NEOPLASTIC CELLS: A SEARCH FOR MOLECULAR TARGETS: A search for molecular mechanisms of free heme/hemin's signaling and protection from cytotoxicity by thiols**, Scientific Supervisor Asterios S. Tsiftoglou, Professor of Pharmacology, Department of Pharmacy, Aristotle University of Thessaloniki.

Research Diploma Projects

- Master Diploma Project entitled: Investigation of the expression profile of Interleukin-8 (IL-8, CXCL8) and its receptor (CXCR1) in human leukemia K562 and osteosarcoma Saos-2 cells, Scientific Supervisor Asterios S. Tsiftoglou, Professor of Pharmacology, Department of Pharmacy, Aristotle University of Thessaloniki.
- Under-graduate Diploma Project entitled: Investigation of the role of the synthase of lupeol-3 [lupeol synthase-3 (*OSC-3*) gene] during rhizogenesis in *Lotus japonicus*, Scientific Supervisor Kaliope K. Papadopoulou, Assistant Professor in Plants' Biotechnology, Department of Biochemistry and Biotechnology, University of Thessaly.

PUBLICATIONS IN SCIENTIFIC JOURNALS

- Delis, C., Krokida, A., **Georgiou, S.**, Peña-Rodríguez, L. M., Kavroulakis, N., Ioannou, E., Roussis, V., Osbourn, A. E. and Papadopoulou, K. K. (2011), Role of lupeol synthase in *Lotus japonicus* nodule formation. **New Phytologist**, 189: 335–346. doi:10.1111/j.1469-8137.2010.03463 (IF: 8.512)
- **Sofia K. Georgiou-Siafis** and Asterios S. Tsiftoglou (2020) Activation of KEAP1/NRF2 stress signaling involved in the molecular basis of hemin-

induced cytotoxicity in human pro-erythroid K562 cells. **Biochemical Pharmacology**, 175 113900 DOI:10.1016/j.bcp.2020.113900 (IF: 5.009)

- **Sofia K. Georgiou-Siafis**, Martina K. Samiotaki, Vasilis J. Demopoulos, George Panayotou and Asterios S. Tsiftoglou (2020) Formation of novel N-Acetylcysteine-hemin adducts abrogates hemin-induced cytotoxicity and suppresses the NRF2-driven stress response in human pro-erythroid K562 cells. **European Journal of Pharmacology**, 880 173077 DOI: 10.1016/j.ejphar.2020.173077 (IF: 3.170)

COMMUNICATIONS IN CONGRESSES

- **Georgiou S.**, Tsiftoglou A. S. (2010). Patterns of human interleukin-8 (*IL-8*) gene expression during growth related changes and hemin-induced differentiation in K562 CML cells. **Review of Clinical Pharmacology and Pharmacokinetics**, International Edition.vol.24 no.2 p.95-97 (Oral Communication)
- **Sofia K. Georgiou** and Asterios S. Tsiftoglou (2013), Intracellular accumulation of heme signals nuclear localization of Nrf2 and transcriptional activation of stress response genes during the early phase of K562 cell hemoglobinization. **64th Congress of Hellenic society of biochemistry and molecular biology**, Athens (Poster)
- **Sofia K. Georgiou** and Asterios S. Tsiftoglou (2014), Thiols abrogate free heme toxicity: Analysis of the mechanism and implications in therapy of haemolytic disorders. **65th Congress of Hellenic society of biochemistry and molecular biology**, Thessaloniki (Oral Communication)
- Marina C. Koutsidou, Ioannis S. Pappas, **Sofia K. Georgiou**, Alexios-Leandros Skaltsounis & Asterios S. Tsiftoglou (2014), Combination of a cell growth irreversible inhibitor (7BIO) with an inducer of neuronal differentiation (UDP4) eradicates human malignant TE671 cells. **65th Congress of Hellenic society of biochemistry and molecular biology**, Thessaloniki (Poster)

- Anastasios E. Koutsoumparis, **Sofia K. Georgiou**, Asterios S. Tsiftoglou (2014), In culture Differentiation of Human Mesenchymal Stem Cells into pro-Endothelial (Angiogenic) Phenotypes. **65th Congress of Hellenic society of biochemistry and molecular biology**, Thessaloniki (Poster)
- **Sofia K. Georgiou** and Asterios S. Tsiftoglou (2016) Thiols act as preventive agents for hemin-induced cellular damage at K562 cells. **9th Panhellenic Congress of Pharmacology**, Thessaloniki (Oral Communication)
- Vasiliki Dimitra C. Tsolaki, **Sofia K. Georgiou**, Martina K. Samiotaki, George Panayotou, Asterios S. Tsiftoglou (2016) Detection and characterization of hemin binding proteins (HeBiPr) involved in the intracellular heme trafficking network (IHeTN) in human leukemia cells. **67th Congress of Hellenic society of biochemistry and molecular biology**, Ioannina (Oral Communication)
- **Sofia K. Georgiou** and Asterios S. Tsiftoglou (2016). Hemin transmits signals promoting high level transcriptional activation of heme oxygenase- 1, cystine/glutamate exchanger, CXC chemokines ligand 1 (CXCL1) and CXCL8 in human erythroleukemia K562 cells. **FEBS JOURNAL**, 283:40-40 doi:10.1111/febs.13805 (Oral Communication)

ADDITIONAL QUALIFICATIONS

Proficiency (Michigan), Delf II (French Ministry of National Education)

Cambridge International examinations in IT skills

TEACHING EXPERIENCE

Auxiliary Support in under-graduate labs in the Department of Pharmacy (Pharmacology I and II).

Indicative themes:

- Antibiotics and antibiogram: A method to determine sensitivity and resistance in antibiotics (A. S. Tsiftoglou, L. C. Papadopoulou)

- Assessment of the action of antineoplastic drugs through DNA electrophoresis (I. Vizirianakis)
- Anticoagulants: Measurement of prothrombin and thromboplastin time (Leukothea Papadopoulou)

Auxiliary support in under-graduate and master diploma research projects.

Teaching Biochemistry An introduction in biomolecules (Nucleic acids, Proteins, Carbohydrates, and Lipids), at Vocational Education and Training (V.E.T.).

RESEARCH SKILLS

Mammalian cell cultures, gene cloning, Western blot analysis, Northern blot analysis, RT-PCR, RT-qPCR, Mass Spectrometry, GSH levels determination, ROS levels measurements, handling and usage of radioactive nucleotides, spectrophotometry, determination of iron, *in vitro* transcription, immunoprecipitation (IP), etc.

SCIENTIFIC RECOGNITION

- 1st in the scoring rank of the graduates in the Department of Biochemistry and Biotechnology, as recorded in the date of graduation (18. 7. 2008),
- Scholarships of Bodossakis' Foundation, Alexandros Onassis' Foundation, and Foundation for Education and European Culture (Founders Nicos and Lydia Tricha) during master and Ph.D. studies,
- In preparation of the deposit of 3 novel chemical structures in the public database PubChem.
- Member of the Greek Society of Biochemistry and Molecular Biology (EEBMB).

Further Education

- Educational Seminar: Teaching of Adults' Teachers, Institute for life learning
KE.ΔI.BI.M., University of Thessaly

Useful links

<https://orcid.org/0000-0003-1382-3017>

<https://www.researchgate.net>