

PERSONAL INFORMATION	
SURNAME	PAPADOPOULOU
NAME	LEFKOTHEA
PLACE OF RESIDENCE	THESSALONIKI, GREECE
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TEL:	+302310997636 / 6948594935

CURRENT POSITION	
2022 –	Professor of Pharmacology, School of Pharmacy, A.U.Th, Greece

PREVIOUS POSITIONS	
2012-2022	Associate Professor, Lab. of Pharmacology, School of Pharmacy, A.U.Th, Greece
2004-2012	Assistant Professor, Lab. of Pharmacology, School of Pharmacy, A.U.Th, Greece
1996-1998	Visitor Scientist / Post-Doctoral Fellow, Dept. of Neurology, College of Physicians and Surgeons, Columbia University, New York, USA
1993-2004	Lecturer, Lab. of Pharmacology, School of Pharmacy, A.U.Th, Greece
1991-1993	Research Associate, Lab. of Pharmacology, School of Pharmacy, A.U.Th, Greece

EDUCATION	
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1986-1991	Lab. of Pharmacology, School of Pharmacy, A.U.Th, Greece Ph.D. “Analysis of Anthracyclines-Hemoproteins Interactions in the Hemopoietic System”
1976-1980	DEGREE in Pharmacy, School of Pharmacy, A.U.Th, Greece

TEACHING ACTIVITIES	
UNDERGRADUATE STUDIES School of Pharmacy, A.U.Th, Greece	
•1999- today	Toxicology
•1999- today	Clinical Pharmacology & Therapeutics
•2015- 2018	Pharmacology II
•2015- 2018	Pharmaceutical Biotechnology
•2018- today	Pharmacology I
GRADUATE STUDIES School of Pharmacy, A.U.Th, Greece	
“Biotechnology - Molecular Diagnostics” // “Pharmacology & Therapeutics”	
•2004-2018	Bioinformatics
•2004-2018	Pharmaceutical Biotechnology II
•2016-2017	Pharmaceutical Biotechnology I
2015-2020	Director of “Pharmacology & Therapeutics”
<u>Participation in GRADUATE STUDIES-TEACHING, in Greece</u>	
2016- today	“Biomedical and Molecular Sciences in Diagnosis and Treatment of Diseases” , which is coordinated of the School of Medicine at the Democritus University of Thrace in collaboration with the Department of Biomedical Sciences of the International University of Greece. Director: Prof. T. Lialiaris
2018- today	“Toxicology” , Department of Biochemistry and Biotechnology, University of Thessaly. Director: Prof. D. Kouretas
2020- today	“Industrial Pharmacy” , School of Pharmacy, A.U.Th, Greece. Director: Ass. Prof. E. Markopoulou
Supervision of graduate students and doctoral fellows	
2 PhD	
18 Master theses	
22 undergraduate Diploma theses	

IDENTIFICATION OF SCO2 GENE,

a nuclear gene encoding the mitochondrial Sco2, a COX assembly protein

Papadopoulou LC, Sue CM, Davidson MM, Tanji K, Nishino I, Sadlock JE, Krishna S, Walker W, Selby J, Glerum DM, Coster RV, Lyon G, Scalais E, Lebel R, Kaplan P, Shanske S, De Vivo DC, Bonilla E, Hirano M, DiMauro S, **Schon EA. (1999)** Fatal infantile cardioencephalomyopathy with COX deficiency and mutations in SCO2, a COX assembly gene. Nature Genetics, Nov;23(3):333-7. DOI: 10.1038/15513

Nucleotide: GenBank Accession number: [AF177385.1](#)

Protein: GenBank Accession number: [AF05313.1](#)

OMIM: [#604377](#)

Method for the development of a delivery platform to produce deliverable PTD-IVT-mRNA therapeutics

Principal Inventor: L. C. Papadopoulou
Co-inventors: I. S. Pappas, A. N. Miliotou, I. S. Vizirianakis

Greek patent: 1010063 (National)

International Patent Pending, PCT/GR2020/000059;
INTERNATIONAL PUBLICATION NUMBER: WO 2021/094792 A1 / 20.05.2021

MAIN SCIENTIFIC INTERESTS

- Molecular mechanisms of action of anthracyclines on bone marrow and myocardium.
- Mitochondrial genetics and neurodegenerative disorders.
- Cloning and expression of COX assembly genes as well as purification and characterization of their protein products being involved in mitochondrial copper pathway
- TAT-mediated protein transduction into mammalian cells, as an alternative therapeutic approach for monogenetic disorders.
- Cellular Bioenergetics
- Radiolabeling of recombinant proteins – biodistribution in mice
- IVT-mRNA therapeutics
- Immunotherapy- Cancer CAR-T cell therapy

SCIENTIFIC WORK / SELECTED PAPERS

CITATIONS: >1900 (Google Scholar), Index: h: 14, i10: 15

<https://scholar.google.com/citations?user=jYXDduY0AAAAJ&hl=el&oi=sra>

[Papadopoulou LC - Search Results - PubMed \(nih.gov\)](#)

[Lefkothea Papadopoulou \(0000-0002-5738-969X\)](#)

[\(orcid.org\)https://www.pharm.auth.gr/en/dep_members/papadopoulou-lefkothea/](https://www.pharm.auth.gr/en/dep_members/papadopoulou-lefkothea/)

- 1) Miliotou NA *et al* (2021) Development of a novel PTD-mediated IVT-mRNA delivery platform for potential protein replacement therapy of metabolic/genetic disorders. Molecular Therapy Nucleic Acids, 26:694-7102).
- 2) Kaiafas G.C *et al* (2020). In vivo Biodistribution study of TAT-L-Sco2 Fusion Protein, Developed as Protein Therapeutic for Mitochondrial Disorders attributed to SCO2 Mutations. Mol Genet Metab Rep., 25:100683.
- 3) Miliotou NA and Papadopoulou LC (2018) CAR T-cell Therapy: A New Era in Cancer Immunotherapy. Curr. Pharm. Biotechnol., 19(1):5-18.
- 4) Papadopoulou *et al* (2018) Production and Transduction of a Human Recombinant β -Globin Chain into Proerythroid K-562 Cells to Replace Missing Endogenous β -Globin. Mol. Pharm. 3;15(12):5665-5677.

- 5) Papadopoulou LC and Tsiftoglou AS (2013) The potential role of cell penetrating peptides in the intracellular delivery of proteins for therapy of erythroid related disorders. Pharmaceuticals (Basel), 6(1):32-53.
 - 6) Papadopoulou LC and Tsiftoglou AS (2011) Transduction of human recombinant proteins into mitochondria as a protein therapeutic approach for mitochondrial disorders. Pharm Res. 28(11):2639-56.
 - 7) Foltopoulou *et al* (2010) Intracellular delivery of full length recombinant human mitochondrial L-Sco2 protein into the mitochondria of permanent cell lines and SCO2 deficient patient's primary cells. Biochim. Biophys. Acta;1802(6):497-508.
 - 8) Papadopoulou LC *et al* (1999) Fatal infantile cardioencephalomyopathy with COX deficiency and mutations in SCO2, a COX assembly gene. Nature Genetics 23(3):333-7.
 - 9) Papadopoulou LC *et al* (1999) Structural and functional impairment of mitochondria in adriamycin-induced cardiomyopathy in mice: suppression of cytochrome c oxidase II gene expression. Biochem. Pharmacol. 57(5):481-9.
 - 10) Papadopoulou LC and Tsiftoglou AS (1996) Effects of hemin on apoptosis, suppression of cytochrome c oxidase gene expression, and bone-marrow toxicity induced by doxorubicin (adriamycin). Biochem. Pharmacol. 52(5):713-22
 - 11) Papadopoulou LC and Tsiftoglou AS (1993). Mitochondrial cytochrome c oxidase as a target site for daunomycin in K-562 cells and heart tissue. Cancer Res. 53(5):1072-8.
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CHAPTERS IN BOOK

1. Miliotou, AN and Papadopoulou LC. (2020) In Vitro-Transcribed (IVT)-mRNA CAR Therapy Development. In: Swiech K., Malmegrim K., Picanço-Castro V. (eds): Chimeric Antigen Receptor T Cells. Methods in Molecular Biology, Humana, New York, NY, Vol. 2086, Pages 87-117. DOI: 10.1007/978-1-0716-0146-4_20.
2. Miliotou AN, Pappas IS, Vizirianakis IS and Papadopoulou LC. (2022) In Vitro-Transcribed mRNAs as a new generation of therapeutics in the dawn of 21st century: Exploitation of peptides as carriers for their intracellular delivery. In: Stefan Jurga and Jan Barciszewski (eds): RNA TECHNOLOGIES, Messenger RNA Therapeutics. Springer Series, Vol. 13. *in press*.