

CURRICULUM VITAE

PERSONAL INFORMATION

Last name : Liadaki Kalliopi
Date of birth : 4 February 1972
Place of birth : Chios, Greece
Citizenship : Greek
Family situation : Married, mother of a boy
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PRESENT POSITION

Assistant Professor of Biochemical Pharmacology, Department of Biochemistry and Biotechnology, University of Thessaly, Larissa, Greece

EDUCATION

1989-1993: B.Sc., Biology, School of Biology, University of Crete, Heraklion, Crete, Greece.

1993-1995: Master's, University of Crete, Department of Biology and Institute of Molecular Biology and Biotechnology.

1995-2000: Ph.D., Molecular Biology and Genetics, University of Crete, Department of Biology and Institute of Molecular Biology and Biotechnology.

2001-2007: Post-doctoral fellow in Genetics, Harvard Medical School, Children's Hospital, Boston and Howard Hughes Medical Institute, Boston, MA 02115.

RESEARCH EXPERIENCE

2001-2007: Research fellow in genetics, in Harvard Medical School, Children's Hospital, Boston, MA, USA. Laboratory of Dr. L. Kunkel, working with the use of stem cells to treat Duchenne muscular dystrophy.

1999-2000: Research collaboration at Massachusetts Institute of Technology, Department of Biology, Cambridge, MA, USA. Laboratory of Dr. M. Krieger, working with studies of lipoprotein-receptor interactions.

1996-2000: Research scholar at Boston University Medical Center, Section of Molecular Genetics, Boston, MA, USA. Laboratory of Dr. V. Zannis, working with the structural and functional analysis of human apolipoproteins.

January 1994-March 1994: University of Crete Medical School, Institute of Molecular Biology and Biotechnology, Heraklion, Crete, Greece. Laboratory of Dr. V. Zannis, working under transcriptional regulation of apolipoprotein genes.

October 1993-December 1993: University of Crete, Department of Biology, Institute of Molecular Biology and Biotechnology, Heraklion, Crete, Greece. Laboratory of Dr. H. Savvakis, working under cloning and characterization of transposable element “Minos” in *Drosophila* and medfly species.

May 1992-August 1992: University of Crete, Department of Biology, Laboratory of Dr. E. Krambovitis, working under the identification of plant diseases using immunodetection assays.

AWARDS AND SCHOLARSHIPS

1989-1990: Recipient of the Greek National Scholarship

1993-1995: Scholarship from the Institute of Molecular Biology and Biotechnology, Heraklion, Crete, Greece.

1995-2000: Scholarship from the Institute of Molecular Biology and Biotechnology, Heraklion, Crete, Greece.

2001-2007: Fellow of the Howard Hughes Medical Institute, Boston, MA, USA.

RESEARCH INTERESTS

- Pharmacogenetics/pharmacogenomics of psoriasis.
- Molecular diagnosis of cancer and study of the molecular pathogenesis of cancer, aiming to the development of personalized therapies.
- Molecular mechanisms of anticancer potential of plant-derived compounds.
- Studies of the biological effects of pesticides and their metabolites using cell culture systems.
- Studies of the mechanisms of skeletal muscle regeneration, with emphasis on the role of oxidative stress in this process, aiming to therapeutic interventions of muscle degenerating diseases.

JOURNAL REVIEWER BY INVITATION

Bioorganic & Medicinal Chemistry

Environmental & Molecular Mutagenesis

Journal of Enzyme Inhibition & Medicinal Chemistry

Pharmaceutical Biology

Journal of Medicinal Food

European Journal of Medicinal Plants

Letters in Drug design and Discovery

PARTICIPATION IN RESEARCH PROGRAMS

1. Research Committee of University of Thessaly: "Molecular mechanisms of cancer cell resistance to chemotherapeutic agents using cancer cell lines cultures". Principal Investigator: Duration: 2008-2009
2. Program THALIS: "Mechanisms of signal transduction and gene expression in hepatocellular carcinoma". Aristotle University of Thessaloniki. Participant. Duration: 2011-2014.
3. Support of Research, Development and Innovation Projects in the Priority Sector of RIS3 – AgroFood, Region of Western Greece. Title: "Microbe Terroir – The role of microbial terroir in the production of high-quality wine from local vine varieties". Funding Body:

Region of Western Greece, Duration 2019-2021, Role: Partner (Participating organizations: Wineries Krokidas and Rouvalis, Un. Patras)

4. RESEARCH-CREATE-INNOVATE, NSRF (National Strategic Reference Framework) grant. Title: "Highlighting the wine identity of the prefecture of Drama through a holistic characterization of the natural and microbial environment. University of Thessaly, Department of Biochemistry and Biotechnology. Duration 2014-2020, Role: Partner.

PARTICIPATION IN SCIENTIFIC CONFERENCES

1. Moderator in a round table on 'Tissue Engineering and Cartilage Repair Approaches'. International Symposium on Cartilage Biology, June 18-20, 2009, Larissa, Greece.
2. Moderator in a round table on 'Therapeutic challenges and concerns'. Scientific Meeting on 'Rheumatoid, autoimmune and metabolic syndromes: diagnosis, comorbidity and therapy'. September 27-28, 2013, Thessaloniki, Greece.
3. Member of the Scientific Committee of the Scientific Meeting on 'Rheumatoid, autoimmune and metabolic syndromes: quality of life and therapeutic prospects. October 11-13, 2013, Volos, Greece.

PUBLICATIONS

1. Liadaki, K. N., Liu, T., Xu, S., Ishida, B., Duchateaux, P., Krieger, J., Kane, J., Krieger, M., Zannis, V. Binding of high density lipoprotein (HDL) and discoidal reconstituted HDL to the HDL receptor scavenger receptor class B type I. Effect of lipid association and apoA-I mutations on receptor binding. *J. Biol. Chem.* (2000); 275: 21262.
2. Gorshkova, I. N., Liadaki, K., Gursky, O., Atkinson, D., Zannis, V. Probing the lipid-free structure and stability of apolipoprotein A-I by mutation. *Biochemistry.* (2000); 39: 15910.
3. Segrest, J. P., Li, L., Anantharamaiah, G. M., Harvey, S. C., Liadaki, K. N., Zannis, V. Structure and function of apolipoprotein A-I and high-density lipoprotein. *Curr. Opin. Lipidology.* (2000); 11: 105.
4. Reardon, C. A., Kan., H. Y., Cabana, V., Blachowicz, L., Lukens, J. R., Wu, Q., Liadaki, K., Getz, G. S., Zannis, V. In vivo studies of HDL assembly and metabolism using

adenovirus-mediated transfer of apoA-I mutants in apoA-I-deficient mice. *Biochemistry*. (2001); 40: 13670.

5. Montanaro, F., Liadaki, K., Volinski, J., Flint, A., Kunkel, L. Skeletal muscle repair potential of adult mouse skin SP cells. *Proc Natl Acad Sci USA* (2003); 100: 9336.

6. Bachrach, E., Li, S., Perez, A., Schienda, J., Liadaki, K., Volinski, J., Flint, A., Chamberlain, J., Kunkel, LM. Systemic delivery of human microdystrophin to regenerating mouse dystrophic muscle by muscle progenitor cells. *Proc Natl Acad Sci USA*. (2004); 101: 3581.

7. Montanaro, F., Liadaki, K., Schienda, J., Flint, A., Gussoni, E., Kunkel, LM. Demystifying SP cell purification: viability, yield and phenotype are defined by isolation parameters. (2004). *Exp Cell Res*. 2004; 298(1):144.

8. Liadaki, K., Kho, A., Sanoudou, D., Schienda, J., Flint, A., Kohane, Z., Beggs, A., Kunkel, L.M. Side Population cells isolated from different tissues share specific transcriptome signatures and express tissue-specific markers. *Exp Cell Res*, 2005, 303 (2): 360.

9. Luth, E.S., Jun, S.J., Wessen, M.K., Liadaki, K., Gussoni, E., Kunkel, L.M. Bone marrow side population cells are enriched for progenitors capable of myogenic differentiation. *J. Cell Science*, 2008, 1 (121):1426.

10. Liadaki, K., Luth, E.S., Kunkel, L.M. Co-detection of GFP and dystrophin in skeletal muscle tissue sections. *Biotechniques*, 2007, 42 (6): 699.

11. Spanou, C., Veskoukis, A. S., Stagos, D., Liadaki, K., Anastasiadi, M., Haroutounian S. A., Tsouka, M., Tzanakouli, E., Kouretas, D. Effects of grape extracts on the in vitro activity of enzymes involved in oxidative stress regulation. *In vivo* (2011); 25: 657.

12. Spanou C., Tzioumaki N., Manta S., Margaris P., Kouretas D., Komiotis D., Liadaki K. Unsaturated Keto and Exomethylene Pyranonucleoside Analogues of Thymine and Uracil Exhibit Potent Antioxidant Properties. *Pharmacology and Pharmacy*, (2011); 2, 122.

13. Liadaki K., Casar J.C., Wessen M. , Luth E.S., Jun S, Gussoni E, Kunkel L.M. $\beta 4$ integrin is a novel marker of a population of myo-endothelial progenitor cells in adult murine skeletal muscle. *Journal of Histochemistry & Cytochemistry*, (2012); 60 (1), 31.

14. Spanou, C., Veskoukis, A. S., Stagos, D., Liadaki, K., Skaltsounis A.L., Anastasiadi M, Haroutounian S., Kouretas, D. Effects of greek legume plant extracts on xanthine

oxidase, catalase and superoxide dismutase activity. *Journal of Physiology and Biochemistry*, (2011); 68(1):37.

15. Tselepi M, Papachristou E, Angelis A, Aligiannis N, Skaltsounis A.L, Kouretas D, Liadaki K. Polyphenolic compounds derived from Greek legume plant extracts exhibit catalytic inhibition of eukaryotic topoisomerases I and II. *Journal of Natural Products*, (2011); 74 (11): 2362.

16. Katsarou D., Omirou M.D., Liadaki K., Tsikou D., Delis C., Garagounis C., Krokida A., Zambounis A., Papadopoulou K.K. Glucosinolate biosynthesis in *Eruca sativa*. *Plant Physiology and Biochemistry* (2016); 109:452.

17. Perruchon C., Pantoleon A., Veroutis D., Gallego-Blanco S., Martin-Laurent F., Liadaki K., Karpouzas D.G. Characterization of the biodegradation, bioremediation and detoxification capacity of a bacterial consortium able to degrade the fungicide thiabendazole. *Biodegradation* (2017); 28 (5-6): 383.

18. Argyropoulou M., Veskoukis A.S., Karanatsiou P.M., Manolakelli A., Kostoglou-Athanassiou I., Vilaras G., Karameris A., Liadaki K. Low Prevalence of TERT Promoter, BRAF and RAS Mutations in Papillary Thyroid Cancer in the Greek Population. *Pathology and Oncology Research*. (2020); 26 (1) :347.

19. Papadopoulou E, Bekris F, Vasileiadis S, Krokida A, Rouvali T, Veskoukis AS, Liadaki K, Kouretas D, Karpouzas DG. Vineyard-mediated factors are still operative in spontaneous and commercial fermentations shaping the vinification microbial community and affecting the antioxidant and anticancer properties of wines. *Food Research International*. (2023); 173(2) :113359.

20. Liadaki K, Zafiriou E, Giannoulis T, Alexouda S, Chaidaki K, Gidarokosta P, Roussaki-Schulze AV, Tsiogkas SG, Daponte A, Mamuris Z, Bogdanos DP, Moschonas NK, Sarafidou T. *PDE4* Gene Family Variants Are Associated with Response to Apremilast Treatment in Psoriasis. *Genes (Basel)*. (2024); 15(3) :369.

BOOK CHAPTERS

1. Liadaki, K., Montanaro, F., Kunkel, L.M. Cellular mediated delivery of DMD: the intersection between regenerative medicine and genetic therapy. (2006). In *Duchenne Muscular Dystrophy: Advances in therapeutics*. Section IV: Experimental Therapeutics,

Chapter 14. Jeffrey S. Chamberlain and Thomas Rando, Eds. Marcel Dekker, Inc., New York. Pages: 295-317.

2. Zannis, V.I., Chroni, A., Liu, T., Liadaki, K., Laccotrippe, M. (2004). New insights on the roles of apolipoprotein A-I, the ABCA1 lipids transporter, and the HDL receptor (SR-BI) in the biogenesis and the functions of HDL. In: Cellular dysfunction in atherosclerosis and diabetes. Editors: Maya Simionescu and Anca Sima Doina Popov. Romanian Academy Publishing House. Pages: 33-72.

ABSTRACTS AND PRESENTATIONS

1. Liadaki, K. N., Ishida, B., Liu, T., Xu, S., Kane, J., Zannis, V., Krieger, M. Association with lipids and the C- and N- terminal domains of apolipoprotein A-I influence its binding to the HDL receptor SR-BI. (1999). *Circulation*, 100 (18): 684.

2. Gorshkova, I. N., Liadaki, K., Gursky, O., Zannis, V., Atkinson, D. Probing the solution structure of apolipoprotein A-I by mutations, CD and fluorescence. *Biophysical Journal*, (2000), 78 (1): 2482.

3. Liadaki, K., Montanaro, F., Flint, A., Kunkel, L. Chemotactic recruitment of stem cells to muscle. *Journal of the Neurological Sciences*, (2002); Vol.199: P39 Suppl. 1.

4. Bachrach, E., Li, S., Liadaki, K., Volinski, K., Muskiewicz, K., Thorne, M., Gussoni, E., Chamberlain, J S., Kunkel, L. M. Isolation, characterization and lentiviral transduction of muscle-derived stem cells from adult murine normal and mdx5cv, and fetal human muscle. 2002, 10th meeting of European Society of Gene Therapy, P-137: 90.

5. Bachrach, E., Li, S., Schienda, J., Volinski, K., Liadaki, K., Gussoni, E., Chamberlain, J S., Kunkel, L. M. Lentiviral transduction of muscle side population cells and transplantation into mdx(5cv) mice. *Neuromuscular Disorders*, 2003, 13(7-8): 640.

6. Montanaro, F., Liadaki, K., Volinski, K., Flint, A., Kunkel, L. Skeletal muscle engraftment potential of adult mouse skin SP cells. 2003. The First Annual Stem Cell Conference: Challenges in the Era of Stem Cell Plasticity.

7. Liadaki, K., Sanoudou, D., Schienda, J., Kho, A., Beggs, A., Kunkel, L. Transcriptional profiling of adult mouse bone marrow and muscle Side Population (SP) cells. 2003. *American Journal of Human Genetics*. Vol 73 (5): 437.

- 8.** Montanaro, F., Liadaki, K., Schienda, J., Flint, A., Gussoni, E., Kunkel, L. M. Variables affecting viability, yield and heterogeneity of bone marrow, muscle and skin side population cells. 2004. 2nd Annual Meeting of International Society of Stem Cell Research, page 126.
- 9.** Liadaki, K., Kho, A., Sanoudou, D., Schienda, J., Flint, A., Kohane, Z., Beggs, A., Kunkel, L. Gene expression analysis of adult mouse muscle and bone marrow Side Population cells. 2004. 2nd Annual Meeting of International Society of Stem Cell Research, page 123.
- 10.** Liadaki, K., Kho, A., Sanoudou, D., Schienda, J., Flint, A., Kohane, Z., Beggs, A., Kunkel, L.M. Side Population cells isolated from different tissues share transcriptome signatures and express tissue-specific markers. 2005. Keystone Symposia: Molecular Regulation of Stem Cells, page 78.
- 11.** Montanaro, F., Liadaki, K., Schienda, J., Flint, A., Gussoni, E., Kunkel, L.M. Isolation parameters and surface characteristics of bone marrow, muscle and skin Side Population (SP) cells. 2005. Keystone Symposia: Molecular Regulation of Stem Cells, page 84.
- 12.** Tselepi, M., Kouretas, D., Liadaki, K. Effect of polyphenolic compounds derived from legume extracts on topoisomerase I activity. 32nd Conference of the Hellenic Association of Biological Sciences, May 20th - 22nd, 2010, Karpenisi, Greece.
- 13.** Spiliotou, V., Veskoukis, A., Kho, A., Liadaki, K., Kouretas, D. The effect of exercise on gene expression of rat skeletal muscle using microarray technology. 19th International Congress on Physical Education and Sport, 1st Congress of Biochemistry and Exercise Physiology, May 20th - 22nd, 2011, Komotini, Greece.
- 14.** Emmanouilidi A., Angelis A., Aligiannis N., Skaltsounis A.L., Kouretas D., Liadaki K. Effect of polyphenolic compounds derived from legume extracts on the growth of human cancer cells. 62nd Congress of the Hellenic Society of Biochemistry and Molecular Biology, December 9th -11th, 2011, Athens, Greece.
- 15.** Argyropoulou M., Athanassiou-Kostoglou I., Vilaras G., Karameris A., Liadaki K. Molecular diagnosis of thyroid cancer in the Greek population. 41st Hellenic Conference of Endocrinology and Metabolism, May 14th – 17th, 2014, Porto Heli, Greece.

- 16.** Vallianou I., Dafou, D., Liadaki K., Hadzopoulou-Cladaras, M. Hepatitis C virus perturbs TGF- β signalling pathway in liver cancer. 65th Congress of the Hellenic Society of Biochemistry and Molecular Biology, November 28th-30th, 2014, Thessaloniki, Greece.
- 17.** Papoutsidakis G., Papadopoulou A., Loukou K., Argyropoulou M., Athanassiou-Kostoglou I., Vilaras G., Karameris A., Liadaki K. Association of BRAF and RAS mutations with thyroid cancer in the Greek population. 65th Congress of the Hellenic Society of Biochemistry and Molecular Biology, November 28th-30th, 2014, Thessaloniki, Greece.
- 18.** Papadopoulou A., Loukou K., Argyropoulou M., Papoutsidakis G., Athanassiou-Kostoglou I., Vilaras G., Karameris A., Liadaki K. Molecular analysis of BRAF and RAS genes in thyroid cancer in the Greek population. 37th Scientific Conference of the Hellenic Society of Biological Sciences, May 21st - 23rd, 2015, Volos, Greece.
- 19.** Athanassiou-Kostoglou I., Argyropoulou M., Karanatsiou P., Papoutsidakis G., Papadopoulou A., Loukou K., Manolakelli A., Synadaki E., Vilaras G., Karameris A., Liadaki K. Analysis of BRAF and RAS genetic alterations in thyroid cancer in the Greek population. European Society of Endocrinology, Munich Germany, May 28th - 31st, 2016.

TEACHING

- 1.** Teaching of the following undergraduate courses in the Department of Biochemistry and Biotechnology, University of Thessaly: Biochemical Pharmacology, Cell Culture Technology, Animal Biotechnology.
- 2.** Participation in the teaching of the following postgraduate courses in the Department of Biochemistry and Biotechnology, University of Thessaly
 - Postgraduate Program: Applications of Molecular Biology – Genetics – Diagnostic Biomarkers: Basic and advanced techniques in biomolecules analysis, Drug development and personalized treatment (responsible professor of the course) and
 - Postgraduate Program: Bioentrepreneurship: Pharmaceuticals (responsible professor of the course)
- 3.** Member of the Examination Committee of 4 PhD students
- 4.** Supervisor of 18 undergraduate and member of the committee of 38 undergraduate students

5. Supervisor of 9 postgraduate thesis projects and member of the thesis committee of 31 postgraduate students.