

# CURRICULUM VITAE

## PERSONAL INFORMATION

Last name : Liadaki  
First name : Kalliopi  
Date of birth : 4 February 1972  
Place of birth : Chios, Greece  
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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.

Isolation and characterization of the carotenoids of the eggs of the crab "*Potamon Potamius*". Advisor E. Stratakis, Professor of Biochemistry, Department 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.

Title: "Ability of mutant human apolipoprotein A-I forms to bind to lipids and form HDL particles". Advisor: Dr V. Zannis.

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

Dissertation Title: “ Structure-function analysis of human apolipoprotein apoA-I”.  
Advisor: Dr. V. Zannis, Professor of Medicine and Biochemistry, Boston University School of Medicine and Professor of Medicine and Biochemistry, School of Medicine, University of Crete, Heraklion, Greece, 71110.

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

Laboratory of Dr. L. Kunkel, Professor of Pediatrics and Genetics, Harvard Medical School, and Howard Hughes Medical Institute, working with the use of muscle stem cells and microarray technology for the therapy of Duchenne muscular dystrophy.

## **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.

## **SCIENTIFIC ACTIVITIES**

Member of the American Society of Human Genetics

Member of the International Society of Stem Cell Research

Member of Hellenic Society for Biochemistry and Molecular Biology

## **JOURNAL REVIEWER BY INVITATION**

Pharmaceutical Biology

Environmental & Molecular Mutagenesis

Turkish Journal of Veterinary & Animal Sciences

Bioorganic & Medicinal Chemistry

Journal of Enzyme Inhibition & Medicinal Chemistry

Journal of Medicinal Food

## **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 (5.000 €)

**2.** Program THALIS: "Mechanisms of signal transduction and gene expression in hepatocellular carcinoma". Aristotle University of Thessaloniki. Participant. Duration: 2011-2014.

## **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.** Liadaki, K., Casar, J.C., Wessen, M., Luth, E.S., Jun, S., Gussoni, E., Kunkel, L.M.  $\beta 4$  integrin marks interstitial myogenic progenitor cells in adult murine skeletal muscle. *J Histochem Cytochem*, 2012, 60: 31.

**12.** Tselepi, M., Papachristou, E., Emmanouilidi, A., Angelis, A., Aligiannis, N., Skaltsounis, A.L., Kouretas, D., Liadaki, K. Catalytic inhibition of eukaryotic topoisomerases I and II by flavonol glycosides extracted from *Vicia faba* and *Lotus edulis*. *J Nat Prod*, 2011, 74: 2362.

**13.** 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 & Pharmacy*, 2011, 2: 122.

**14.** 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.

**15.** Spanou, C., Veskoukis, A.S., Stagos, D., Liadaki, K., Aligiannis, N., Angelis, A., Skaltsounis, A.L., Anastasiadi, M., Haroutounian, S.A., Kouretas, D. Effects of Greek

legume plant extracts on xanthine oxidase, catalase and superoxide dismutase activities. *J Physiol Biochem*, 2012, 68: 37.

### **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 Simionesku 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, 10<sup>th</sup> 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. 32<sup>nd</sup> Congress of Hellenic Society of Biological Sciences, May 20-22, 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. 19<sup>th</sup>

International Congress on Physical Education and Sport, 1<sup>st</sup> Congress of Biochemistry and Exercise Physiology, May 20-22, 2011, Komotini, Greece.

**14.** Emmanouilidi, A., Aggelis 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. 62<sup>nd</sup> Congress of the Hellenic Society of Biochemistry and Molecular Biology, December 9-11, 2011, Athens, Greece.

**15.** Argyropoulou, M., Athanassiou-Kostoglou, I., Vilaras, G., Karameris, A., Liadaki, K. Molecular diagnosis of thyroid carcinoma in the Greek population. 41<sup>st</sup> Hellenic Congress of Endocrinology and Metabolism, May 14-17, 2014, Porto Heli, Greece.

**16.** Papoutsidakis, G., Papadopoulou, A., Loukou, K., Argyropoulou, M., Athanassiou-Kostoglou, I., Vilaras, G., Karameris, A., Liadaki, K. Association of BRAF and RAS gene family mutations with thyroid carcinoma in the Greek population. 65<sup>th</sup> Congress of the Hellenic Society of Biochemistry and Molecular Biology, November 28-30, 2014, Thessaloniki, Greece.

**17.** Vallianou, I., Dafou, D., Liadaki, K., Cladaras, M. H. Hepatitis C virus perturbs TGF- $\beta$  signalling pathway in liver cancer. 65<sup>th</sup> Congress of the Hellenic Society of Biochemistry and Molecular Biology, November 28-30, 2014, Thessaloniki, Greece.