

## *CURRICULUM VITAE*

### **PANAGIOTA PAPAZAFIRI**

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#### **EDUCATION**

**1983-1987: Ph.D. Cellular and Molecular Biology**, Université Scientifique Technologique et Médicale de Grenoble-France.

**1979-1983: Diploma in Biology**, Aristotle University of Thessaloniki-Greece.

#### **PROFESSIONAL EXPERIENCE**

**1998-present:** University of Athens, Department of Biology.  
(1998-2004: Lecturer, 2004-2010: Assistant Professor, 2010: Associate Professor )

**1995-1998: Principal research scientist**, Institute of Biology, National Research Centre "Demokritos", Athens, Greece.

**1992-1994: Visiting Scientist**, Department of Biological and Technological Research (DIBIT), HOSPITAL SAN RAFFAELE, Milano, Italy.

**1989-1992: Research Associate** in the Institute of Biology, National Research Centre "Demokritos", Athens, Greece.

**1989 (6-month): Visiting Scientist**, Boston University Medical Centre (Section of Molecular Genetics), Massachusetts, the USA.

**1988-1989: Post Doctoral fellow** in the Institute of Molecular Biology and Biotechnology (IMBB), Heraklion-Crete, Greece

#### main research experience

**1995-1998:** assessment of genotoxic potential of organic compounds in human lymphocytes

**1992-1994:** analysis of calcium homeostasis and calcium binding proteins in several cell types and conditions

**1989-1992:** evaluation of opioid effects on the pituitary function

**1988-1989:** investigation of apoA-I gene promoter function through site directed mutagenesis and analysis of the resulting molecular interactions

#### **AWARDS**

Hellenic Scholarship Foundation, Fellowship, 1984-1987.

European Union, 1992-1994

#### **MEMBERSHIPS**

1. Member of the Hellenic Society of Biological Sciences.
2. Member of the Hellenic Society for Neurosciences
3. Member of the Hellenic Society of Biochemistry and Molecular Biology

## RESEARCH INTERESTS

Cell physiology with emphasis on calcium, PI3K-Akt, HIF1 $\alpha$ , signalling during stress

### SHORT DESCRIPTION

The research interest of the group is focusing on the investigation of conditions which allow the preservation and the adjustment of regular cell physiology. Experimental models include 1) cell ageing, 2) ischemia-reoxygenation in the perfused rat myocardium, 3) excitotoxicity of neuronal cells and 4) influence of environmental factors and nanoparticles. We study the activation of PI3K-Akt, cytoplasmic calcium and HIF1 $\alpha$ , and we explore their crosstalk as well as their interaction with other signalling pathways that contribute to the regulation of cellular homeostasis and cell survival. To this end we are applying a number of different, biochemistry, molecular and cell biology techniques including fluorimetry, subcellular fractionation, RT-PCR, western blot and immunoprecipitation.

## PUBLICATIONS

### PhD Thesis

Etude de la différenciation des cellules érythroleucémiques de souris: méthylation du DNA, régulation de l'expression de l'ornithine décarboxylase. Université Scientifique Technologique et Médicale de Grenoble, Joseph Fourier (1987).

1. **Papazafiri, P.** and Osborne, H.B. Effect of Alpha-difluoromethylornithine on DNA methylation in murine erythroleukaemic cells. Relationship to stimulation of induced differentiation. *Biochem. J.*, 242, 479-483, (1987).
2. Meilhoc, E., **Papazafiri, P.** and Osborne, H.B. Relationship between changes in polyamine biosynthesis and murine erythroleukaemic cell differentiation. *Molecular Approaches to Developmental Biology*, 547-559, (1987).
3. **Papazafiri, P.** and Osborne, H.B. Regulation of ornithine decarboxylase in murine erythroleukaemic cells by N,N'-diacetyl-1,6-hexanediamine and N-acetyl-1,6-hexanediamine. *Eur. J. Biochem.*, 178, 789-793, (1989).
4. **Papazafiri, P.**, Ogami, K., Ramji, D.P., Nicosia, A., Monaci, P., Cladaras, C. and Zannis, I.V. Promoter elements and factors involved in hepatic transcription of the human apoA-I gene. Positive and negative regulators bind to overlapping sites. *J. Biol. Chem.*, 266, 5790-5797, (1991).
5. **Papazafiri, P.**, Dragatsis, I., Zioudrou, C. and Gerozissis, K. Regulation of the release of GnRH and LH by opioid peptides in vitro. *Recent Advances in Cellular and Molecular Biology*, Vol. 3, 163-171, (1992).
6. **Papazafiri, P.**, Bossi, M. and Meldolesi, J. Expression of muscle calsequestrin in epithelial HeLa cells: Distribution and functional role. *Biochim. Biophys. Acta*, 1223, 333-340, (1994).
7. Racchetti, G., **Papazafiri, P.**, Volpe, P. and Meldolesi, J. Calstosin, a new microsomal lumen Ca<sup>2+</sup>-binding protein abundant in the rat brain. *Biochem. Biophys. Res. Commun.*, 203, 828-833, (1994).
8. Raichman, M., Panzeri, M.C., Clementi, E., **Papazafiri, P.**, Eckley, M., Clegg, D.O., Villa, A. and Meldolesi, J. Differential localization and functional role of calsequestrin in growing and differentiated myoblasts. *J. Cell Biology*, 128, 341-354, (1995).

9. **Papazafiri, P.**, Podini, P., Meldolesi, J. and Yamaguchi, T. Ageing affects cytosolic Ca<sup>2+</sup>-binding proteins and synaptic markers in the retina but not in the cerebral cortex neurons. *Neurosci. Letters*, 186, 65-68, (1995).
10. Dragatsis, I., **Papazafiri, P.**, Zioudrou, C. and Gerozissis, K. Opioids modify the release of LH at the pituitary level. In vitro studies with entire pituitaries. *J. Endocrinology*, 145, 263-270, (1995).
11. Zarani, F., **Papazafiri, P.** and Kappas, A. Induction of micronuclei in Human lymphocytes by Organic Solvents *in vitro*. *J. Environ. Path. Toxic. Oncol.*, 18(1), 21-28, (1999).
12. Koufaki, M., Calogeropoulou, T., Detsi, A., Roditis, A., Kourounakis, A., **Papazafiri, P.**, Tsiakitzis, K., Gaitanaki, C., Beis, I. and Kourounakis, P. Novel potent inhibitors of lipid peroxidation with protective effects against reperfusion arrhythmias. *J. Med. Chem.* 44 (24): 4300-3, (2001).
13. Gaitanaki, C., Anezaki, M., Margieti, M., **Papazafiri, P.** and Beis I. Characterisation of the Calcium Paradox in the Isolated Perfused Pigeon Heart: Protection by Hypothermia, Acidosis and Alkalosis. *Cell. Physiol. Biochem.* 12 (3):93-100, (2002).
14. **Papazafiri, P.** and Kletsas, D. Developmental and age-related alterations of calcium homeostasis in human fibroblasts. *Experimental Gerontology*, 38(3):307-11, (2003).
15. Gaitanaki, C., **Papazafiri, P.**, Beis, I. The Calpain-Calpastatin system and the calcium paradox in the isolated perfused pigeon heart. *Cell Physiol. Biochem.* 13:173-180, (2003).
16. Iliopoulou, D., Mihopoulos, N., Vagias, C., **Papazafiri, P.**, and Roussis, V. New brominated diterpenes from the red alga *Laurencia obtuse*. *J. Organic Chemistry*, 68: 7667-7674, (2003).
17. Koufaki, M., Calogeropoulou, T., Rekka, E., Chryselis, M., **Papazafiri, P.**, Gaitanaki, C., and Makriyannis, A. Bifunctional Agents for Reperfusion Arrhythmias: Novel hybrid Vitamin E/Class I Anti-arrhythmics. *Bioorganic & Medicinal Chemistry*, 11(23): 5209-5219, (2003).
18. Gaitanaki, C., Lambrakakis, H., **Papazafiri, P.**, and Beis, I. Various divalent cations protect the isolated perfused pigeon heart against a calcium paradox. *J. Comp. Physiol. B* 174 (5):371-82, (2004).
19. Koufaki, M., Detsi, A., Theodorou E., Kirizidi, C., Calogeropoulou, T., Vassilopoulos, A., Kourounakis, A., Rekka, E., Kourounakis, P., Gaitanaki, C., **Papazafiri, P.** Synthesis of chroman analogues of lipoic acid and evaluation of their activity against lipid reperfusion arrhythmias. *Bioorg Med Chem.* 12(18):4835-41 (2004).
20. **Papazafiri, P.**, Avlonitis, N., Agelou, P., Koufaki, M., Calogeropoulou, T., Scoulica, E. and Fragiadaki, I Structure-activity relationships of antineoplastic ring-substituted ether phospholipid derivatives. *Cancer Chemother. Pharmacol.* 56(3):261-70 (2005).
21. Vassilopoulos, A., Gaitanaki, C., **Papazafiri, P.** and Beis, I. Atrial natriuretic peptide mRNA regulation by p38-MAPK in the perfused amphibian heart. *Cellular Physiol. and Biochem.* (2005):16(4-6):183-192.
22. Vassilopoulos, A., **Papazafiri, P.** Attenuation of oxidative stress in HL-1 cardiomyocytes improves mitochondrial function and stabilizes Hif-1 $\alpha$ . *Free Radical Research.* (2005) 39(12): 1273-1284.

23. Kladi, M., Xenaki, H., Vagias, C., **Papazafiri, P.** and V. Roussis. New cytotoxic sesquiterpenes from the red algae *Laurencia obtusa* and *Laurencia microcladia*. Tetrahedron. (2006) 62(1): 182-189.
24. Xilouri M. and **P. Papazafiri**. Anti-apoptotic effects of allopregnenolone on P19 neurons. European Journal of Neurosciences. (2006) 23(1): 43-54.
25. Koufaki, M., Kiziridi, C., **Papazafiri, P.**, Vassilopoulos, A., Varro A, Nagy Z, Farkas A, Makriyannis, A. Synthesis and biological evaluation of benzopyran analogues bearing class III antiarrhythmic pharmacophores. A. Bioorg Med Chem. (2006) 14(19):6666-78.
26. Xilouri, M., Avlonitis, N., Calogeropoulou T. and **P. Papazafiri**. Neuroprotective effects of steroid analogues on P19-neurons. Neurochemistry International, 50(4):660-70 (2007).
27. Gaitanaki, C., Kalpachidou Th., Aggeli I.K.S., **Papazafiri, P.** and Beis, I. CoCl<sub>2</sub> induces protective effects via the p38-MAPK signalling pathway and ANF in the perfused amphibian heart. J Exp Biol. 2007 210(13):2267-77.
28. Kladi, M., Vagias., **Papazafiri, P.**, Furnari, G., Serio, D. and V. Roussis. New sesquiterpenes from the red alga *Laurencia microcladia*. Tetrahedron, 63, 7606-7611, (2007).
29. Xilouri M. and **Papazafiri, P.** Induction of Akt by endogenous neurosteroids and calcium sequestration in P19 derived neurons. Neurotox Res. 13(3-4):209-19 (2008).
30. Koini, E. N., **Papazafiri, P.**, Vassilopoulos, A., Koufaki, M., Zoltán Horváth, Gy J. Papp, András Varró, and Calogeropoulou T. 5,7,8-Trimethyl-benzopyran and 5,7,8-trimethyl-1,4-benzoxazine aminoamide derivatives as novel antiarrhythmics against ischemia-reperfusion injury. J. Med. Chem. 52, 2328–2340 (2009).
31. M. Kladi, C. Vagias, P. **Papazafiri, S.** Brogi, A. Tafi and V. Roussis. Tetrahydrofuran Acetogenins from *Laurencia glandulifera*. J Nat Prod. 72, 190–193 (2009).
32. Brogi, S., Kladi, M., Vagias, C., **Papazafiri, P.**, Roussis V. and Tafi, A., Pharmacophore Modeling for Qualitative Prediction of Antiestrogenic Activity. J. Chem. Inf. Mod. 49(11):2489-97 (2009).
33. Lhullier, C., Falkenberg, M., Ioannou, E., Quesada, A., **Papazafiri, P.**, Horta, P., Schenkel, E., Vagias, C., Roussis, V. Cytotoxic Halogenated Metabolites from the Brazilian Red Alga *Laurencia catarinensis*. J Nat Prod. 73(1):27-32 (2010)
34. Diamantopoulou A., Xilouri M., and **Papazafiri, P.** Dissociation of neurosteroid protective effects and global calcium disturbances in neuronal cells. *Submitted*

#### Abstracts in international journals

1. **PAPAZAFIRI, P.**, RAMJI, D.P., OGAMI, K., CLADARAS, C., CORTESE, R., and ZANNIS, I.V., Circulation 82 (4), 4, 1990.
2. YAMAGUCHI, T., **PAPAZAFIRI, P.**, PODINI, P. and MELDOLESI, J., Journal of Neurochemistry 65, 142, 1995.
3. **P. PAPAZAFIRI**, F. ZARANI, LALCHEV, S., V. GEORGIEVA, A. VAGLENOV and A. KAPPAS. Mutation Res. 379, S107, 1997.

Presentations in international conferences : 24

Presentations in international conferences : 32