

Education

- B.Sc. in Pharmaceutical Science (1969)
- Ph.D. in Chemistry (Biochemistry) University of Athens (1976)
- Post Doctoral studies at the University of Texas Health Science Center at San Antonio, USA (1986-1987, 1991) and 1993-2007 1-3 months each year for research collaboration at the same University

Research Field of Interest

- Lipid Biochemistry:
- Biochemistry and function of the **endocannabinoid system** using **platelets** and ***Tetrahymena*** cells as models: Enzymes, receptors, endocannabinoids and analogs.
- **Platelet Activating Factor** (1-0-alkyl-2-acetyl-*sn*-glycero-3-phosphocholine, PAF) and analogs: Interaction with other bioactive lipids including endocannabinoids.
- **Fatty acids** as signaling molecules: Oleic acid, arachidonic acid metabolic products (Hepoxilin A3) and derivatives, trans fatty acids and derivatives.
- **Valproic acid**: Mechanism of action, synthesis and study of valproyl-derivatives.

Teaching

Undergraduate

- Basic Biochemistry (Biochemistry I)
- Special Topics in Biochemistry (Biological membranes, Hormones and Signal transduction pathways)
- Biochemistry II
- Nutrition and Food Chemistry (1982-2003)
- 4th year research project (approx. 2 students each year)

Graduate

- Lipid Chemistry and Biochemistry
- Advanced Biochemistry (Integration of Metabolism, Hormones)
- Enzymology (1994-1998)
- Biology I (Metabolism), Department of Biology

Book authorship

1. Special Topics in Food Chemistry (1984, in Greek, 6 coauthors)
2. Topics in Nutrition and Food Chemistry (1990, in Greek 2 coauthors)
3. Experimental Biochemistry (2001 in Greek, 3 coauthors)
4. Biochemistry of Hormones (2007, in Greek)
5. Nutrition and Food Chemistry (2007, in Greek, 3 coauthors)

Selected papers

1. **A. Sifaka-Kapadai** and D.J. Hanahan (1993) An endogenous inhibitor of PAF induced platelet aggregation isolated from rat liver has been identified as free fatty acid. *Biochem. Biophys. Acta* **1166**, 217-221
2. M. Calligerou, **A. Sifaka-Kapadai***, D. Galanopoulou, S. T. Weintraub and M. Mavri-Vavayanni (1996) Platelet activating factor and lysophosphatidylcholines from strawberry *Phytochemistry* **41**, 89-92
3. S. I. Svetlov, **A. Sifaka-Kapadai**, D. J. Hanahan and M. S. Olson (1996) Signalling responses to alkyllysophosphatidic acid; The activation of phospholipases A2 and C and protein tyrosine phosphorylation in human platelets *Archives Biochem. Biophys.* **336**, 59-68
4. M. Trapali, M. Mavri-Vavayanni and **A. Sifaka-Kapadai*** (1996) PAF-acetylhydrolase activity and PAF levels in pancreas and plasma of well-fed, diabetic and fasted rat. *Life Sciences*, **59**, 849-857
5. **A. Sifaka-Kapadai**, D.J. Hanahan and M.A. Javors (1997) Oleic acid-induced Ca^{2+} mobilization in human platelets; is oleic acid an intracellular messenger? *J.Lipid Med. Cell Sign.* **15**, 215-232
6. E. Botitsi, M. Mavri-Vavayanni and **A. Sifaka-Kapadai*** (1998) Metabolic fate of platelet-activating factor (PAF, 1-O-alkyl-2-acetyl-sn-glycero-3-phosphocholine), and lyso-PAF (1-O-alkyl-2-lyso-sn-glycero-phosphocholine) in FRTL5 cells. *J.Lipid Res.* **39**, 1295-1304
7. **A. Sifaka-Kapadai**, M. Patiris, C. Bowden and M. Javors (1998) Incorporation of [3H]valproic acid into lipids in GT1-7 neurons. *Biochem. Pharmacol.* **56**, 207-212
8. **A. Sifaka-Kapadai**, S. I. Svetlov M.A. Javors and D.J. Hanahan (1998) Effect of suramin on human platelet aggregation and Ca^{2+} mobilization induced by thrombin and other agonists *Life Sciences*, **63**, 1769-1777
9. V. Karava, L. Fasia and **A. Sifaka-Kapadai*** (2001) Anandamide amidohydrolase activity, released in the medium by *Tetrahymena pyriformis*. Identification and partial characterization. *FEBS Letters* **508**, 327-331
10. L. Fasia, V. Karava and **A. Sifaka-Kapadai*** (2003) Uptake and metabolism of [3H]anandamide by rabbit platelets. Lack of transporter? *Eur. J. Biochem.* **270**, 3498-3506
11. N. R. Sullivan, T. Burke, **A. Sifaka-Kapadai**, M. Javors, J. G. Hensler (2004) Effect of valproic acid on serotonin-2A receptor signaling in C6 glioma cells. *J. Neurochem.* **90**, 1269-1275
12. D. Anagnostopoulos, C. Chatgililoglu, C. Ferreri, A. Samadi, **A. Sifaka-Kapadai** (2005) Synthesis of all-trans arachidonic acid and its effect on rabbit platelet aggregation. *Bioorg. Med. Chem. Lett.* **15**, 2766-2770
13. V. Karava, P-M. Zafiriou, L. Fasia, D. Anagnostopoulos, E. Boutou, C. E. Vorgias, M. Maccarrone, **A.Sifaka-Kapadai*** (2005) Anandamide metabolism by *Tetrahymena pyriformis in vitro*. Characterization and identification of a 66kDa fatty acid amidohydrolase. *Biochimie*, **8**, 967-974

14. M. P. Zafiriou, R. Deva, R. Chiccoli, **A. Sifaka-Kapadai**,* S. Nigam (2007) Biological role of hepoxilins: Upregulation of phospholipid hydroperoxide glutathione peroxidase as a cellular response to oxidative stress? *Prostaglandins Leucotrienes and Essential Fatty Acids* **77**, 209-215
15. C. Chatgililoglu, C. Ferreri, A. Hermetter, E. Lacote, B.Mihaljević, A. Nicolaidis, **A.Sifaka-Kapadai** (2008) Lipidomics and Free Radical Modifications of Lipids *Chimia*, **62**, 713-720
16. C. Ferreri, D. Anagnostopoulos, I. Lykakis, C. Chatgililoglu and **A. Sifaka-Kapadai*** (2008) Synthesis of all-trans anandamide a substrate for Fatty Acid Amide Hydrolase with dual effects on platelet activation. *Bioorg. Med. Chem.* **16**, 8359-8365
17. A. Niotis, C. Masticiadis, P. Petrou, I. Christofidis, **A. Sifaka-Kapadai**, K. Misiakos and S. Kakabakos (2009) Capillary waveguide fluoroimmunosensor with improved repeatability and detection sensitivity. *Analytical and Bioanalytical Chemistry* **393**, 1081-1086
18. S. Karaliota, **A. Sifaka-Kapadai**, C. Gontinou, K. Psarra and M. Mavri-Vavayanni (2009) Anandamide induces the differentiation of rat preadipocytes; PPAR γ and CB1 receptor upregulation *Obesity (Silver Spring)* **17(10)**:1830-1838.
19. E. Gkini, D. Anagnostopoulos, M. Mavri-Vavagianni and A. Sifaka-Kapadai* (2009) 2-acylglycerol metabolism in platelets. Identification and characterization of monoacylglycerol lipase (MAGL). *Platelets* **20(6)**:376-85
20. A. Niotis, C. Masticiadis, P. Petrou, I. Christofidis, S. Kakabakos, **A. Sifaka-Kapadai**, K. Misiakos (2010). Dual cardiac marker capillarywaveguide fluoroimmunosensor based on tyramide signal amplification. *Analytical and Bioanalytical Chemistry* **396**:1187-1196
21. A. Xanthopoulou, D. Anagnostopoulos, K.Vougas, A.K.Anagnostopoulos, A.Alexandridou, G. Spyrou, **A. Sifaka-Kapadai*** and G.Tsangaris* (2010). A two dimensional proteomic profile of *Tetrahymena thermophila*. *In vivo* **24** :443-456
22. D. Anagnostopoulos, C. Freni, J. Wood, L. Pandarinathan, A. Makriyannis, and **A.Sifaka-Kapadai*** (2010) Identification of endocannabinoids and related N-acylethanolamines in *Tetrahymena*. A new class of compounds for *Tetrahymena*. *Protist* , **161**:452-465
23. A. Evagorou, D. Anagnostopoulos, D.Farmaki and **A. Sifaka-Kapadai*** (2010). Metabolism of 2-acyl glycerol and Characterization of monoacylglycerol lipase (MAGL) activity in *Tetrahymena*, *Eur. J. Protistology* **46**:289-287
24. MP. Zafiriou, LC. Zelarayan, C.Noac, A.Renger, S. Nigam, **A. Sifaka-Kapadai*** (2011). Hepoxilin A₃ protects b-cells from apoptosis in contrast to its precursor, 12- hydroxyeicosatetraenoic acid. *Biochim. Biophys. Acta* **1811**:361-369

25. Souabni H, Thoma V, Bizouarn T, Chatgililoglu C, **Siafaka-Kapadai A**, Baciou L, Ferreri C, Houée-Levin C, Ostuni MA (2012). trans Arachidonic acid isomers inhibit NADPH-oxidase activity by direct interaction with enzyme components. *Biochim. Biophys. Acta*,
doi:101016/j.bbamem.2012.04.018