

## ZERVOU Maria, Ph.D, M.Sc

Researcher B'

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### Education

2002: Ph.D. Chemistry, University of Patras

1992: M.Sc. Electronic Engineering, Department of Physics, University of Athens

1989: B.Sc. Physics, University of Athens

### Appointments

2013-present: Researcher B' at the Institute of Biology, Medicinal Chemistry and Biotechnology, National Hellenic Research Foundation, Athens

2006-2013: Researcher C' at the Organic and Pharmaceutical Chemistry, National Hellenic Research Foundation, Athens

2003-2006: Special Functional Scientist at the Organic and Pharmaceutical Chemistry, National Hellenic Research Foundation, Athens

1992-2003: Special Technical Scientist at the Organic and Pharmaceutical Chemistry, National Hellenic Research Foundation, Athens

### Research Interests

✓ Drug design by applying NMR spectroscopy and *in silico* studies.

Synergistic use of Bio-NMR and molecular modeling.

*Topics:* antihypertensive AT1 antagonists, aspartic-protease inhibitors, DHEA neurosteroid analogs, glycogen phosphorylase inhibitors, bioactive peptides.

Studies also address new repellents for the malaria-transmitting mosquito *A.gambiae*.

✓ NMR- and LC-MS based metabolomics.

*Topics:* metabolomics in algae research, applications in high added-value natural products as traditional beverages

✓ Structure elucidation of novel bioactive metabolites of plant or marine origin, structure characterization of metal-ligand complexes and nanostructures.

## Foreign languages

Fluent in English (Lower diploma of Cambridge University) and French (Sorbonne I).  
 Limited knowledge of Italian (Palso I).

## Participation in funded research programs

### National research programs

- KPIPIS - GSRT, Development Proposals for Research Institutions. "Targeted therapeutic approaches against degenerative diseases-conditions with emphasis in cancer and aging ". (2013-2016)
- OPERATIONAL PROGRAMME "COMPETITIVENESS", Measure 4.5, Action 4.5.1: Infrastructure to Support the long term viability of Research Activities, Technological Promotion and Dissemination. "Design and Synthesis of bioactive compounds" (2006-2009)
- 02 PRAXE 173 (2003-2005). Production of novel antihypertensive Molecules.
- 2 Bilateral Scientific and Technological Collaboration between Greece-Slovenia EPAN M.4.3.6.1 "Conformations of pharmaceutical molecules and study of their interactions with membranes". (2003-2005), (1999-2001)

### Research programs funded from the Cypriot Research Promotion Foundation

- Framework Programme for Research, Technological Development and Innovation of the Cypriot Research Promotion Foundation "Metabolic, isotopic, Antioxidant and elemental profiling to characterize Cypriot wines of specific geographical and varietal origin" . (2011-2013) (Scientific responsible NHRF: Dr. M. Zervou)
- Scientific and technological Collaboration with University of Cyprus for the standardization protocol of traditional Cypriot beverage Zivania. (2003-2005).

### EU Programs

- EU-FP7-REGPOT-2009-1- ARCADE "Advancement of Research Capability for the Development of New Functional Compounds". (2010-2013)
- EU-FP5 GROWTH. "Development and Assessment of Methods for the Detection of Adulteration of Olive Oil with Hazelnut oil". (2001-2004)
- EU-FP5 AIR2 - Agro-Industrial Research. "A new integrated approach to the authentication of olive oil to improve its competitiveness on the world market". (1995-1998).
- EU SMT – Standards, Measurement and Testing Programme. "Development of new software for Certified Reference Materials through the wine and ethanols CRMs". (1999-2001). <http://www.eie.gr/iopc/softcrm/index.html>

### EU Joint Research Centre

- EU JRC / IRMM (Institute for Reference Materials and Measurements. "Upgrade and improvement of SoftCRM, the "in house" developed s/w for the Certification of Reference Materials" (2004-2005) Scientific responsible (NHRF): Dr. M. Zervou

#### EU Networks

- EU network VIRM (G7RT-CT-2002-05104). The European Virtual Institute for Reference Materials. (2002-2006). NHRF: NCP
- EU network FIT-Food analyses using Isotopic Techniques- Standards, Measurements and Testing Programme (1996-1999).

#### **Workshops / meetings organization**

- 3rd REGPOT-ARCADE Workshop entitled "*Advanced Mass Spectrometric and NMR Methods*", NHRF, 28-30 May 2012
- 2nd REGPOT-ARCADE Workshop entitled "*Structure- & Computer- Aided Design Workshop: "Bioactive Molecules & Materials"*", NHRF, 7-11 November 2011
- Workshop on Structure Based Drug Discovery. IOPC / NHRF (June 2008)
- 2nd meeting of the participating laboratories to the EU GROWTH FP5 project entitled "Development and Assessment of Methods for the Detection of Adulteration of Olive Oil with Hazelnut oil". (October, 2001)
- "Food analyses using Isotopic Techniques". Workshop within the frame of EU Network -FIT addressing scientists from Greece and Cyprus working in Food and Beverage Industry, Governmental Organizations related to Food and Beverage Control and Greek Universities attended the conference. NHRF (November 1996).

#### **Teaching/training Experience**

- Supervision of 1 Postdoctoral Fellow (Dr. C. Potamitis, 2010-today), 2 PhD theses (Ch. Fotakis, Chemistry Department, University of Athens - defended in 2013; A. Kokkotou, chemist - co-supervisor with Prof. V. Roussis, School of Pharmacy, University of Athens, in progress), 2 MSc theses (A. Kokkotou, Chemistry Department, University of Athens, defended in 2010; V. Martziani, co-supervisor with Ass. Prof. V. Magafa, School of Pharmacy, University of Patras, defended in 2013)
- Participation in the 3-member supervisor committee (P. Georganta, School of Pharmacy, University of Athens, defended in 2011; S. Perdikaris, School of Pharmacy, University of Athens, in progress)
- Participation in the 7-member evaluation committee of 2 PhD theses (A. Politi, Chemistry Department, University of Athens, defended in 2009; C. Potamitis, Chemistry Department, University of Athens, defended in 2009)
- Educational Seminars in Chemistry "NMR Spectroscopy towards the design of bioactive compounds", NHRF, Science Society Program, 01-30/11/2011

## **Litterature contribution**

**PhD thesis** (2002) "Conformational studies of bioactive peptidomimetic compounds by NMR spectroscopy". Division of Organic Chemistry, Biochemistry and Natural Products, Department of Chemistry, University of Patras.

**National Patent** "New analytical methodology for the detection of Virgin olive Oil adulteration using <sup>13</sup>C NMR spectroscopy". (OBI, Num 1002879). T. Mavromoustakos, G. Bonas, M. Zervou, E. Theodoropoulou.

## **Publications in peer-review journals**

1. M. Mondal, N. Radeva, H. Koster, A. Park, C. Potamitis, M. Zervou, G. Klebe, A. K. H. Hirsch. Structure-Based Design of Novel Inhibitors of the Aspartic Protease Endothiapepsin Exploiting Dynamic Combinatorial Chemistry. *Angew Chem Int Ed*, Accepted (**2014**)
2. M. Zervou\*, Z. Cournia, C. Potamitis, G. Patargias, S. Durdagi, S. Golic Grdadolnik, T. Mavromoustakos. Insights into the Molecular Basis of Action of the AT1 Antagonist Losartan Using a Combined NMR Spectroscopy and Computational Approach. *BBA Biomembranes*, doi: 10.1016/j.bbamem.2013.12.012, (**2013**).
3. C. Fotakis, D. Christodouleas, K. Kokkotou, M. Zervou\*, P. Zoumpoulakis, P. Moulos, M. Liouni, A. Calokerinos. NMR metabolite profiling of Greek grape marc spirits. *Food Chemistry* **2013**, 138, 1837–1846
4. C. Fotakis, K. Kokkotou, M. Zervou\*, P. Zoumpoulakis. NMR metabolite fingerprinting in grape derived products: An overview. *Food Research International* **2013**, 54, 1184-1194
5. K.A. Vallianatou, D.J. Frank, G. Antonopoulou, S. Georgakopoulos, E. Siapi, M. Zervou, I.D. Kostas. Rhodium-catalyzed asymmetric olefin hydrogenation by easily accessible aniline- and pyridine-derived chiral phosphites. *Tetrahedron Letters* **2013**, 54 ( 5) 397-401
6. C. Fotakis, G. Megariotis, D. Christodouleas, E. Kritsi, P. Zoumpoulakis, D. Ntountaniotis, M. Zervou, C. Potamitis, A. Hodzic, G. Pabst, M. Rappolt, G. Mali, J. Baldus, C. Glaubitz, M. G. Papadopoulos, A. Afantitis, G. Melagraki, T.Mavromoustakos. Comparative study of the AT1 receptor prodrug antagonist candesartan cilexetil with other sartans on the interactions with membrane bilayers. *Biochim. Biophys. Acta-Biomembranes* **2012**, 1818, 3107–3120
7. S. Feuillastre, A. S. Chajistamatiou, C. Potamitis, M. Zervou, P. Zoumpoulakis, E. D. Chrysina, JP Praly, S. Vidal. C-Glucosylated malonitrile as a key intermediate towards carbohydrate-based glycogen phosphorylase inhibitors. *Biorg. Med. Chem* **2012**, 20(18), 5592-9
8. C. Fotakis, D. Christodouleas, M. Zervou, K. Papadopoulos, A.C. Calokerinos. Classification of Wines based on different Antioxidant Responses to Spectrophotometric Analytical methods. *Anal. Lett.* **2012**, 45 (5-6), 581-591.

9. D. Athanasiadou, A. Godelitsas, D. Sokaras, AG Karydas, E. Dotsika, C.Potamitis, M. Zervou, S. Xanthos, E.Chatzitheodoridis, H.C. Gooi, U. Becker. New insights into the chemical and isotopic composition of human-body biominerals. I: Cholesterol gallstones from England and Greece. *J. Trace Elem Med Biol* **2013**, *27*(2), 7
10. C. Fotakis, D. Christodouleas, P. Zoumpoulakis, E. Kritsi, N. P. Benetis, T. Mavromoustakos, H. Reis, A. Gili, M. G. Papadopoulos, M. Zervou\*. Comparative Biophysical Studies of Sartan Class Drug Molecules Losartan and Candesartan (CV-11974) with Membrane Bilayers. *J. Phys. Chem. B* **2011**, *115* (19), 6180-6192
11. E. D. Tzika, M. Christoforou, S. Pispas, M. Zervou, V. Papadimitriou, T.G. Sotiroudis, E. Leontidis and A. Xenakis. Influence of Nanoreactor Environment and Substrate Location on the Activity of Horseradish Peroxidase in Olive Oil Based Water-in-Oil Microemulsions. *Langmuir* **2011**, *27*(6), 2692-2700
12. A. Skendi, C.G. Biliaderis, M.S. Izydorczyk, M. Zervou, P. Zoumpoulakis. Structural variation and rheological properties of water-extractable arabinoxylans from six Greek wheat cultivars. *Food Chem.* **2011**, *126*(2), 526-536
13. C. Gabriel, C.P. Raptopoulou, V. Psycharis, A. Terzis, M. Zervou, C. Mateescu, A. Salifoglou. 1D-3D Metal-Organic Lattice Assemblies through Chemical Reactivity and MetalAssisted Ligand Transformations in Ternary Pb(II)-Phenanthroline-(Hydroxy)dicarboxylic Acid Systems. *Crystal Growth & Design* **2011**, *11*, 382-395.
14. M. Kaliva , C. Gabriel , C. P. Raptopoulou , A. Terzis, G. Voyiatzis , M. Zervou , C. Mateescu , A. Salifoglou. A Unique Dinuclear Mixed V(V) Oxo-peroxo Complex in the Structural Speciation of the Ternary V(V)-Peroxo-citrate System. Potential Mechanistic and Structural Insight into the Aqueous Synthetic Chemistry of Dinuclear V(V)-Citrate Species with H<sub>2</sub>O<sub>2</sub>. *Inorg. Chem.*, **2011**, *50* (22), 11423–11436.
15. Y. Gardikis, P. G. Tsoungas, C.Potamitis, G. Pairas, M. Zervou, P. Cordopatis. Xanthones in Heterocyclic Synthesis. An Efficient and General Route for the Synthesis of Regioselectively Substituted Phthalazines. *Heterocycles* **2011**, *83* (6), 1291-1302
16. Y. Gardikis, P. G. Tsoungas, C. Potamitis, M. Zervou, P. Cordopatis. Xanthones in Heterocyclic Synthesis. An Efficient Route for the Synthesis of C-3 o-Hydroxyaryl Substituted 1,2-Benzisoxazoles and Their N-Oxides, Potential Scaffolds for Angiotensin(II) Antagonist Hybrid Peptides. *Heterocycles* **2011**, *83* (5), 1077-1091.
17. Gardikis K., Hatziantoniou S., Bucos M., Zervou M., Screttas C.G., Steele B.R., Ionov M., Micha-Screttas M., Fessas, Demetzos C. Development and characterization of a new drug delivery nanosystem combining liposomal and dendrimeric technology (liposomal locked-in dendrimers) for cancer therapy. *J Pharm Sci* **2010**, *99*(8), 3561-3571
18. Politi A.,Zervou M., Triantafyllidi H., Zoumpoulakis P., Zoga A., Moutevelis-Minakakis P., Kokotos G., Mavromoustakos T., Iliodromitis E.K., Kremastinos D.Th. Hypertension study in anesthetized rabbits: Protocol proposal for AT1 antagonists screening. *JRAAS* **2010**, *11* (2), 103 - 110
19. Camoutsis C., Geronikaki A., Ciric A., Soković M. Zoumpoulakis P., Zervou M. Sulfonamide-1,2,4-thiadiazole derivatives as antifungal and antibacterial agents: Synthesis, biological evaluation, lipophilicity, and conformational studies, *Chem. Pharm. Bull.* **2010**, *58*(2), 160-167

20. V. Saroglou, A. Karioti, A. Rancic, K. Dimas, C. Koukoulitsa, M. Zervou, H. Skaltsa. Sesquiterpene Lactones from *Anthemis melanolepis* and Their Antibacterial and Cytotoxic Activities. Prediction of Their Pharmacokinetic Profile. *J. Nat. Prod.* **2010**, *73*, 242–246
21. M. Plioukas, A. Termentzi, C. Gabrieli, M. Zervou, P. Kefalas, E. Kokkalou. Novel acylflavones from *Sideritis syriaca* ssp. *Syriaca*. *Food Chemistry* **2010**, *123*, 1136–1141
22. J. Wiecek, D. Kovala-Demertzi, Z. Ciunik, M. Zervou, M.A. Demertzis. Diorganotin Complexes of a Thiosemicarbazone. Synthesis, Properties, X-Ray Crystal Structure and Antiproliferative Activity of Diorganotin Complexes," *Bioinorganic Chemistry and Applications*, **2010**, Article ID 867195,
23. J. Wiecek, D. Kovala-Demertzi, Z. Ciunik, J. Wietrzyk, M. Zervou, M. Demertzis. Organotin compound derived from 3-hydroxy-2-formylpyridine- semicarbazone. Synthesis, crystal structure and anti-proliferative activity. *Bioinorganic Chemistry and Applications*, **2010**, Article ID 718606,
24. C. Potamitis, M. Zervou, V. Katsiaras, P. Zoumpoulakis, S. Durdagi, M.G.Papadopoulos, J. M. Hayes, S.Golic Grdadolnik, I. Kyrikou, D. Argyropoulos, G. Vatougia, T. Mavromoustakos. Antihypertensive Drug Valsartan in solution and at the AT1 Receptor: Conformational Analysis, Dynamic NMR Spectroscopy, in silico Docking and Molecular Dynamics Simulations. *J. Chem. Inf. Model.* **2009**, *49*, 726–739
25. Calogeropoulou T., Avlonitis N., Minas V., Alexi X., Pantzou A., Charalampopoulos I., Zervou M., Vergou V., Katsanou E. S., Lazaridis I., Alexis M., Gravanis A. Novel DHEA Derivatives with Anti-Apoptotic Neuroprotective activity. *J. Med. Chem.* **2009**, *52* (21), 6569–6587
26. Ch. Fotakis, D. Christodouleas, P. Chatzigeorgiou, M. Zervou, N. P. Benetis, K. Viras, T. Mavromoustakos. Development of a CP-31P NMR broadline simulation methodology for studying the interactions of antihypertensive AT1 antagonist losartan with phospholipids bilayers. *Biophysical J.* **2009**, *96*, 2227–2236
27. Ioannou E., Zervou M., Ismail A., Ktari L., Vagias C., Roussis V. 2,6-Cyclo-xenicanes from the brown algae *Dilophus fasciola* and *Dilophus spiralis*. *Tetrahedron* **2009**, *65* 10565–10572
28. Termentzi A., Zervou M., Kokkalou E. Isolation and structure elucidation of novel phenolic constituents from *Sorbus domestica* fruits. *Food Chemistry*, **2009**, *116*(1), 371–381
29. E. Ioannou, A. F. Abdel-Razika, M. Zervou, D. Christofidis, X. Alexi, C. Vagias, M. N. Alexis, V. Roussis. 5 $\alpha$ ,8 $\alpha$  Epidioxysterols from the gorgonian *Eunicella cavolini* and the ascidian *Trididemnum inarmatum*: Isolation and evaluation of their antiproliferative activity. *Steroids* **2009**, *74*, 73–80
30. Gabriel, M. Kaliva, J. Venetis, P. Baran, I. Rodriguez-Escudero, G. Voyiatzis, M. Zervou, A. Salifoglou. Aqueous V(V)-Peroxo-Amino Acid Chemistry. Synthesis, Structural and Spectroscopic Characterization of Unusual Ternary Dinuclear Tetraperoxo Vanadium(V)-Glycine Complexes. *Inorg. Chem.* **2009**, *48*, 476–487
31. V. Georgantas, N. Kotsakis, C.P. Raptopoulou, A. Terzis, L. Iordanidis, M. Zervou, T. Jakusch T. Kiss, A. Salifoglou. Synthetic, structural and solution speciation studies on

- binary Al(III)–(carboxy)phosphonate systems. Relevance to the neurotoxic potential of Al(III). *Journal of Inorganic Biochemistry* **2009**, *103*, 1530–1541
32. C. Koukoulitsa, M. Zervou, C. Demetzos, T. Mavromoustakos. Comparative docking studies of labdane-type diterpenes with forskolin at the active site of adenylyl cyclase. *Bioorganic & Medicinal Chemistry* **2008**, *16*(17), 8237-8243
33. I. Kyrikou, N. P. Benetis, P. Chatzigeorgiou, M. Zervou, K. Viras, C. Poulos, T. Mavromoustakos. Interactions of the dipeptide paralyisin  $\beta$ -Ala-Tyr and the amino acid Glu with phospholipid bilayers. *BBA - Biomembranes* **2008**, *1778* (1), 113-124
34. Armata, C. Gabrieli, A. Termentzi, M. Zervou, E. Kokkalou. Constituents of *Sideritis syriaca* ssp. *Syriaca* (Lamiaceae) and their antioxidant activity. *Food Chemistry* **2008**, *111*, 179–186
35. Kapou, M. A. Fousteris, S. S. Nikolaropoulos, M. Zervou, S. G. Grdadolnik, P. Zoumpoulakis, I. Kyrikou, T. Mavromoustakos. 2D NMR and conformational analysis of a prototype anti-tumour steroidal ester. *J. Pharm. Biomed.* **2005**, *38* (3), 428-434
36. N.P. Benetis, I. Kyrikou, T. Mavromoustakos, M. Zervou. Static  $^{31}\text{P}$  CP NMR Multilamellar Bilayer Broadlines in the Absence and presence of the Bioactive Dipeptide beta-Ala-Tyr and Comparison with Glu". *Chem. Phys.* **2005**, *314*(1-3) 57-72
37. P. Petrakis, I. Touris, M. Liouni, M. Zervou, I. Kyrikou, R. Kokkinofa, C. R. Theocharis, T.M. Mavromoustakos. Authenticity of the traditional Cypriot spirit "Zivania" on the basis of  $^1\text{H}$  NMR Spectroscopy Diagnostic Parameters and Statistical Analysis. *J Agric Food Chem* **2005**, *53*, 5293-5303
38. D. Kovala-Demertzi, V. N. Dokorou, J. P. Jasinsky, A. Opolski, J. Wiecek, M. Zervou, M. A. Demertzis. Organotin flufenamates: Synthesis, characterization and antiproliferative activity of organotin flufenamates. *J. Organ. Chem.* **2005**, *690*, 1800-1806
39. T. Mavromoustakos, M. Zervou, P. Zoumpoulakis, I. Kyrikou, N.P. Benetis, L. Polevaya, P. Roumelioti, N. Giatas, A. Zoga, P. Moutevelis Minakakis, A. Kolocouris, D. Vlahakos, S. Golic Grdadolnik, J. Matsoukas. Conformation and Bioactivity. Design and Discovery of Novel Antihypertensive Drugs. *Curr Top Med Chem* **2004**, *4*, 385-401
40. T. Mavromoustakos, P. Zoumpoulakis, I. Kyrikou, A. Zoga, E. Siapi, M. Zervou, I. Daliani, D. Dimitriou, A. Pitsas, C. Kamoutsis, P. Laggner. Efforts to Understand the Molecular Basis of Hypertension Through Drug:Membrane Interactions. *Curr Top Med Chem* **2004**, *4*, 445-459.
41. T. Mavromoustakos, A. Kapou, N.P. Benetis, M. Zervou. Conformational Analysis Using 2D NMR Spectroscopy Coupled with Computational Analysis as an Aid in the Alignment Procedure of 3D-QSAR studies. *Drug Design Reviews - Online* **2004**, *1*(3), 235-245(11).
42. P. Zoumpoulakis, I. Daliani, M. Zervou, I. Kyrikou, G. Lamprinidis, E. Mikros, T. Mavromoustakos. Losartan's Molecular Basis of Interaction with Membranes and  $\text{AT}_1$  Receptor. *Chem. Phys. Lipids* **2003**, *125*, 13-25.
43. G. Bonas, M. Zervou, A. Papaeoannou and M. Lees. "SoftCRM": A new Software for the Certification of Reference Materials. *Accredit Qual Assur* **2003**, *8*:101-107

44. T. Mavromoustakos, M. Zervou, G. Bonas, A. Kolocouris, P. Petrakis. A Novel Analytical Method To Detect Adulteration of Virgin Olive Oil by Other Oils. *J Am Oil Chem Soc* **2000**, *77*(4), 405-411.
45. T. Mavromoustakos, A. Kolocouris, M. Zervou, P. Roumelioti, J. Matsoukas and R. Weisemann. An effort to understand the molecular basis of hypertension through the study of conformational analysis of Losartan and Sarmesin using a combination of NMR spectroscopy and theoretical calculations. *J. Med. Chem.* **1999**, *42*:10, 1714-1722
46. T. Mavromoustakos, E. Theodoropoulou, M. Zervou, T. Kourouli, D. Papahatjis. Structure Elucidation and Conformational Properties of synthetic Cannabinoids 2-[6a,7,10,10a-tetrahydro-6,6,9-trimethyl-6H dibenzo [b,d]pyran-1-ol]-2-[hexyl]-1,3-dithiolane and its methylated analog *J. Pharm.. Biomed.* **1999**, *18*(6), 947-956
47. T. Mavromoustakos, M. Zervou, D. Panagiotopoulos, E. Theodoropoulou, J. Matsoukas, D. Karussis. Structure, Elucidation and Conformational Properties of the Immunomodulator Linomide. *J. Pharm. Biomed.* **1998**, *16* (5), 741-751
48. T. Mavromoustakos, E. Theodoropoulou, M. Zervou, G. Stamos, C. Kamoutsis, E. Humpfer. Nuclear Magnetic Resonance Spectral Analysis and Conformational Properties of 11-Benzoyl-9,9a,10,11 tetrahydro-4H-indolo[4,3-ab] carbazole. *J. Pharm. Biomed.* **1998**, *16*(5), 723-732
49. T. Mavromoustakos, M. Zervou, E. Theodoropoulou, D. Panagiotopoulos, G. Bonas, M.P.Day, A. Helmis: <sup>13</sup>C Nuclear Magnetic Resonance Spectroscopic Analysis of the Triacylglycerol Composition of the Greek Virgin Olive Oils. *Magnetic Resonance in Chemistry* **1997**, *35*, S3-S7

### Book chapters

1. M. Zervou\*, C. Koukoulitsa, P. Zoumpoulakis. Screening for Bioactive Compounds of Plant Origin using NMR-based and in silico approaches. *In* Plants in Traditional and Modern Medicine: Chemistry and activity. Kokkalou E. (Ed.), Transworld Research Network; Keral, India, (**2010**) ISBN:978-81-7895-432-5
2. T. Mavromoustakos, S. Golic Grdadolnik, M. Zervou, P. Zoumpoulakis, C. Potamitis, A. Politi, E. Mantzourani, J.A. Platts, C. Koukoulitsa, P. Minakakis, G. Kokotos, T. Tselios, J. Matsoukas, S. Durdagi, M. Papadopoulos, D. Papahadjis, Z.S. Spyrinti, G.A. Dalkas, G. Spyroulias. Putative Bioactive Conformers of Small Molecules: A Concerted Approach using NMR Spectroscopy and Computational Chemistry. *In* Medicinal Chemistry Research Progress. Giulia P. Colombo and Sofia Ricci (Eds). Nova Publisher (**2008**).
3. T. Mavromoustakos, M. Zervou, P. Zoumpoulakis. Design and Discovery of Novel Antihypertensive Drugs Through Conformation and Bioactivity Studies. *In* Frontiers in Medicinal Chemistry - Online, **2006**, *3*, 87-111. Allen B. Reitz / Atta-ur-Rahman (Eds). Betham Science Publishers.
4. I. Kyrikou, M. Zervou, P. Petrakis, T. Mavromoustakos. An Effort to Develop an Analytical Method to detect Adulteration of Olive Oil by Hazelnut Oil. *In* Magnetic Resonance in food Science. Latest Developments. P.S. Belton, A.M. Gil, G.A. Webb and



D. Rutledge (Eds). Special publication No. 286 of the Royal society of Chemistry (2003).

5. P. Zoumpoulakis, M. Zervou, S.G. Grdadolnik, T. Mavromoustakos. Structure Elucidation and Conformational Properties of Irbesartan. *In Drug Discovery and Design: Medical Aspects. Biomedical and Health Research*, vol. 55. J. Matsoukas and T. Mavromoustakos (Eds). IOS Press (2002).

6. A. Kolokouris, M. Zervou, T. Mavromoustakos, P. Roumelioti, T. Tselios, J. Matsoukas, E. Humpfer: Conformational Analysis of Peptidic and Peptidomimetic AII Antagonists Using a Combination of NMR Spectroscopy and Theoretical Calculations. *In Bioactive Peptides in Drug Discovery and Design: Medical Aspects. Biomedical and Health Research*, vol. 22. J. Matsoukas and T. Mavromoustakos (Eds). IOS Press (1999).

### Oral presentations in conferences/workshops

1. M. Zervou (Invited Oral Presentation), C. Potamitis, K.E. Tsitsanou, P. Zoumpoulakis, S.E. Zographos, , C. Drakou, U. Zelenko, S. Golic Grdadolnik. NMR approaches probing molecular interactions of ligands at the Odorant Binding Protein 1 of malaria-transmitting mosquito *Anopheles gambiae*.

2nd SEE-DRUG Workshop: NMR BASICS & APPLICATIONS IN LIFESCIENCES, FP7-REGPOT-2011-1, SEE-DRUG Project, Conference & Cultural Center, University of Patras, 13th–15th May, 2013

2. C. Potamitis, P. Zoumpoulakis, M. Zervou (Oral Presentation). Applications of Biomolecular NMR in Chemical Biology. *Final ARCADE Meeting May, 2013*

3. C. Fotakis, K. Kokkotou, M. Zervou (Invited Oral Presentation), P. Zoumpoulakis. NMR-omics towards the authenticity of grape derived products.

BuTrAFoS (Building Trust through Authentic Food and safety), Limassol Cyprus, 28-31 Oct, 2012, in the frame of the Cyprus presidency of EU.

4. Katerina Kokkotou, Maria Zervou (Invited Oral Presentation) , Panagiotis Zoumpoulakis, Charalambos Fotakis, Panagiotis Moulos, Anna Tsantili-Kakoulidou, Maria Liouni. Metabolic monitoring of Greek white wines using HR NMR spectroscopy and multivariate statistical analysis.

EastNMR Satellite meeting, 18<sup>th</sup> EuroQSAR, Rhodes Greece, September 19-24, 2010.

5. C. Potamitis, M. Zervou (Oral Presentation), S. Golic Grdadolnik, I. Kyrikou, D. Argyropoulos D., G. Vatougia, V. Katsiaras, S. Nikolaropoulos, P. Zoumpoulakis, T. Mavromoustakos. Conformational Analysis of the Antihypertensive Drug Valsartan using Dynamic NMR Spectroscopy. Comparative superimposition and docking studies with the prototype AT1 antagonsit Losartan. 8th Conference, Medicinal Chemistry: Drug Discovery and Design, Patras, Greece March 15-17, 2007

### Published abstracts from international conferences /Papers in international conferences proceedings

1. Zervou, M; Potamitis, C.; Zoumpoulakis, P; Fotakis, C; Papadimitriou, E; Cordopatis, P; Magafa, V. Pharmacophore model of Cysteine-based alpha 4 beta 1

Integrin Ligands based on Conformational Solution Studies. *32nd European Peptide Society Symposium*, 2-7 Sept. 2012, Megaron, Athens, Greece.

*J. Peptide Sci*, **2012**, *18*, *Suppl. S1*, *page S165*,

**Paper:** *Proceedings of the 32nd European Peptide Symposium*, p. 544-5

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