

## **PERSONAL DATA**

Surname: **Troganis**  
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## **EDUCATION-TRAINING**

1975-1980: B.Sc., University of Athens  
1987-1992: Ph.D., University of Athens  
1993-1994: Postdoctoral Researcher, Ohio State University  
1994-2006: Manager of the NMR Centre of the University of Ioannina  
1998-2000: Lecturer, Department of Chemistry, University of Ioannina, Greece  
2001-2004: Lecturer, Department of Biological Applications and Technology, University of Ioannina, Greece  
2005-2012: Assistant Professor, Department of Biological Applications and Technologies, University of Ioannina, Greece  
2012-2017: Associate Professor, Department of Biological Applications and Technologies, University of Ioannina, Greece  
2017- : Professor, Department of Biological Applications and Technology, University of Ioannina, Greece

## **COURSES**

### *I) Undergraduated courses*

- a) Physical Chemistry in Biological Systems
- b) Structural Biology.

### Practical courses

- a) Experimental Physical Chemistry in Biological System

### *II) Post-Graduated courses*

- a) Applications of Nuclear Magnetic Resonance in Chemistry and Biology

## **RESEARCH INTERESTS:**

- Development of NMR Techniques
- Structural Studies of Biological Active Compounds
- Solvation Studies of Model Compounds and Peptides
- Analysis of Plant Extracts using NMR Techniques
- Metabonomic studies of Biological Fluids

## **AWARDS**

- Scholarship by N.C.S.R “Demokritos” , 1982-1986
- Scholarship by N.I.H., 1992-1994

## **RESEARCH PROJECTS**

Coordinator of 5 projects and main researcher in 14 projects.

## **CITATION**

2816 hetero-citations according to Google Scholar, with 26 h-Index.

## **PUBLICATION**

1. S. Hamodrakas, E. Alexandraki, A. Troganis and C.I. Stassinopoulou  
Models of Binding of 4-nitrophenyl- $\alpha$ -D-mannopyranoside to the Lectin Concanavalin A. -*Int. J. Biol. Macromolecules* 11(1), 17-22, **1989**.
2. A. Hempel, N. Camerman, S.J. Hamodrakas, F.P. Ottensmeyer, A. Troganis, C.I. Stassinopoulou and A. Camerman  
2,2,6,6-Tetramethylpiperidine-1-oxyl-4-yl  $\alpha$ -D-glycoside. - *Acta Cryst.*, C49, 298-300, **1993**.
3. A. Troganis and C.I. Stassinopoulou  
Modes of Association of Concanavalin A with  $\alpha$ -D-glycosides. -*Bioch. Biophys. Acta*, 1206(2), 215-224, **1994**.
4. I.P. Gerothanassis, A. Troganis and C. Vakka  
 $^{17}\text{O}$  and  $^1\text{H}$ - $^{15}\text{N}$  Heteronuclear Multiple Quantum Coherence ( $^1\text{H}$ - $^{15}\text{N}$  HMQC) NMR of Linear Amides: Evidence of an Out-of-Plane (Torsion Angle) Deformation of the Amide Bond and Pyramidicity at the Amide Nitrogen. - *Tetrahedron*, 51(34), 9493-500, **1995**.
5. I.P. Gerothanassis, C. Vakka and A. Troganis  
 $^{17}\text{O}$  NMR Studies of the Solvation State of Cis/Trans Isomers of Amides and Model Protected Peptides. -*J. Magn. Res.*, (B), 111(3), 220-9, **1996**.
6. I.P. Gerothanassis, A. Troganis and C. Vakka  
The First Experimental Evidence of Differential Hydration of E/Z Isomers of Sterically Hindered Amides: One Dimensional Steady-State Selective Intermolecular  $^{13}\text{C}$ ,  $^1\text{H}$  Overhauser Effect Study of Tert-butylformamide, - *Tetrahedron Letters*, 37(36), 6569-72, **1996**.
7. I. Bertini, A. Coutsolelos, A. Dikiy, C. Luchinat, G. Spyroulias and A. Troganis  
Structural and Dynamic Information on Double-Decker  $\text{Yb}^{3+}$  and  $\text{Dy}^{3+}$  Porphyrin Complexes in Solution through  $^1\text{H}$  NMR, *Inorg. Chem.*, 35(21), 6308-15, **1996**.
8. E. Katsarou, A. Troganis and N. Hadjiliadis  
Binary and Ternary Complexes of Platinum (II) with the Dipeptide Esters Gly-GlyOEt, Gly-AlaOMe, Gly-2-AbaOMe, Gly-nValOMe, Gly-nLeuOMe and the Nucleosides GuO (Guanosine) and Cyd (Cytidine). *Inorg Chim. Acta*, 256(1), 21-8, **1997**.
9. A. Troganis, I.P. Gerothanassis and D. Papademitriou  
Experimental Evidence of Specific Solute-Solvent Interactions of Fullerenes  $\text{C}_{60}$  and  $\text{C}_{70}$  in Solution: One dimensional Steady State Intermolecular  $^{13}\text{C}$ ,  $^1\text{H}$  Overhauser Effect Study. *J. Magn. Reson.*, 130(1), 149-52, **1998**.
10. C.G. Kalodimos, I.P. Gerothanassis, A. Troganis, B. Looock and M. Momenteau  
 $^{13}\text{C}$  Shieldings,  $^{18}\text{O}$  Isotope Effects on  $^{13}\text{C}$  Shieldings and  $^{57}\text{Fe}$ - $^{13}\text{C}$  Spin Couplings of the Fe-C-O Unit in Superstructured Hemoprotein Models: Comparison with Hemoproteins, C-O Vibrational Frequencies and X-ray Structural Data. *J. Biomol. NMR*, 11(4), 423-35, **1998**.
11. C.I. Stassinopoulou, A. Troganis, L. Leondiadis, E. Bouchager and P. Cordopatis  
Solution Structure of the 35-54 Peptide Fragment of Human Interleukin-2 Receptor  $\beta$ -Chain. *J. Protein Chem.*, 17(6), 552-3, **1998**.
12. I.P. Gerothanassis, V. Exarhou, V. Lagouri, A. Troganis, M. Tsimidou and D. Boskou  
Methodology for Identification of Phenolic Acids in Complex Phenolic Mixtures by High Resolution Two-Dimensional Nuclear Magnetic Resonance. Application to Methanolic Extracts of two Oregano Species. *J. Agr. Food*

- Chem.*, 46(10), 4185-92, **1998**.
13. K.D. Soulti, A. Troganis, T. Kabanos, A. Keramidas, Y. Deligiannakis, C.P. Raptopoulou and A. Terzis  
Model Studies of the Interaction of Vanadium(III) and Oxovanadium(IV/V) with the Carbonyl Amide Oxygen. *Inorg. Chem.*, 37(26), 6785-94, **1998**.
  14. A.I. Karakatsani, T.A. Liapikos, A.N. Troganis and D.C. Tsoukatos  
Involvement of Phospholipids on Apolipoprotein B Modification during Low Density Lipoprotein Oxidation. *Lipids*, 33(12), 1159-62, **1998**.
  15. A.J. Tasiopoulos, A.N. Troganis, A. Evangelou, C.P. Raptopoulou, A. Terzis, Y. Deligiannakis and T.A. Kabanos  
Synthetic Analogues for Oxovanadium(IV)-Glutathione Interaction: An EPR, Synthetic and Structural Study of Oxovanadium(IV) Compounds with Sulphydryl Containing Pseudopeptides and Dipeptides. *Chem. Eur. J.*, 5(3), 910-21, **1999**.
  16. T. Tselios, L. Probert, G. Kollias, I. Daliani, E. Matsoukas, A. Troganis, I.P. Gerothanassis, T. Mavromoustakos, G.J. Moore and J.M. Matsoukas  
Design and Synthesis of a Potent Cyclic Analogue of the Myelin Basic Protein Epitope MBP<sub>72-85</sub>: Importance of the Ala<sub>81</sub> Carboxyl Group and of a Cyclic Conformation for the Induction of Experimental Allergic Encephalomyelitis (E.A.E). *J. Med. Chem.*, 42(7), 1170-77, **1999**.
  17. A. Troganis, I.P. Gerothanassis, Z. Athanassiou, T. Mavromoustakos, G. Hawkes and C. Sakarellos  
Thermodynamic Origin of Cis/Trans Isomers of a Proline-Containing  $\beta$ -Turn Model Dipeptide in Aqueous Solution: A Combined Variable Temperature <sup>1</sup>H-NMR, Two-Dimensional <sup>1</sup>H,<sup>1</sup>H Gradient Enhanced Nuclear Overhauser Effect Spectroscopy (NOESY), One-Dimensional Steady-State Intermolecular <sup>13</sup>C,<sup>1</sup>H NOE and Molecular Dynamics Study. *Biopolymers*, 53(1), 72-83, **2000**.
  18. V. Tsikaris, A. Troganis, V. Moussis, E. Panou-Pomonis, M. Sakarellos-Daitsiotis and C. Sakarellos  
Arg Side Chain-Backbone Interactions Evidenced in Model Peptides by <sup>17</sup>O-NMR Spectroscopy. *Biopolymers*, 53(2), 135-9, **2000**.
  19. C.G. Kalodimos, I.P. Gerothanassis, R. Pierattelli and A. Troganis  
Multinuclear (<sup>13</sup>C, <sup>17</sup>O, <sup>57</sup>Fe) NMR Studies of Carbonmonoxy Heme Proteins and Synthetic Model Compounds. *J. Inorg. Biochem.* 79(1-4), 371-380, **2000**.
  20. A.J. Tasiopoulos, A.N. Troganis, Y. Deligiannakis, A. Evangelou, T.A. Kabanos, J.D. Woolins and A. Slawin  
Synthetic Analogues for Oxovanadium(IV/V)-Glutathione Interaction: An NMR, EPR, Synthetic and Structural Study of Oxovanadium(IV/V) Compounds with Sulphydryl Containing Pseudopeptides and Dipeptides. *J. Inorg. Biochem.*, 79(1-4), 159-170, **2000**.
  21. T. Tselios, I. Daliani, S. Deraos, S. Thymianou, E. Matsoukas, A. Troganis, I. Gerothanassis, A. Mouzaki, T. Mavromoustakos, L. Robert and J. Matsoukas  
Treatment of Experimental Allergic Encephalomyelitis (EAE) by a Rationally Designed Cyclic Analogue of Myelin Basic Protein (MBP) Epitope 72-85. *Bioorg. Med. Chem. Lett.*, 10(24), 2713-2717, **2000**.
  22. V. Exarchou, A. Troganis, I.P. Gerothanassis, M. Tsimidou and D. Boskou  
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  23. M. Papadopoulos, B. Nock, T. Maina, I. Pirmettis, C. Raptopoulou, A. Tasiopoulos, A. Troganis, T. Kabanos, A. Terzis and E. Chiotelis

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24. G. Balayiannis, D. Papaioannou and A. Troganis\*  
Configuration and Conformation of a Novel Uridine Analogue:  $^1\text{H}$  and  $^{13}\text{C}$  NMR Spectra of (5'S)-1-[2'-(2-hydroxyethyl)tetrahydropyran-5'-yl]-1H-pyrimidine-2,4-dione. *Magn. Reson. Chem.*, 40, 244-246, **2002**.
25. D. Morikis, M. Roy, A. Sahu, A. Troganis, P.A. Jennings, G. Tsokos and J.D. Lambris  
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26. D. Skalkos, E. Tatsis, I.P. Gerothanassis, and A. Troganis  
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27. V. Exarchou, N. Nenadis, M. Tsimidou, I.P. Gerothanassis, A. Troganis and D. Boskou  
Antioxidant Activities and Phenolic Composition of Extracts from Greek Oregano, Greek Sage and Summer Savory. *J. Agr. Food Chem.*, 50(19) 5294-5299, **2002**.
28. V. Exarchou, A. Troganis, I.P. Gerothanassis, M. Tsimidou and D. Boskou  
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29. A.G. Tzakos, A.M.J.J. Bonvin, A. Troganis, P. Cordopatis, M.L. Amzel, I.P. Gerothanassis and N.A.J. van Nuland  
On the molecular basis of the recognition of angiotensin II (AII) NMR structure of AII in solution compared with the X-ray structure of AII bound to the mab Fab131. *Eur. J. Biochem.*, 270(5), 849-860, **2003**.
30. A.S. Galanis, G.A. Spyroulias, R. Pierattelli, A. Tzakos, A. Troganis, I.P. Gerothanassis, G. Pairas, E. Manessi-Zoupa and P. Cordopatis  
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31. A.N. Troganis\*, C. Tsanaksidis and I.P. Gerothanassis  
 $^{14}\text{N}$  NMR Relaxation Times of Several Protein Amino Acids in Aqueous Solution - Comparison with  $^{17}\text{O}$  NMR Data and Estimation of the Relative Hydration Numbers in the Cationic and Zwitterionic Forms. *J. Magn. Reson.*, 164(2), 294-303, **2003**.
32. V. Theodorou, A.N. Troganis and I.P. Gerothanassis  
On the detection of both carbonyl and hydroxyl oxygens in amino acid derivatives: a  $^{17}\text{O}$  NMR reinvestigation. *Tetrahedron Letters*, 45(10), 2243-2245, **2004**.
33. A.G. Tzakos, I.P. Gerothanassis and A.N. Troganis  
On the Structural Basis of the Hypertensive Properties of Angiotensin II: A Solved Mystery or a Controversial Issue? *Current Topics in Medicinal Chemistry*, 4(4), 431-444, **2004**.
34. A.G. Tzakos, P. Fuchs, N.A.J. van Nuland, A. Troganis, T. Tselios, S. Deraos,

- J. Matsoukas, I.P. Gerothanassis and A.M.J.J. Bonvin  
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35. Matsoukas J, Apostolopoulos V, Kalbacher H, Papini AM, Tselios T, Chatzantoni K, Biagioli T, Lolli F, Deraos S, Papathanassopoulos P, Troganis A, Mantzourani E, Mavromoustakos T, Mouzaki A  
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  37. Troganis AN, Sicilia L, Barbarossou K, Gerothanassis IP, Russo N  
Solvation properties of N-substituted cis and trans amides are not identical: Significant enthalpy and entropy changes are revealed by the use of variable temperature <sup>1</sup>H NMR in aqueous and chloroform solutions and ab initio calculations, *J. Phys. Chem. A*, 109 (51), 11878-11884, **2005**.
  38. Tatsis EC, Boeren S, Exarchou V, Troganis AN, Vervoort J, Gerothanassis IP  
Identification of the major constituents of *Hypericum perforatum* by LC/SPE/NMR and/or LC/MS, *Phytochemistry*, 68 (3), 383-393, **2007**.
  39. Tatsis EC, Exarchou V, Troganis AN, Gerothanassis IP  
<sup>1</sup>H NMR determination of hypericin and pseudohypericin in complex natural mixtures by the use of strongly deshielded OH groups, *Anal. Chim. Acta*, 607, 219-226, **2008**.
  40. Kontogianni, V.G., Exarchou, V., Troganis, A., Gerothanassis, I.P.  
Rapid and novel discrimination and quantification of oleanolic and ursolic acids in complex plant extracts using two-dimensional nuclear magnetic resonance spectroscopy-Comparison with HPLC methods, *Anal. Chim. Acta*, 635(2), 188-195, **2009**.
  41. Exarchos K.P., Papaloukas C., Exarxos T.P., Troganis A.N., Fotiadis D.I.  
Prediction of cis/trans isomerization using feature selection and support vector machines, *J. Biomed. Inform.*, 42(1), 140-149, **2009**.
  42. Goulas V., Exarchou V., Troganis A.N., Psomiadou E., Fotsis T., Briasoulis E., Gerothanassis I.P.  
Phytochemicals in olive-leaf extracts and their antiproliferative activity against cancer and endothelial cells, *Mol. Nutrit. Food Res.*, 53(5), 600-608, **2009**.
  43. Exarchos K.P., Exarchos T.P., Papaloukas C., Troganis A.N., Fotiadis D.I.  
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  44. Charisiadis P., Exarchou V., Troganis A.N., Gerothanassis I.P.  
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  45. D.K. Laimou, M. Katsara, M.T.I. Matsoukas, V. Apostolopoulos, A.N. Troganis\*, T.V. Tselios\*  
Structural elucidation of Leuprolide and its analogues in solution: insight into their bioactive conformation, *Amino Acids*, 35(5), 1147-1160, **2010**.

46. Tsiafoulis, C.G., Exarchou, V., Tziouva, P.P., Bairaktari, E., Gerothanassis, I.P., Troganis, A.N.\*  
A new method for the determination of free L-carnitine in serum samples based on high field single quantum coherence filtering <sup>1</sup>H-NMR spectroscopy, *Anal. Bioanal. Chem.*, 399, 2285-2294, **2011**.
47. Laimou D, Lazoura E, Troganis A.N, Matsoukas M.T, Deraos S.N, Katsara M, Matsoukas J, Apostolopoulos V, Tselios T.V  
Conformational studies of immunodominant myelin basic protein 1–11 analogues using NMR and molecular modelling, *J Comput Aided Mol Des*, 25(11), 1019-1032, **2011**.
48. P. G. Takis, V. S. Melissas\*, A. N. Troganis\*  
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49. Exarchou, V., Takis, P.G., Malouta, M., Vervoort, J., Karali, E., Troganis, A.N.\*  
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50. Takis, P.G., Papavasileiou, K.D., Peristeras, L.D., Melissas\*, V.S., Troganis, A.N.\*  
Probing micro-solvation in "numbers": The case of neutral dipeptides in water, *Physical Chemistry Chemical Physics*, 15(19), 7354-7362, **2013**.
51. G.E. Magoulas, A. Rigopoulos, Z. Piperigkou, C. Gialeli, N.K. Karamanos, P.G. Takis, A.N. Troganis, A. Chrissanthopoulos, G. Maroulis, D. Papaioannou  
Synthesis and antiproliferative activity of two diastereomeric lignan amides serving as dimeric caffeic acid-L-DOPA hybrids, *Bioorganic Chemistry*, 66, 132-144, **2016**.
52. P.G. Takis\*, M.E. Oraiopoulou, C. Konidaris, A.N. Troganis\*  
<sup>1</sup>H NMR based Metabolomics study for the detection of the Human urine profile metabolic effects of *Origanum dictamnus* ingestion, *Journal of Agricultural and Food Chemistry*, 7(9), 4104-4115, **2016**.
53. P.G. Takis, K.D. Papavasileiou, L.D. Peristeras, G. Boulougouris, V.S. Melissas, A.N. Troganis  
Carboxylic and imide groups' micro-solvation in neat Dimethyl-Sulfoxide studied by <sup>1</sup>H-NMR and newly evolved theoretical approaches, *Physical Chemistry Chemical Physics*, 19(21), 13710-22, **2017**.
54. G.G. Kordopati, H. Tzoupis, A.N. Troganis, G.M. Tsivgoulis, S.G. Grdadolnic, C. Simal, T.V. Tselios  
Biologically relevant conformational features of linear and cyclic proteolipid protein (PLP) peptide analogues obtained by high-resolution nuclear magnetic resonance and molecular dynamics, *Journal of Computer-Aided Molecular Design*, 31(9), 841-854, **2017**.
55. Chatzimitakos, T., Kasouni, A., Sygellou, L., Avgeropoulos, A., Troganis, A., Stalikas, C.  
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56. Chatzimitakos, T.G., Kasouni, A.I., Troganis, A.N., Stalikas, C.D.  
Carbonization of Human Fingernails: Toward the Sustainable Production of Multifunctional Nitrogen and Sulfur Codoped Carbon Nanodots with Highly Luminescent Probing and Cell Proliferative/Migration Properties, *ACS Applied Materials and Interfaces*, 10(18), 16024-16032, **2018**.

57. Chatzimitakos, T., Kasouni, A., Sygellou, L., Leonardos, I., Troganis, A., Stalikas, C.  
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Development of a Multi-Enzymatic Approach for the Modification of Biopolymers with Ferulic Acid, *Biomolecules*, 12(7), 992, **2022**.