Mavromoustakos Thomas

Assistant Professor/Associate Professor/Professor

LAB OF ORGANIC CHEMISTRY, DEPARTMENT OF CHEMISTRY, NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS

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Google scholar:
https://scholar.google.com/citations?user=cPjnYXcAAAAJ&hl=en
(citations 7068, h-index 44)
SCOPUS:https://www.scopus.com/authid/detail.uri?authorId=35592959700
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EDUCATION

- Bachelor Chemistry Department, NKUA 1980
- Msc/Medicinal Chemistry, University of Connecticut, USA 1988
- PhD/ Medicinal Chemistry, University of Connecticut, USA 1990. Study of the cannabinoid and anesthetic steroids with artificial and biological membranes.

RESEARCH FIELDS

- Design of novel drugs against various diseases (neurodegenerative diseases, diabetes, cancer, hypertension, inflammation and psychotropic)

To achieve this aim I use the following physical chemical methodologies:
a. Solid State Nuclear Magnetic Resonance in order to study the dynamic changes it causes the drug in the lipid bilayers. In addition, the orientation of drugs in lipid bilayers is sought using deuterium NMR in collaboration with synthetic chemists who deuterate specific sites of drugs.
b. High Resolution Nuclear Magnetic Resonance in duterated solvents or environments that simulate the active site of action.
c. Conformational Analysis Using NMR ROE data in combination with computational analysis and molecular modeling to complement the experimental results.
d. Differential Scanning Calorimetry to study the thermal changes that causes the presence of pharmaceutical compounds with model membranes.
e. X-ray diffraction where the topography of drugs is sought in lipid bilayers. The X-ray diffraction experiments are run in Graz of Austria and ELETTRA facilities in Trieste of Italy.
f. Raman Spectroscopy to study the interactions of bioactive compounds with lipid bilayers. In particular, the *trans:gauche* ratio is estimated at the different mesomorphic states of lipid bilayers.
g. 3D-QSAR studies. CoMFA and CoMSIA softwares are applied to reveal the stereoelectronic requirements for a drug to exert biological activity. 3D-QSAR studies is a valuable tool in the rational design.
h. Simulation of NMR spectra in liquid and solid state with the collaboration of theoretical physical chemists.
k. Docking studies of drugs acting on receptors, DNA and bilayer environment.

- Authenticity aspects of beverages and foods

a. Study of geographical origin and adulteration of virgin olive oil by other cheaper oils using high resolution ^{13}C-NMR of olefinic region. In addition it is studied the adulteration of refined oil by refined hazelnut oil.
b. Study of authenticity of Cypriot beverage zivania with the combination of different physical chemical methods in collaboration with the University of Cyprus (^{1}H-NMR and Raman

Spectroscopies, ICP, Gas Chromatography, Refractometry, Statistical Analysis to facilitate the analysis of the output data etc).

EDUCATIONAL EXPERIENCE

UNDERGRADUATE COURSES

- Course/Elective 6211 Molecular Modeling and Nuclear Magnetic Resonance Spectroscopy
- Organic Chemistry Laboratory for Biologists
- Organic Chemistry Laboratory for Chemists

GRADUATE COURSES

- Laboratory of Organic Chemistry / Department of Chemistry EKPA, Master's Program in Organic / NMR Spectroscopy and Molecular Modeling/
- Laboratory of Polymers and Oenology/Department of Chemistry EKPA, Masters program Polymers/NMR Spectroscopy
- Food Chemistry Laboratory / Department of Chemistry EKPA, Master's program in Food Chemistry/ NMR Spectroscopy
- /Department of Chemistry EKPA, Master's program DIHINET/Educational courses related to Medicines, NMR spectroscopy and the contribution of carbon to biological life.
- Ioannina Department of Chemistry, Bioinorganic Chemistry Master's program NMR spectroscopy
- Department of Medicine of Crete Postgraduate program, pharmacology, Rational design of Medicines
- Department of Pharmacy EKPA Master's program in Cosmetology, Rational design of Medicines

DISCRIMINATIONS / SCHOLARSHIPS

- Fellowship sponsored by Royal Society for two monthly stayment in Great Britain. During my residence at the University of York I was trained in Molecular Graphics at Prof. Rod Hubbard's laboratory.
- Award for the 3rd best presented poster in the Third International Conference on Applications of Magnetic Resonance in Food Science, Nantes, September 16-18, 1996.
- Award by the Academy of Athens (29 December 1998) for the best research activity in 1998 related to hypertension.
- Award of a Fulbright Scholarship for the Summer of 1999.
- Award for the 3rd best presented poster in the Conference of Patras entitled Medicinal Chemistry Design and Development of Drugs in Medicinal Chemistry (1-3, 2001).
- Award for the 3rd best presented poster in the Conference of Patras entitled Medicinal Chemistry Design and Development of Drugs in Medicinal Chemistry (7-9, 2002).
- In October of 2000, a committee consisting of Prof. E.C. Constable, Prof. G.W. Gray, Prof. M.W. Gray, Prof. P.A. Schubiger και Dr. N. Ragousi, characterized the research activity of Medicinal Chemistry as an excellent ("the work done in this group is excellent") and also the research referred to the adulteration of olive oil ("the work of the group on virgin olive oil adulteration is worthy of note"). As a director of LMA I was involved in both activities.
- Reference of my research activity on peptidomimetism by the company Synergix Ltd in the software of «Molecular Conceptor". A chapter is written on the synthesis of Bioactive Molecules with G. Cohen of the same company and the product is now commercially available.
- .Scholarship by Royal society and COST D22 to perform binding experiments of antihypertensive molecules in AT1 and AT2 receptors as well as cell cultures.
- .Selected to teach at the University of Cyprus courses of Organic and Medicinal Chemistry.
- The article "Conformation and Bioactivity, Design and Development of Novel Antihypertensive Molecules is publishe in the Journal of "Current and Medicinal Chemistry (IF 4.483) and was selected one of the best articles. This article after being modified was published in the "Frontiers in Medicinal Chemistry (volume 2).
- .Invitation by Prof. A.M. Dopico to write a chapter in the book "Methods in Membrane Lipids" by Humana Press. The book has been circulated in 2007 and the chapter I have written appears with no 39 entitled

"The Use of Differential Scanning Calorimetry to Study Drug-Membrane Interactions".

- .Honored as a second degree Universal Title in Theology (3.2.2008).
- Selected as evaluator from the Scientific Committee of National Programs of Slovenia during the phases A and B (2007 until now).
- In Wikipedia there is a web site referred to AMG-3 cannabinoid in which the following publications are mentioned: Mavromoustakos T, Theodoropoulou E, Zervou M, Kourouli T, Papahatjis D. Structure elucidation and conformational properties of synthetic cannabinoids (-)-2-(6a,7,10,10a-tetrahydro-6,6,9-trimethyl-1-hydroxy-6H-dibenzo[b,d]pyranyl)-2-hexyl-1,3-dithiolane and its methylated analog. Journal of Pharmaceutical and Biomedical Analysis. 1999 Jan;18(6):947-56. PMID 9925329 and Durdagi S, Papadopoulos MG, Papahatjis DP, Mavromoustakos T. Combined 3D QSAR and molecular docking studies to reveal novel cannabinoid ligands with optimum binding activity. Bioorganic and Medicinal Chemistry Letters. 2007 Dec 15;17(24):6754-63. PMID 17980589.
- In htpp://www.newsrx.com/article (NewsRX. Medical News article on Medicinal Chemistry, 16.7.2007) is mentioned the article S. Durdagi et al J. Med. Chem. 50, 2875-2885 (2007).
- The article by S. Durdagi et al J. Chem. Inf. Model. 49,1139-1143 (2009) is mentioned in the http://www.rice.edu/nationalmedia/news2009-05-19-hiv.shtml
- In Science Daily in the Science news it is published the article entitled "Buckyball Computer Simulations Help Team Find Molecular Key to Combating HIV of the article by S. Durdagi et al J. Chem. Inf. Model. 49,1139-1143(2009) http://www.sciencedaily.com/releases/2009/05/090519134839.htm.
- In the Genetic Engineering & Biotechnology News is mentioned the published article by S. Durdagi et al J. Chem. Inf. Model. 49,1139-1143(2009) http://www.genengnews.com/news/bnitem.aspx?name=54814928&taxid=3
- It is mentioned in the Blog der Gesundheit. Eine gute Gesundheit ist das wichtigste für den Körper und vor allem für ihren Geist. Achten sie auf diesen!
- The article of S. Durdagi et al J. Chem. Inf. Model. 49,1139-1143(2009) http://gesundheit-blog.weiterlesen.net/new-found-molekule-mai-block-hiv-spread.html
- The article Combined 3D QSAR and molecular docking studies to reveal novel cannabinoid ligands with optimum binding activity published in
- Bioorganic & Medicinal Chemistry Letters, Volume 17, Issue 24, December 2007, Pages 6754-6763 by Durdagi, S.; Papadopoulos, M.G.; Papahatjis, D.P.; Mavromoustakos, T. was selected on the top 25 between October-December of 2007 http://top25.sciencedirect.com/subject/chemistry/6/journal/bioorganic- medicinal-chemistry-letters/0960894X/archive/14&print=true
- The article Development of Accurate Binding Affinity Predictions of Novel Renin Inhibitors through Molecular Docking Studies. J. Mol. Gr. Mod. 29 425-435 (2010) by A.P. Politi, S. Durdagi, P.M. Minakakis, T. Mavromoustakos, G. Kokotos was elected by the journal as one of the 25 best articles between October-December 2010. http://top25.sciencedirect.com/subject/pharmacology-toxicology-and-pharmaceutical-science/20/journal/journal-of-molecular-graphics-and-modelling/10933263/archive/30

RESEARCH GRANTS

- Molecular and Isotopic Characterization of Virgin Olive Oil. Scientific Officer: Th. Blackbeard Funding: 148,000 ECU, Program duration 3 years.
- Development and Assessment of Methods for the Detection of Adulteration of Olive Oil with Hazelnut Oil. GROWTH (MEDEO 2001). Scientific Officer: R. Aparicio-Ruiz Funding: 45766 ECU Program duration 3 years.
- Transnational cooperation between Romania and Greece 2000-2002. Program title: Study of Interactions between antihypertensive and antibiotic molecules in membranes. Scientific Officer: Th. Blackbeard. Funding: 4,200,000 Program duration 2 years.
- Transnational cooperation between Slovenia and Greece 2000-2002. Program title: Configuration analysis of pharmaceutical molecules and study of their interaction with membranes. Scientific Officer: Th. Blackbeard. Funding: 1,600,000
- EPET II-EKVAN 115. Program Title: Peptide Mimics. The New Generation of Pharmaceutical Products. Quality Production of Angiotensin Inhibitors. The New Generation of Anti-Hypertensives. Scientific Program Manager: Ioannis Matsoukas. Funding: 12,000,000. Program duration 3 years.
- PABE 1999. Preparation and preclinical evaluation of Liposomal anticancer drugs for transdermal administration. Scientific Officer P.N. Gerolymatos SA. Funding: 5,000,000. Program duration 2

years.

- Participation in the approved Research Program PENED 99 99ED442 entitled "Synthesis, characterization and study of the Molecular Structure and Chemical Activity of Mono-, Di- and Tri- Organotin Compounds with the non-steroidal Anti-Inflammatory Drugs Piroxicam, Tenoxicam, Alloxicam, Meloxicam and Lornoxicam of Oxinam's team. Oncological, biochemical and cytogenetic study in vivo and in vitro in normal and cancer cells of the action of compounds with the aim of improving chemotherapy". Scientific Manager Prof. S. Chatzikakou. Funding: 4,800,000. Program duration 2 years.
- Participation in the research program PENED Program 99 with code number 99Ed69 and title "Structural Bioconversion of Renewable Hydrocarbon Sources with the aim of producing Active Vinyls with Phytoregulatory Action" with the responsible body the Agricultural Institute Prof. M. Polysiou. Funding: 2,800,000. Program duration 2 years.
- COST CHEMISTRY ACTION D9. Advanced Computational Chemistry of Increasingly Complex Systems. Scientific Officer: Th. Mavromoustakos (only covers travel and accommodation expenses).
- "NMR center of excellence in Slovenia" Grant as a collaborator of one of the postgraduate students who are carrying out the experimental part of their PhD thesis in my supervised laboratory.
- Organization of a seminar on November 22, 1996 entitled: "New Technologies in the Analysis of Food and Beverages." Use of Isotopic Techniques and Detection of Product Fraud and Authenticity". The conference was organized within the framework of the FIT (FOOD ANALYSIS USING ISOTOPIC TECHNIQUES) program and concerns thematic networks (No SMT4-CT95-7500). This program is financed by the European Community. Speakers from France, Italy, England, Germany and Greece took part in this conference. About 80 scientists from Industries, Universities and Research bodies participated in the conference.
- PAVE 2000. Scientific Officer P.N. Gerolymatos SA. Budget for the IOFX. Project title: Pilot Preparation of the Anticancer Active Leuprolide Acetate and Development of its New Pharmaceutical Form. Funding: 2,500,000 drachma Program duration 2 years.
- Transnational cooperation between Romania and Greece. Program title: Correlation of the morphological structure and ionic transport capacity of bioactive components in the polymeric and phospholipid bilayers. Scientific Manager: Th. Mavromoustakos. Financing: 12,915 euros. Program duration 2 years.
- Transnational cooperation between Slovenia and Greece. Program title: Formulations of Pharmaceutical Molecules and Study of their Interaction with Membranes. Scientific Manager: Th. Mavromoustakos. Funding: 11,739 euros. Program duration 2 years.
- ENTER. Program Title "Using Theoretical Calculations for the Design & Synthesis of Innovative Antihypertensive Molecules". Scientific Manager: Th. Mavromoustakos. Funding: 73,320 euros. Program duration 15 months.
- AGAINST PARTNERSHIP YB/76 "MYELIN" Program Title "New Directions in the immunotherapy of Multiple Sclerosis using innovative active analogues of epitope 87-99 of the myelin basic protein alone or coupled with mannan". Scientific Manager: I. Matsoukas. Funding: 587000 euros. Program duration 3 years.
- YB/84 "HERAKLIS" JOINT PARTNERSHIP Program Title "The Production of new dual action (angiotensin II inhibitors together with adrenergic inhibitors) antihypertensive drugs and coating of endoprostheses with angiotensin II inhibitors to reduce restenosis. Scientific Manager: I. Matsoukas. Financing: 37000 euros. Program duration 3 years.
- 18.02 ACT 173: Production of Innovative Antihypertensive Molecules. Scientific Manager: Th. Mavromoustakos. Funding: 44,000 euros. Program duration 2 years.
- Cyprus Promotion Institute: Authenticity Study of Cypriot Zivania Drink. Scientific Manager: Th. Mavromoustakos. Funding: 11,000 Cyprus pounds. Program duration 2 years.
- Cyprus Research Promotion Institute: Innovative approach against the disease of Psoriasis. Scientific Officer Th. Mavromoustakos: Funding: 117326 Cyprus pounds. Program duration 2 years.

- EPAN/3.3 New Approaches Against Neurodegenerative Diseases. Scientific Manager: IOFX Funding: 200,000 euros. Program duration 3 years.
- RES/Measure of action 4.5 Design and Synthesis of Bioactive Molecules. The download of this program was based on the subsidized EPA of the Institute of Organic and Medicinal Chemistry. I am a scientific officer in two of the four subsidized. The total subsidy amount is 1,125,000 euros. It refers to the upgrading of the equipment of the I.O.F.X. Among the instruments purchased is a 600 MHz Nuclear Magnetic Resonance Spectrograph.
- Excellence-Research Programs GGET. Cycle II. Design and Synthesis of Bioactive and Functional Molecules. Scientific Officer: Institute of Organic and Medicinal Chemistry. Financing: 92750 euros. Program duration 3 years.
- Marie Curie Actions EURODAISY. MEST/CT2005/020575. Scientific Officer: Institute of Organic and Medicinal Chemistry. Funding amount: 509777 euros. Program duration 3 years.
- PENED 2003/03ED827. Design, synthesis and biological evaluation of MBP analogues for the immunotherapy of multiple sclerosis. Scientific Manager: I. Matsoukas. Funding: 38,692 euros. Program duration 2 years.
- ENTER 04E52 Use of Theoretical Calculations for the Design and Synthesis of Innovative Antihypertensive Molecules. Improvement, Upgrade and Commercial Exploitation of the Designed and Developed Software. Scientific Manager: Th. Mavromoustakos. Funding: 48,750 euros. Program duration 2 years.
- KY-SLO/0407/06 Cyprus Slovenia Transnational Cooperation. Conformational study of small linear peptides: "An innovative approach to Protein Folding". Scientific Manager: Th. Mavromoustakos. Financing: 10300 LK (18458 euros). Program duration 2 years.
- Cyprus-Romania Transnational Cooperation. KY-ROU/0407/Studies of controlled release of antipsoriatic drugs from different degrees of hydrated collagenous membranes. Scientific Manager: Th. Mavromoustakos. Funding: 12277 LK (22099 euros). Program duration 2 years.
- Infrastructure for the installation of a Nuclear Magnetic Resonance spectrograph to conduct Biological NMR experiments for the Cyprus Research and Technology Center where I was President (400,000 euros). Approved during negotiation. The amount was not granted on the grounds that the scientific supervisor is a foreign resident.
- Insertion into Biological Membranes. Scientific Manager: Th. Mavromoustakos. Funding: 68,000 euros. Program duration 2 years.
- Grant of two weeks of use of the European NMR spectroscopy facilities in Ljubljana, Slovenia (East-NMR Intranet application). Title of approved proposal: Conformational Analysis of Aliskiren at different environments. 04.11.2009. Scientific Manager: Th. Mavromoustakos.
- Subsidized proposal to grant two weeks of use of European NMR spectroscopy facilities in Ljubljana, Slovenia (East-NMR Intranet application). Title of approved proposal: Conformational Analysis of anticancer organotin compounds in absence and presence of LOX-3. 04.06.2010.
- Cyprus Research Promotion Foundation, Program ΔΙΔΑΚΤΩΡ/ΔΙΣΕΚ 0308/33 "Synthesis of Novel Catalytic Materials for Low-Temperature WGS Reaction" (Dec. 2008-Dec. 2010). Χρηματοδότηση: 60.000 ευρώ. Επιστημονικός Υπεύθυνος: Θ. Μαυρομούστακος.
- HERACLITOS II. Design and synthesis of innovative renin enzyme inhibitors. Scientific Manager: Th. Mavromoustakos. Funding 45,000 euros. Program duration 2 years.
- HERACLITOS II: Design of innovative bioactive molecules with the help of molecular simulation for the treatment of degenerative CNS diseases: ALZHEIMER AND PARKINSON. Scientific Manager: Th. Mavromoustakos. Funding 45,000 euros. Program duration 2 years.
- Subsidized proposal to grant two weeks of use of European NMR spectroscopy facilities in Frankfurt, Germany (East-NMR Intranet application.). Title of approved proposal: Use of solid state NMR spectroscopy to study the interactions of AT1 antagonists in lipid bilayers. The visit took place in October-November 2011. Scientific Manager: Th. Mavromoustakos.
- Granted proposal for two weeks of use of European NMR spectroscopy facilities in Ljubljana Slovenia (East-NMR Intranet application) to conduct experiments on peptide conjugates with cyclodextrins. The visit took place in August 2012.

- Subsidized proposal for one week's use of European NMR spectroscopy facilities in Frankfurt, Germany (BIO-NMR Intranet application.). Title of approved proposal: Use of solid state NMR spectroscopy to study the interactions of AT1 antagonists with cyclodextrins. Scientific Manager: Th. Mavromoustakos.
- Subsidized proposal for granting one week (28.7-5.8.2014) use of European NMR spectroscopy facilities in Frankfurt, Germany (BIO-NMR Intranet application). Title of approved proposal: Use of solid state NMR spectroscopy to study the interactions of AT1 antagonists with cyclodextrins. Scientific Manager: Th. Mavromoustakos.
- The application for annual access to LinkSCEEM/Cy-Tera resources on "The application of technologically advanced systems to improve drug delivery of antihypertensive AT1 antagonists" has been accepted. To implement the program, CPU core-hours: 100000, GPU hours: 78000 and a total storage amount of 1024 GB (2015) were given. Scientific Manager: Th. Mavromoustakos.
- Subsidized CERIC program. Visit to the laboratories of the National Research Institute of Slovenia and Technical University of GRAZ, Austria to conduct Solid State Nuclear Magnetic Resonance and X-Ray experiments respectively (20.9-29.9.2015). Scientific Manager: Th. Mavromoustakos.
- Subsidized Transnational Cooperation Greece-Germany (IKYDA 2015). Transfer to Germany to conduct Solid State Nuclear Magnetic Resonance experiments (4.10-9.10.2015). The development of a new methodology for the delivery of AT1 antihypertensive drugs using Solid State NMR and Molecular Dynamics. Scientific Manager: Th. Mavromoustakos.
- Subsidized CERIC program. Visit to the laboratories of the National Research Institute of Slovenia and ELETTRA of Trieste, Italy to conduct Solid State Nuclear Magnetic Resonance and X-Ray experiments respectively (11.5-18.5.2016). Scientific Manager: Th. Mavromoustakos.
- Subsidized Transnational Cooperation Greece-Germany (IKYDA 2015). Transfer to Germany to conduct Solid State Nuclear Magnetic Resonance experiments (23.6-2.7.2016). Scientific Manager: Th. Mavromoustakos.
- Subsidized European CERIC Program for travel to Trieste and Ljubljana to conduct Nuclear Magnetic Resonance and X-Ray Diffraction experiments (3.8-11.8.2017). Scientific Manager: Th. Mavromoustakos.
- Six Subsidized European CERIC Programs to move to Ljubljana to conduct Nuclear Magnetic Resonance experiments (2018-2022).
- Subsidized European CERIC Program for going to Trieste to conduct X-Ray Diffraction experiments (4.3-8.3.2018).
- Subsidized program EDMB34 (2018-2020) for young researchers K.E. 14995. Preparation and study of innovative forms of administration of pharmaceutical molecules with the aim of improving the pharmacological properties. Scientific Manager: Th. Mavromoustakos. Funding: 44000. Program duration 15 months.
- Subsidized time for using supercomputers: (2017): "5th Call for proposals for production projects for access to the national supercomputer system ARIS", project code MDAT1R (2018): "3rd Call for proposals for projects assessing the VI-SEEM services and associated infrastructure", project code AT1R (2019): "Calls for proposals for DECI-15 (Tier-1)", project code 15DECI0334 AT1R (2019): "7th call for proposals for production projects for access to the national supercomputing system ARIS", project code AT1R. Scientific Manager: Th. Mavromoustakos.
- Subsidized time to use supercomputers: (2020): Project code LOXIRB. PRACE DECI 16, 2,400,000 standardized hours. Scientific Manager: Th. Mavromoustakos.
- Subsidized time on the CYTERA and ARIS supercomputers to perform Molecular Dynamics experiments (2018-
2022).

REVIEWER OF SCIENTIFIC JOURNALS

- J. Med. Chem., Biochim. Biophys. Acta, J. Am. Oil. Chem. Soc., Pharmacol. Res., J. Pharmaceut. Biomed., Mini Rev. Med. Chem (editorial board), Curr. Med. Chem., Drug Design Reviews-Online (editorial board), J. Agric. Food Chem., Journal of Computer-Aided Molecular Design, Letter in Organic Chemistry, Chemical Biology in Drug Design, Food Analytical Methods, European J. Med. Chem.. International Journal of

EDITOR OF BOOKS AND SPECIAL VOLUMES

Pharmaceutics, Journal of Molecular Graphics and Modelling, Aminoacids, Journal of Chemical Information and Modeling. Expert Opinion on Drug Discovery. Στο 6th Workshop on Computational Chemistry and Its Applications (2011), Collection of Czechoslovak Chemical Communications, Current Pharmaceutical Design, Molbank (open access journal), Letters in Drug Design&Discovery, Journal of Enzyme Inhibition and Medicinal Chemistry, Molecules, Nanotechnology, Polymers etc.

1. T. Mavromoustakos, J.M. Matsoukas. Nuclear Magnetic Resonance.
- Design of Pharmaceutical Molecules.
- Applications in Medicine, Food and Beverage Chemistry January 1999.

2. T. Mavromoustakos, A. Kolocouris, C. Papakonstantinou, P. Sinigalias, C. Lappas. Two textbooks in Chemistry for the third class of high school . They are published in August of 1998 and are distributed in all high schools of Greece.

3.T. Mavromoustakos, A. Kolocouris, C. Papakonstantinou, P. Sinigalias, C. Lappas. A Chemistry laboratory guide for the third class of high school . They are published in August of 1998 and are distributed in all high schools of Greece.

4.T. Mavromoustakos, A. Kolocouris, C. Papakonstantinou, P. Sinigalias, C. Lappas. Two books containing solutions of the exercises in the textbooks. They are published in August of 1998 and are distributed in all high schools of Greece.

5.T. Mavromoustakos. Use of the NMR in the study of pharmaceutical substances, zeolithes, polymers and archaelogical findings. January 2001.

6.T. Mavromoustakos, J. Matsoukas. NMR spectroscopy . Application in Medicine, Pharmaceutical Chemistry, Biochemistry and Food and Beverage Chemistry (2006).

7. T. Mavromoustakos and P. Zoumpoulakis.. Molecular Modeling. Applications in Organic and Pharmaceutical Chemistry (2008).

8. T. Mavromoustakos, T. Tselios and C. Papakonstantinou. Fundamental Principles of Organic Chemistry, Ed., Athens 2014.

9.T. Mavromoustakos, A. Tzakos, G. Spyroulias, E. Mikros, A. Kolocouris, K. Papakonstantinou, I. Gerothanasis, I. Matsoukas. Nuclear Magnetic Resonance (2018).

SOFTWARE-TRANSLATIONS

- Participate in creating the «Molecular Conceptor" now a commercial product by Synergix Ltd.
- Participate in the translation of Klein's Organic Chemistry Book in Greek Language.
- Participate and in the translation and Editing of Ludon and Parish Organic Chemistry Book in Greek Language.
- Participation in the translation and Editing of Laboratory Tchnicques and Experiments of Organic Chemistry by D.L. Pavia, G.M. Lampman, G.S. Kriz, R.G. Engel.

Editor

1.Bioactive Peptides in Drug Discovery and Design: Medical Aspects. This book was published by IOS press in January of 1999 as the 22nd volume of a series of books entitled «Biomedical and Health Research". Eds. J. Matsoukas, T. Mavromoustakos.

2.Review of Clinical Pharmacology and Pharmacokinetics vol. 11, 1997. An issue dedicated in Peptides and Biomedical Research. Eds. J. Matsoukas, T. Mavromoustakos

3.Bioactive Peptides in Drug Discovery and Design: Medical Aspects.This book is in press 2002 in as the 55th volume of a series of books entitled «Biomedical and Health Research". Eds. J. Matsoukas, T. Mavromoustakos.

4.Guest Editor in Current Reviews in Medicinal Chemistry and more particularly in the issue dedicated to hypertension («Modern Aspects in the Design and Discovery of Novel Antihypertensive Drugs, 2004». The contributors of this issue included well known scientists of Greece, Europe and USA.

5. Guest Editor in Current Medicinal Chemistyr volume 18(17), 2011. Methodologies and Applied Strategies in the Rationa Drug Design.

6. Editors: T. Mavromoustakos and T. Kellici Editors. Rational Drug Design Methods and Protocols Methods in Molecular Biology 1824, Springer Protocols, 2018.

7. Editors: T. Mavromoustakos, A. Tzakos, S. Durdagi. Τίτλος: Supramolecules in Drug Discovery and Drug Delivery. Methods in Molecular Biology 1824, Springer Protocols, 2020.

PATENTS

- T. Mavromoustakos, G. Bonas, M. Zervou, E. Theodoropoulou. A new method to detect Adulteration of Virgin Olive Oil (No 1002879).
- T. Mavromoustakos, G. Kokotos, P. Minakaki. Novel Antihypertensive Drugs (No 1004905).

- S. Hadjikakou, C. Banti, A. Rossos, M. Kapetana, A. Meretoudi, P. Raptis, C. Papachristodoulou, T. Mavromoustakos, P. Zoumpoulakis, N. Kourkoumelis. “New Hydrogels for the development of sterile condact (No 1010095).

ADDITIONAL INFORMATION

- Presentations at conferences: **94**
- Supervision of doctoral theses:**23**
- Supervision of graduate students: **43**
- Supervision of undergraduate students: **84**
- PI in31 Research Programs
- Collaboration/Participation in **22** Research Programs
- Reviewer in Research Programs: **European (i.e. Marie Curie). Slovenian, National (i.e. ELIDEK)**.

SELECTED PUBLICATIONS (link OF PUBLICATIONS)

- https://doi.org/10.1021/jm980499w
- https://doi.10.1016/j.bmc.2008.10.039
- https://doi 10.2174/092986711795933731
- https://doi: 10.1016/j.chemphyslip.2004.06.005
- doi: 10.1021/ci900047s.
- doi: 10.1016/s0009-3084(03)00053-7
- https://doi.org/10.1021/mp5008053
- doi: 10.1021/acsabm.8b00748.
- doi: 10.1016/j.csbj.2020.11.042.
- doi: 10.1016/j.bbamem.2019.183142