Curriculum Vitae 2018

GEORGE VARVOUNIS

Professor

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Address: University of Ioannina, School of Sciences, Chemistry Department, Section of Organic Chemistry and Biochemistry, Panepistimioupoli Dourouti, 451 10 Ioannina, Greece.

Education

1974-1977: B.Sc., Honours in Chemistry and Biochemistry, Life Sciences Department, Polytechnic of Central London, England, U.K.

1977-1979: M.Sc., Applied Heterocyclic Chemistry, Department of Chemistry and Applied Chemistry, University of Salford, England, U.K.

1977-1981: Laboratory Teaching Assistant at the Department of Chemistry of the University of Salford, England, U.K.

1979-1982: Ph.D., Chemistry, Department of Chemistry and Applied Chemistry, University of Salford, England, U.K.

1982-1990: Lecturer at the Section of Organic Chemistry and Biochemistry, University of Ioannina, Greece.

1983-1987: Postdoctoral fellow, Department of Chemistry, Queen Elizabeth College, University of London, England, U.K. (total period of 15 months).

1988-1994: Sabbatical leave, Department of Chemistry and Applied Chemistry, University of Salford, England, U.K. and Department of Chemistry, Kings College London, University of London, England, U.K. (total period of 12 months).

1990-2001: Assistant Professor at the Section of Organic Chemistry and Biochemistry, University of Ioannina, Greece.

2001-2012: Associate Professor at the Section of Organic Chemistry and Biochemistry, University of Ioannina, Greece.

2012-present: Professor at the Section of Organic Chemistry and Biochemistry, University of Ioannina, Greece.

Research

Design, synthesis, and study of the chemical properties of novel heterocyclic compounds of pharmacological interest.

We are interested in developing novel synthetic methodologies that will be applied in the area of heterocyclic ring formation, particularly for the synthesis of pyrrole, imidazole and indole derivatives of natural products or pharmacologically active compounds. One aspect of this research is identified by our efforts towards finding promising drugs against AIDS and is focused on synthesizing non-nucleoside HIV-1 reverse transcriptase (RT) inhibitors. Compounds exhibiting this activity include diarylsulfones, pyrrolobenzo-thiazepines, as well as pyrrolobenzothiadiazocines. We also have strong interest in the synthesis of analogues of the pyrrolo[2,1-*c*]-[1,4]benzodiazepine family of anti-tumour antibiotics such as anthramycin, DC-81 and abbeymycin. These natural products have shown strong cytotoxic and anti-tumour effects believed to arise from interaction with DNA. Certain pyrrolo[2,1-*c*][1,4]benzo-diazepines, such as VPA-985, are known to be orally active arginine vasopressin antagonists with selectivity for V2 receptors may be potentially useful for treating diseases characterized by excess renal reabsorption of free water. In this area of research we are interested in the synthesis of novel imidazo- and pyrrolo-benzodiazepines.

Design, synthesis, and study of the chemical properties of trihalomethyl substituted aromatic and heteroaromatic compounds.

Nucleophilic aromatic substitution in carbocyclic and heterocyclic arenes is a very important reaction from both the academic and industrial point of view. *Tele* nucleophilic substitution is the reaction where an entering

group occupies a position on the arene or heteroarene that is two or more bonds distant from the atom to which the leaving group is bonded. For this type of useful and exciting chemistry we require 3-(trichloromethyl)-pyridine, quinoline, nitrobenzene, nitronaphthalene, benzonitrile and naphthonitrile derivatives, as starting materials. One of our targets is the synthesis of the naturally occurring cereal hydroxamic acid, 2,4-dihydroxy-7-methoxy-1,4-benzoxazin-3-one (DIMBOA), which exhibits interesting biological properties, such as phytotoxic, antimicrobial, antifeedant, antifungal, and insecticidal properties. On this line of work we aim to investigate the chemistry of trichloromethyl analogues of DIMBOA and other closely related natural products.

Design, synthesis, and study of the chemical properties of hydrazones and oximes of *o*-hydroxyarylaldehydes and ketones

Oxidative ring closure is an important tool for synthesizing a plethora of 5- and 6-membered heterocycles. In recent years there has been a rich development of both selective and mild oxidation methods that have found important applications in synthetic organic chemistry, that are useful for industry. Our research in this area of chemistry involves the oxidative cyclisation of hydrazones and oximes of *o*-hydroxyarylaldehydes and ketones. We have incorporated the medicinally important isoxazole, 1,2,5-oxadiazole, indole and pyran rings into novel polyheterocyclic systems. In parallel we are investigating the in situ oxidative generation of 1,3-dipoles from appropriately substituted hydrazones and oximes of o-hydroxyarylaldehydes and ketones leading to intra- or intermolecular cycloaddition reactions with alkenes or alkynes.

Generation and *in situ* trapping of *o*-quinone methides

A new mild method has been devised for generating *o*-(naphtho)quinone methides via fluoride-induced desilylation of silyl derivatives of *o*-hydroxybenzyl(or 1-naphthylmethyl) nitrate. The reactive *o*-(naphtho)-quinone methide intermediates were trapped by C, O, N and S nucleophiles and underwent "inverse electron demand" hetero Diels-Alder reaction with dienophiles to give stable adducts. The method has useful potential application in natural product synthesis and drug research. This method has also been applied for the regioselective one-pot synthesis of 3-substituted 2,3-dihydrobenzofurans from 2-bromo-1-{2-[(triisopropyl-silyl)oxy]phenyl}ethyl nitrate by fluoride-induced desilylation leading to *o*-quinone methide generation, Michael addition of different C, N, O and S nucleophiles and intramolecular 5-*exo*-*tet* elimination of bromide anion. The method has potential synthetic applications in drug discovery.

Scientific Programmes

1. Research Committee, University of Ioannina, (1988-1989).

2. NATO (αρ. CRG 890336), (1990-1992).

3. Research Committee, University of Ioannina, (1991-1992).

4. PENED (GSRT, no. 91ED102), (1994-1996).

5. PAVE (GSRT, no. 92BE121), (1994-1996).

6. PENED (GSRT, no. 15815/29-12-95), (1996-1998).

7. Research Committee, University of Ioannina, (1996-1997).

8. Greek-German Bilateral Collaboration, (GSRT, no. 11072/16-10-1997), (1997-1999).

9. Greek-Georgian Bilateral Collaboration, (GSRT, no. 3169/29-02-2000), (2000-2002).

10. Greek-Polish Bilateral Collaboration, (GSRT, no. 1627/07-02-2001), (2001-2003).

11. Research Committee, University of Ioannina, (2002-2003).

12. Greek-Slovenian Bilateral Collaboration, (GSRT, no. 1476/06-02-3003), (2003-2005).

13. Heraclitus: Grants for Research with Priority in Basic Research, (GSRT, no. 257/19-10-2004), (2004-2005).

14. Pythagoras I: Support for Research Groups at Universities, (GSRT, no. 256/14-09-2004), (2004-2006). Postdoctoral researcher Dr. N. Karousis.

15. ENTER 2004: Program for the Integration in the Greek S & T System Researchers from Abroad (Ph.D.), (GSRT, no. 04EP87/31-10-2006), (2006-2008). Postdoctoral researcher Dr. M. Surowiec.

16. IKYDA 2009: Program for Promotion of Exchange and Scientific Cooperation between Greece-Germany, (IKY Contract no. 135/09-03-2009), (2009-2010).

17. COOPERATION: Operational Programme 'Competitiveness and Entrepreneurship' and Regions in Transition. National Strategic Reference Framework ΕΣΠΑ 2007-2013. Scientific Coordinator: Alexander Tselepis.

Participation in International Conferences

1. 14th International Congress of Heterocyclic Chemistry at Antwerp University (R.U.C.A.), Belgium, August 1-6, 1993, Oral presentation, Abstract book pp OP-Ma-5.

2. 15th International Congress of Heterocyclic Chemistry, Taipei International Centre, Taiwan, August 5-12, 1995, Oral presentation, Abstract book pp PO3-249, OP-Ia-7

3. 7th European Conference on Spectroscopy of Biological Molecules, Madrid, 1997. Gerothanassis, I. P.; Varvounis, G. ^{17}O NMR studies of electronic and steric interactions of 2,3(1*H*,4*H*)quinoxalinedione. Carmona, Pedro; Navarro, Raquel; Hernanz, Antonio (eds.). Spectroscopy of Biological Molecules: Modern Trends, (1997), 623-624.

4. 2nd Electronic Conference on Heterocyclic Chemistry (ECHET-98), 29 June-24 July 1998, (www.ch.ic.ac.uk/ectoc/echet98/), article 038. Kimbaris, Athanasios; Varvounis, George. Synthesis of the novel benzo[b]pyrrolo[2,3-e]azepinone and benzo[b]pyrrolo[3,2-e]azepinone ring systems. Rzepa, H. S.; Kappe, C. O.; Leach, C. (eds.), (1998), 197-199.

5. XVIIIth European Colloquium on Heterocyclic Chemistry, October 4th–7th 1998, Rouen, France, Poster presentation, Abstract book (1998), pp A114.

6. 17th International Congress of Heterocyclic Chemistry, Institute of Organic Chemistry, Vienna University of Technology, August 1–6 1999, Vienna, Austria, Poster presentation, Abstract book (1999) pp PO-492.

7. [European Conference on Spectroscopy of Biological Molecules], 7th, Madrid, 1997, "Spectroscopy of Biological Molecules: Modern Trends". Title: "^{17}O NMR studies of electronic and steric interactions of 2,3(1*H*,4*H*)-quinoxalinedione". Gerothanassis, I. P.; Varvounis, G., Abstracts book (1997), pp 623-624.

8. 2nd International Conference of the Chemical Societies of the South-Eastern European Countries on Chemical Sciences for Sustainable Development. Halkidiki, Greece, June 6th-9th 2000. "Design and Synthesis of Dipeptide-Like Heterocyclic Structures Targeting to the Development of New Hybrid Peptide Antagonists of Angiotensin II". Bissyris, V. Magafa, G. Pairas, Manessi-Zoupa, E., Mikros, E., Tsoungas, P. G., Varvounis, G., Cordopatis, P. Poster presentation, Abstract book (2000), pp POO85, 134.

9. 1st Eurasian Meeting on Heterocyclic Chemistry, "Heterocycles in Organic and Combinatorial Chemistry", September 16–19, 2000, Suzdal, Russia, Invited lecture, Abstract book (2000), pp 51.

10. The Fifth International Electronic Conference on Synthetic Organic Chemistry (ECSOC-5), September 1-30, 2001 (http://www.mdpi.net/ecsoc-5/), article A0034.

11. The Third Jordanian International Conference of Chemistry, 22–26 April, 2002, Yarmouk University, Irbid, Jordan, Invited lecture 18.

12. 2nd Eurasian Meeting on Heterocyclic Chemistry, "Heterocycles in Organic and Combinatorial Chemistry", September 14–17, 2002, Novgorod the Great, Russia, Invited lecture 10.

13. 10th Blue Danube Symposium on Heterocyclic Chemistry, 3–6 September 2003, Institute of Applied Synthetic Chemistry, Vienna University of Technology, Vienna, Austria, Poster presentation, Abstract Book (2003), p PO-196.

14. International Electronic Conferences on Synthetic Organic Chemistry, 5th, 6th, Sept. 1-30, 2001 and 2002 [and] 7th, 8th, Nov. 1-30, 2003 and 2004, pp 1405-1411. Title: "A new synthesis of the pyrrolo[1,2-*c*][3,1,6]benzothiadiazocine ring system from 1-{[1-(2-nitrophenyl)-1*H*-pyrrol-2-yl]sulfinyl} derivatives". Kimbaris, A.; Cobb, J.; Varvounis, G.

15. 9th Ibn Sina International Conference on Pure and Applied Heterocyclic Chemistry. Sharm El-Sheikh, Egypt, 11-14 December 2004. Title: "Synthesis of the Novel Pyrrolo[1,2-*c*][1,3,6]-benzotriazocine Ring System" Rotas, G., Varvounis, G. Abstract book (2004), Rotas, G. Poster presentation, Abstract book, p IPA-6, 99.Title: "Novel Routes to Pyrrole Containing Heterocycles" Karousis, N, Kimbaris, A., Koriatopoulou, K. Rotas, G., Skoulika, S., Tsakonas, G., Varvounis, G. Abstract Book (2004), Varvounis, G., Invited lecture, Abstract book, pp KA-15, 25

16. 9th National Conference on Bioactive Heterocycles and Drug Discovery Paradigm (Including One Day International Symposium on Recent Trends in Drug Discovery). Saurashtra University, Department of Chemistry, Rajkot, Gujarat, India, 8-10 January 2005. Title: "Versatile Synthesis of Novel Polycyclic Heterocycles Derived from 1-, 2- or 3-Substituted Pyrroles and 2-Hydroxy-naphthaldehyde" Karousis, N, Koriatopoulou, K. Rotas, G., Skoulika, S., Tsakonas, G., Tsoungas, P. G., Varvounis, G. Abstract Book (2005), Varvounis, G. Invited lecture, pp IL-16, 59.

17. 20th International Congress of Heterocyclic Chemistry, Palermo, Italy, 30 July-5 August 2005, Abstract Book, poster presentation 1-PO81, Title: "Studies towards the synthesis of novel pyrrolobenzodiazocine ring system," Poster presentation, Abstract book 4-PO94, p 268, Title: "Oxidation of 2-hydroxynaphthaldehyde hydrazones with NBS," Poster presentation, Abstract book p 533.

18. 2nd International Symposium on Drug Discovery and Process Research, 10 – 20 February 2006, K.L.E. Society's College of Pharmacy, Belgaum, 590 010, Karnataka, India, Title: "Synthetic strategies towards tricycles containing a central diazepine, diazocine, thiazocine or thiadiazocine ring with potentially useful pharmacological properties", Varvounis, G., Plenary lecture, Abstract Book (2006), p 24.

19. 4th Eurasian Meeting on Heterocyclic Chemistry, August 27-31, 2006, Thessaloniki, Greece. Title: "Oxidation of 2-hydroxynaphthalene- and 2-hydroxy-7-methoxy-naphthalene-1-carbaldehyde". Dolka, C. Liaskopoulos, T. Tsoungas, P. G., Varvounis, G., Poster presentation, Abstracts book, 2-PO121, p 313-314.

20. 4th Transmediterranean Colloquium on Heterocyclic Chemistry, Rectory Auditorium, University of Aveiro, Portugal June 23rd -27th, 2006. Title: "Convenient synthetic routes to fused 6-, 7- and 8-membered rings with benzene and pyrrole", Varvounis, G. Plenary lecture, Abstracts Book (2006), PL3, p 3.

21. International Conference on Chemistry Chem05, "Green and Sustainable Chemistry for Developing Countries", Department of Chemistry, Cairo University, 3-6 March 2008. Title: "Synthesis of Pyrrolobenzodiazepines and 8-Membered Congeners as Analogues of Bioactive Molecules", Varvounis, G. Invited lecture, Abstracts Book (2008), p 29.

22. 23rd European Colloquium on Heterocyclic Chemistry, University of Antwerp, Belgium, 9-13 September 2008, Interesting Oxidative Transformations of 2-Hydroxynaphthalene-1-carbaldehyde oxime. Dolka, C.; Van Hecke, K.; Van Meervelt, L.; Van der Eycken, E.; Varvounis, G. Poster presentation, Abstract Book, PO58, p 113.

23. 11th Conference in Advanced Medicinal Chemistry, Telloglio Institute of Arts, 159k, Aghiou Dimitriou Str., Thessaloniki, Hellas, "Approaches to Rational Drug Design", 23-24 May 2009. Title: "Development of Regioselectively Substituted Naphthalene-Based Amino Acids as Building Blocks in Peptide Synthesis". Assimomytis, N. L.; Varvounis, G.; Tsoungas, P. G.; Cordopatis, P. Poster presentation, Abstract Book, p 43.

24. International Conference on Chemistry Chem06, "Contemporary Chemistry and Environment", Department of Chemistry, Cairo University, 1-4 March 2010. Title: "Novel syntheses of 5- and 6-membered heterocycles containing N or N,O atoms via the oxidation of the oximes, hydrazones and hydrazides of 2-hydroxy-1-naphthaldehyde and (2-hydroxynaphthalen-1-yl)ketones", Varvounis, G. Invited lecture, Abstracts Book (2008), p 49.

25. 6th Eurasian Meeting on Heterocyclic Chemistry (6th EAMHC), University of Alicante, Alicante, Spain, 30 June-4 July, 2010. Title: "Tele Nucleophilic Substitutions of Hydrogen in m-(Trichloromethyl)-nitro-benzenes and 3-(Trichloromethyl)pyridines", Varvounis, G. Invited lecture, Abstracts Book (2010), pp 36-37.

26. 11th Eurasia Conference on Chemical Sciences, the Dead Sea, Jordan, 6-10 October 2010. Title: "Nucleophilic Aromatic Substitutions of Hydrogen following the *Tele* pathway", Varvounis, G. Invited lecture, Abstracts Book (2010), p 84.

27. The Sixth Jordanian International Conference of Chemistry 19 – 21 April, 2011 Yarmouk University, Irbid, Jordan. Title: "Reactions leading to novel pyrrolobenzo-diazepines and -diazocines with pharmacological interest", Varvounis, G. Invited lecture, Abstracts Book (2011).

27. 17th European Symposium on Organic Chemistry (ESOC2011) 10-15 July 2011, Crete, Greece.
Title: ”Mild and rapid method for the generation of *o*-quinone methide and *o*-naphthoquinone methide intermediates”, Shaikh, A. K.; Varvounis, G. Poster presentation, Abstract Book (2011).
Title: ”Synthesis of novel 1-methyl-2-(2-nitrobenzylsulfanyl)-1*H*-pyrrole derivatives as potential anti-HIV-1 RT inhibitors”, Dimaki, V.; Varvounis, G. Poster presentation, Abstract Book (2011).
Title: ”The isolation of diverse products from the oxidation of acyl hydrazones of 2-hydroxy-1-naphthaldehyde”, Tzinavou, A.; Dolka, C.; Varvounis, G. Poster presentation, Abstract Book (2011).
Title: ”An Unprecedented Transformation of Methyl 2-{[(1-substituted-1*H*-pyrrol-2-yl)carbonyl]amino}benzoates”, Varvounis, G.; Koriatopoulou, K.; Dimitris Korovesis, D. Stavroula Skoulika, S. Invited lecture (Varvounis, G.), Abstracts Book (2012).

28. Eurasia-12 Conference on Chemical Sciences, the period 16 - 21 of April, 2012 Corfu, Greece.
Title: “Unexpected transformations of methyl 2-{[(1-alkyl-1*H*-pyrrol-2-yl)carbonyl]-amino}benzoate. New synthesis of the 3,4-dihydro-pyrrolo[2,1-*c*][1,4]oxazin-1-one ring system.” Marilena Fermeletzi and George Varvounis, Poster presentation, Abstracts Book (2012).
Title: An Efficient Method for the Synthesis of the Natural Product Xyloketal H”, Abdul kadar Shaikh, George Varvounis, Poster presentation, Abstracts Book (2012).
Title: “Novel oxidations of hydrazones with iodobenzene diacatate (IBD)”. Alexandra Tzinavou, Chrysanthi Dolka and George Varvounis. Poster presentation, Abstracts Book (2012).

29. TRAMECH VII (Trans Mediterranean Colloquium on Heterocyclic Chemistry), November 27-30, 2013, Rabat, Morocco. Title: ”Novel synthesis of 3-substituted 2,3-dihydro-1-benzofurans via *o*-quinone methide intermediates”. Abdul kadar Shaikh, George Varvounis. Varvounis, G. Invited lecture, Abstracts Book (2013), p 84.

Supervision of Ph.D. and M.Sc. Theses

1. Korakas Demetrios, Ph.D. thesis awarded 1996.

2. Giannopoulos Thomas, Ph.D. thesis awarded 1999.

3. Patsis George, Ph.D. thesis awarded 1999.

4. Kimbaris Athanasios, Ph.D. thesis awarded 2000.

5. Supsana Paraskevi, M.Sc. thesis, awarded 2001.

6. Karousis Nikolaos, Ph.D. thesis awarded 2003.

7. Rotas George, Ph.D. thesis, awarded 2005.

8. Liaskopoulos Theodoros, M.Sc. thesis, awarded 2005.

9. Belekos Dimitris, M.Sc. thesis, awarded 2005.

10. Tsakonas Georgios, M.Sc. thesis, awarded 2006.

11. Dolka Chrysanthi, M.Sc. thesis, awarded 2007

11. Koriatopoulou Konstantina, M.Sc. thesis, awarded 2007

12. Dolka Chrysanthi, Ph.D. thesis, awarded 2009.

13. Dimaki Virginia, M.Sc. thesis, awarded 2011

14. Tzinavou Aleka, M.Sc. thesis, awarded 2012

15. Shaikh N. Abdul, Ph.D. thesis, awarded 2013

16. Fermeletzi Marilena, M.Sc. thesis, died in 2015

17. Sarandou Antonia, M.Sc. thesis, awarded 2016

18. Orfanidou Anastasia, M.Sc. thesis, awarded 2016

19. Aouant Alia, M.Sc. thesis, awarded (2018)

20. Gerontitis Ioannis, M.Sc. thesis, to be awarded 2019

21. Galpinos Vasilis, M.Sc. thesis, to be awarded 2020

22. Theodorakopoulou, Paraskevi, M.Sc. thesis, to be awarded 2020

Important International Scientific Collaboration

1. Professor Erik Van der Eycken, University of Leuven, Department of Chemistry, Celestijnenlaan 200F, B-3001 Heverlee, Belgium.

2. Professor Rob Lavigne, University of Leuven (KULeuven), Department of Biosystems, Celestijnenlaan 200F, B-3001 Heverlee, Belgium.

3. Prof. Dr. Sabine Müller, Ernst-Moritz-Arndt Universität Greifswald, Institut für Biochemie, Biochemie II Bioorganische Chemie, Felix-Hausdorff-Straße 417487 Greifswald, Germany.

4. Dr. Andre Cobb, King's College London, Department of Chemistry, Room 116, Britannia House, 7 Trinity Street, London SE1 1DB, U.K.

Important Lectures at Universities outside Greece

1. Institut für Chemie, Humboldt Universität zu Berlin, Hessische Str. 1-2, D-10115 Berlin, Germany. Title of lecture "Synthesis of 1-aroylpyrroles and 1-aroylmethylpyrroles as potential precursors to novel DNA-interacting pyrrolobenzodiazepines and pyrrolobenzo-diazocines" 1997, invited by Professor J. Liebscher.

2. Institute of Organic Chemistry, Polish Academy of Sciences, ul. Kasprzaka 44/52, PL-01-224 Warsaw, Poland. Title of lecture "The Synthesis of Nitrogen Heterocycles from Pyrroles, Pyrimidines and Naphthols" 2001, invited by Professor M. Mąkosza.

3. University of Ljubljana, Slovenia, Faculty of Chemistry and Chemical Technology, Aškerčeva 5, 1000 Ljubljana, Slovenia Title of lecture: "Expedient Routes to Selected Heterocycles Containing N, N and O or N and S" 2004, invited by Professor B. Stanovnik.

4. University of Leuven, Department of Chemistry, Celestijnenlaan 200F, B-3001 Heverlee, Belgium. Title of lecture "Novel and unpredictable reactions emerging from the oxidation of the oximes, hydrazones and hydrazides of 2-hydroxy-1-naphthaldehyde and (2-hydroxynaphthalen-1-yl)ketones" 2008, invited by Professor Erik Van der Eycken.

5. Department of Chemistry, University of Cyprus P.O. Box 20537, CY-1678 Nicosia, Cyprus. Title of lecture "Unexpected behaviour of 2-hydroxy-1-naphthaldehyde and 1-(1-hydroxynaphthalen-2-yl)-ethanone oximes, hydrazones and hydrazides towards common oxidative reagents" 2008, invited by Associate Professor P. Koutentis.

6. Ernst-Moritz-Arndt Universität Greifswald, Institut für Biochemie, Biochemie II Bioorganische Chemie, Felix-Hausdorff-Straße 417487 Greifswald. Title of lecture "Synthesis and application of flavine derivatives for switching of RNA conformation" 2009, invited by Prof. Dr. Sabine Müller.

Member of Scientific Societies

Hellenic Association of Chemists, International Society of Heterocyclic Chemistry, American Chemical Society. American Chemical Society, International Union of Pure and Applied Chemistry (IUPAC), Hellenic Society of Medicinal Chemistry

Referee to International Scientific Journals

Arkivoc, Asian Journal of Chemistry, Bioorganic & Medicinal Chemistry, Bioorganic and Medicinal Chemistry Letters, Catalysis Communications, Chemistry - A European Journal, Egyptian Journal of Chemistry, European Journal of Medicinal Chemistry, European Journal of Organic Chemistry, Jordanian Journal of Chemistry, Journal of Heterocyclic Chemistry, Journal of Organic Chemistry, Journal of Sulfur Chemistry, Journal of the American

Chemical Society, Mendeleev Communications, Marine Drugs, Molecules, Monatshefte fur Chemie, Organic Letters, Phosphorus, Sulfur and Silicon, Synthetic Communications, Tetrahedron, Tetrahedron Letters, QSAR & Combinatorial Science

Member of Editorial Advisory Boards

Arkivoc, Asian Journal of Chemistry, EC Pharmacology and Toxicology, Jordanian Journal of Chemistry and Journal of International Environmental Application & Science

Scientific Awards

1. Award by the International Scientific Foundation for "Contribution to World Science and International Scientific Collaboration" (2006).

2. Award by the International Scientific Foundation the "Gold Badge for Scientific Achievements and International Scientific Collaboration" (2010)

Patents

Varvounis, Georgios. A preparation of [[(chlorophenyl)(phenyl)-]piperazinyl]ethoxyacetic acid (cetirizine) and its dihydrochloride. Industrial Property Organization, *Greek Pat. Appl*. 99100135 (2000), 12 pp.

Teaching

Undergraduate

Organic Chemistry I-IV, Laboratory of Organic Chemistry I and II, Introductory Chemistry Laboratory, Natural Products and Heterocyclic Compounds, Heterocyclic Chemistry, Advanced Organic Synthesis Laboratory, Literature or/and Laboratory Research, Project Thesis.

Graduate

Bioorganic Chemistry, Advanced Lectures in Organic, Total Synthesis of Natural Products and Pharmaceutically Active Compounds, Applied Heterocyclic Chemistry, Graduate Laboratory of Organic Chemistry for the M.Sc. degree "Synthetic Chemistry, Biochemistry-Bioactive Compounds", Synthesis of Pharmaceutical and Diagnostic Compounds for the M.Sc. degree "Medicinal Chemistry" and Laboratory of Organic and Inorganic Synthetic Chemistry and Biotechnology for the M.Sc. degree "Medicinal Chemistry".

List of scientific publications in international journals and in international scientific book series

1. Clark, J.; Varvounis, G. Heterocyclic Studies. Part 42. Pyrimido[5,4-*d*][1,2,3]triazines and some Related Tricyclic Compounds. *J. Chem. Soc. Perkin Trans. 1*, **1984**, 1475-1481.

2. Cheeseman, G. W. H.; Hawi, A. A.; Varvounis, G. Synthesis of 5,6-Dihydropyrrolo[1,2-*a*][3,1,6]benzothiadiazocines. *J. Heterocycl. Chem*. **1985**, *22*, 423-427.

3. Clark, J.; Varvounis, G.; Bakavoli, M. Heterocyclic Studies. Part 44. Novel Tricyclic Compounds containing the Pyrimido[5,4-*d*][1,2,3]triazine System. *J. Chem. Soc. Perkin Trans. 1* **1986**, 711-719.

4. Cheeseman, G. W. H.; Varvounis, G. Synthesis and Reactions of Pyrrolo[1,2-*a*][3,1,6]benzothiadiazocines. *J. Heterocycl. Chem*. **1987**, *24*, 1157-1161.

5. Yakovidis, G.; Varvounis, G.; Hadjiliadis, N. Copper(II) Complexes of Thieno[2,3-*d*]pyrimidine Derivatives. *Inorg. Chim. Acta* **1988**, *151*, 165-167.

6. Cheeseman, G. W. H.; Varvounis, G. Synthesis of some Pyrrolobenzothiadiazocines. *J. Heterocycl. Chem*. **1988**, *25*, 431-435.

7. Dainter, R. S.; Jackson, T.; Omar, A. H. H.; Suschitzky, H.; Wakefield, B. J.; Hughes, N.; Nelson, A. J.; Varvounis, G. Transformations of Trichloromethyl Groups During Reactions of 3-Trichloromethylpyridines with Methoxide. *J. Chem. Soc. Perkin Trans. 1* **1989**, 283-287.

8. Cobb, J.; Cheeseman, G. W. H.; Varvounis, G. The use of NMR Measurements in the Orientation of Pyrrolic Substitution in 5,6-Dihydro-7-methyl-6-oxopyrrolo[1,2-*a*][3,1,6]benzothiadiazocine. *J. Heterocycl. Chem*. **1989**, *26*, 81-83.

9. Cobb, J.; Demetropoulos, I. N.; Skoulika, S.; Varvounis, G.; Aubry, A. Structure Determination of some 5,6-Dihydropyrrolo[1,2-*a*][3,1,6]benzo-thiadiazocines. *J. Heterocycl. Chem*. **1992**, *29*, 295-303.

10. Clark, J.; Korakas, D.; Shahhet, M. S.; Varvounis, G. Synthesis of Thieno[2,3-*d*]pyrimidines from 4,6-Dichloropyrimidine-5-carbaldehydes. *J. Heterocycl. Chem*. **1993**, *30*, 1065-1072.

11. Korakas, D.; Varvounis, G. A Convenient Synthesis of 2-Aminomethyl-1-arylpyrroles. *Synthesis* **1994**, 164-166.

12. Korakas, D.; Varvounis, G. Synthesis of 5,6-Dihydro-4*H*-pyrrolo[1,2-*a*][1,4]benzodiazepine and 10,11-Dihydro-5*H*,12*H*-pyrrolo[2,1-*c*][1,4]-benzodiazocine Derivatives *via* Cyclisation of 2-Amino-methylpyrroles. *J. Heterocycl. Chem.* **1994**, *31*, 1317-1320.

13. Tsiveriotis, P.; Varvounis, G.; Papadimitriou, C.; Hadjiliadis, N. Nickel(II) and Cobalt(II) Complexes of 2,4-Diaminothieno[2,3-*d*]-pyrimidines. *Transition Met. Chem.* **1994**, *19*, 335-339.

14. Cartwright, D.; Ferguson, J. R.; Giannopoulos, T.; Varvounis, G.; Wakefield, B. J. Synthesis of some *β*-Trichloromethyl-azines and -diazines. *J. Chem. Soc., Perkin Trans. 1,* **1995**, 2595-2597.

15. Cartwright, D.; Ferguson, J. R.; Giannopoulos, T.; Varvounis, G.; Wakefield, B. J. Abnormal Nucleophilic Substitution in 3-Trichloromethylpyridine, its *N*-oxide and 3,5-Bis-(trichloromethyl)-pyridine. *Tetrahedron* **1995**, *51*, 12791-12796.

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