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FIELD OF EXPERTISE

Synthetic Organic chemistry, Synthesis of bioactive Natural Products and analogs, Biomimetic Synthesis, Organic compounds for Biological applications, Design and Synthesis of aromatic compounds for application in nanotechnology

EDUCATION

Agricultural University of Athens, Chemistry Laboratory – General Department, Athens, Greece

- PhD ((Synthetic Organic Chemistry – Total Synthesis of Natural Products) Grade: 10/10

"Development of methodology for the biomimetic synthesis of bisorbicillinoids family members. First Total Synthesis of Trichodimerol and Bisorbicillinol. Development of methodology for the synthesis of sesquiterpenes with seven-membered cyclic ethers. Construction of the bicyclic AB-system of the polycyclic skeleton of adociasulfate-2. Development of methodology for the synthesis of cyclic bromo-sesquiterpenes with seven-membered cyclic ethers. Total asymmetric synthesis of natural products (-)-Aplysistatin, (+)-12-hydroxy-Palisadin B and (+)-Palisadin A. First total asymmetric synthesis of (+)-Palisadin B."

1998 - 2004

National and Kapodistrian University of Athens, Department of Chemistry, Athens, Greece

1993 - 1998

- BSc. In Chemistry awarded in 2/1998, Grade (Very good, 7.16/10, 2nd among the graduated students of the year
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PROFESSIONAL EXPERIENCE

Researcher C level at the National Centre of Scientific Research "Demokritos", Institute of Nanoscience & Nanotechnology

2017 - to date

Special Scientific Staff (Synthetic Chemist) at the National Centre of Scientific Research "Demokritos", Institute of Nanoscience & Nanotechnology

2007- 2017

Scientific Advisor at Pro-Rad Ltd. (for large scale synthesis of bioactive organic compounds).

10/2016 - 11/2016

Scientific Advisor at Proactina S.A (for large scale synthesis of bioactive organic compounds)

11/2014-1/2015

Postgraduate researcher at the National Centre of Scientific Research "Demokritos", Institute of Physical Chemistry

2004 - 2007

Research Scientist at the National Centre of Scientific Research "Demokritos", Institute of Microelectronics / Institute of Physical Chemistry

1999 - 2004

Teaching Assistant at the Agricultural University of Athens, General Department, Chemistry Laboratory, Athens, Greece.

1999 - 2001

TEACHING - TRAINING EXPERIENCE

- **Laboratory experiments of the course: "Inorganic Chemistry"**, at the first semester of undergraduate students of Agricultural University of Athens (Year: 1998-1999, 1999-2000, 2000-2001)
- **Laboratory experiments of the course: "Organic Chemistry"**, at the second semester of undergraduate students of Agricultural University of Athens (Years: 1998-1999, 1999-2000, 2000-2001)
- **Training – theoretical and practical training – Supervision of undergraduate and postgraduate students** at the Laboratory of Synthesis of Natural Products and Bioorganic Chemistry and the Institute of Nanoscience

and Nanotechnology – NCSR "Demokritos" (2001 – today) - Supervision/Co-supervision of PhD candidates, postgraduate and undergraduate students and participation in 3-membered committees.

STUDENTS AND POST-DOCTORALS FELLOWS SUPERVISED/CO-SUPERVISED

- Two (2) post-doctoral fellows
- Three (3) PhD students
- Nine (9) M.Sc. students
- Three (3) undergraduate students

DISTINCTIONS

1. **Guest Editor** of the peer-reviewed international journal "Frontiers in Chemistry."
2. **Guest Editor** of the peer-reviewed international journal "Symmetry".
3. **Reviewer for peer-reviewed international scientific journals** (e.g., Organic Letters, Molecules, SynLett, Chemistry A European Journal, MarineDrugs etc.).

PARTICIPATION IN RESEARCH GRANTS

Research Project / Institution	Role	Duration
"Development of photoresists for application in photolithography 193 nm and below (resist 193-157)» (EE 589) funded by the European Community / NCSR "DEMOKRITOS", Institute of Microelectronics	Design and synthesis of polycarbocyclic compounds for the modification of optical properties and etch resistance enhancement of photoresists (193 nm)	1999 - 2001
Development and Validation of Source Optics and Resist in Next Generation EUV Lithography-SOARING" funded from European Community / EPPRA (EE 954) / NCSR "DEMOKRITOS", Institute of Microelectronics	Design and synthesis of polyaromatic compounds and application in EUV-nanolithography	2002 - 2003
"Novel Molecules for EUV Lithography: a New Approach to Photoresist Design, Coupled with Fractal Description and Molecular Simulation or Roughness" (EE 1089) / NCSR "DEMOKRITOS", Institute of Physical Chemistry / funded by Intel Co. and Institute of Microelectronics	Design and synthesis of polyaromatic compounds and other organic compounds with application in nanolithography	2003 - 2006
"Methodology for the construction of matrices of third-generation parallel disks" (EE 1814) co-funded by Greece and European Community / NCSR "DEMOKRITOS", Institute of Nanoscience and Nanotechnology	Design and synthesis of polyaromatic and other compounds with application in nanoelectronics	2013 - 2015
"EDUCATION AND LIFELONG LEARNING" OPELL, ACTION ARISTEIA (EXCELLENCE) II, entitled: "3069-GliTerIn": Gli-mediated transcription inhibitors based on furanoditerpenoid natural product" co-funded by Greece and European Community (NSRF 2007-2013) (EE 1867) / NCSR "DEMOKRITOS", Institute of Nanoscience and Nanotechnology	Research support	2014-2017
KRIPIS" - Unit II entitled: "Advanced materials and systems for energy collection and management" co-funded by Greece and the European Community (NSRF 2007-2013) / NCSR "DEMOKRITOS", Institute of Nanoscience and Nanotechnology	Design and synthesis of anthracene derivatives for application in organic photovoltaic systems	2013 - 2015
ΚΡΗΠΙΣ II: "Development of Materials and Devices for Industrial, Health, Environmental and Cultural Applications" (MIS 5002567) implemented under the "Action for the Strategic Development on the Research and Technological Sector", funded by the Operational Programme "Competitiveness, Entrepreneurship and Innovation" (NSRF 2014-2020) and co-financed by Greece and the European Union (European Regional Development Fund).	Synthesis of prenylated acylphloroglucinols for their biological evaluation in cyclodextrins and nanoparticles	2018 - 2020

"Development of novel anticancer drugs with therapeutic target the oncoprotein MYC" (MIS-5031813) funded by the Operational Program Competitiveness, Entrepreneurship and Innovation (NSRF 2014-2020) co-financed by Greece and the European Union	Scientific responsible for the "Synthesis of improved analogues of lead compounds with therapeutic target the oncoprotein MYC" (EE 12432) as part of the Research Grant / NCSR "Demokritos", Institute of Nanoscience & Nanotechnology	2018 - to date
"Using organic LED in intelligent food packaging for quality monitoring of meat products" (MIS-5075103) funded by the Operational Program Competitiveness, Entrepreneurship and Innovation (NSRF 2014-2020) co-financed by Greece and the European Union / NCSR "DEMOKRITOS", Institute of Nanoscience & Nanotechnology	Synthesis of polyaromatic compounds for use in OLEDs	2020 - to date

INVITED ORAL PRESENTATIONS

- **"Improvements in the Biomimetic Synthesis of Abyssomicin C and atrop-Abyssomicin C. Results and Perspectives"**, Virtual Congress on Materials Science and Engineering, November 9-10, 2020
- **"Profession: Chemist"**, Days of Career, Society for the Promotion of Education & Learning, Arsakeia-Tositseia Schools, December 12, 2019, Ekali, Greece
- **"Anthracene-based molecular glasses. Design, synthesis and applications in nanolithography and organic electronics. Overview and perspectives."** 26th International Conference on Advanced Nanotechnology, October 4-5, 2018, Moscow, Russia
- **"Biomimetic Synthesis of Natural Products and analogues in the development of anticancer and other drugs-From simplicity to complexity"**, 19th Conference of Medicinal Chemistry, "Medicinal Chemistry: Design and Development of Pharmaceutical Products", September 20-22, 2018, Amaliada, Greece
- **"Synthesis of Natural Products and Designed Organic Molecules Targetting at the Development of Anticancer Drugs"** 18th Conference of Medicinal Chemistry, "Medicinal Chemistry: Design and Development of Pharmaceutical Products, October 30-31, 2017 Patra, Greece.
- **"Profession: Chemist"**, Days of Career, Society for the Promotion of Education & Learning, Arsakeia-Tositseia Schools, December 12, 2016, Ekali, Greece

SELECTED PUBLICATIONS

1. **Biomimetic explorations towards the bisorbicillinoids: Total synthesis of bisorbicillinol, bisorbibutenolide, and trichodimerol.** Nicolaou, K. C.; Simonsen, K. B.; Vassilikogiannakis, G.; Baran, P. S.; *Vidali, V. P.*; Pitsinos, E. N.; Couladouros, E. A., *Angew. Chem. Int. Ed.* **1999**, *38*, 3555-3557
2. **Biomimetic Total Synthesis of Bisorbicillinol, Bisorbibutenolide, Trichodimerol, and Designed Analogues of Bisorbicillinoids.** Nicolaou, K. C.; Vassilikogiannakis, G.; Simonsen, K. B.; Baran, P. S.; Zhong, Y.-L.; *Vidali, V. P.*; Pitsinos, E. N.; Couladouros, E. A., *J. Am. Chem. Soc.* **2000**, *122*, 3071-3079.
3. **"Photoresist etch resistance enhancement using novel polycarbocyclic derivatives as additives."** Gogolides, E.; Argitis, P.; Couladouros, E. A.; *Vidali, V. P.*; Vasilopoulou, M.; Cordoyiannis, G.; Diakoumakos, C. D.; Tserepi, A., *J. Vac. Sci. Technol. B* **2003**, *21*, 141-147.
4. **"Novel Stereocontrolled Approach to syn- and anti- Oxepene-Cyclogeranyl trans-Fused Polycyclic Systems. Asymmetric Total Synthesis of (-)-Aplysistatin, (+)-Palisadin A, (+)-Palisadin B, (+)-12-Hydroxy-Palisadin B and the AB Ring System of Adociasulfate-2 and Toxicol A."** Couladouros, E. A.; *Vidali, V. P.*, *Chem. Eur. J.* **2004**, *10*, 3822-3835.
5. **"Materials for lithography in the nanoscale"** P. Argitis, D. Niakoula, A. M. Douvas, E. Gogolides, I. Raptis, *V. P. Vidali, E. A. Couladouros* *Int. J. of Nanotechnology* **2009**, *6*, 71 – 87
6. **"A Short Biomimetic Approach to the Fully Functionalized Bicyclic Framework of type A Acylphloroglucinols"** E.A. Couladouros, M. Dakanali, K. D. Demadis, *V. P. Vidali* *Org. Lett.* **2009**, *11*, 4430 – 4433.
7. **"An unusual michael-induced skeletal rearrangement of a bicyclo[3.3.1]nonane framework of phloroglucinols to a novel bioactive bicyclo[3.3.0]octane"** *Vidali, V.P.*, Mitsopoulou, K.P., Dakanali, M., Demadis, K.D., Odysseos, A.D., Christou, Y.A., Couladouros, E.A. *Org. Lett.* **2013**, *15*, 5404 – 5407.
8. **"Isolation and structure elucidation of hyperibine J [revised structure of adhyperfirin (7-deprenyl-13-methylhyperforin)]: Synthesis of hyperibone J."** K. P. Mitsopoulou, *V. P. Vidali*, A. Maranti, E. A. Couladouros, *European Journal of Organic Chemistry* **2015**, 287 – 290.
9. **"An Improved Biomimetic Formal Synthesis of Abyssomicin C and atrop-Abyssomicin C."** *Vidali, V., P., Canko, A., Peroulas, A., D., Georgas, E., T., Bouzas, E., Herniman, J., M., Couladouros, E.,* *AEur. J. Org. Chem.* **2020**, 4547-4557 (2020). DOI: 10.1002/ejoc.202000671
10. **"Enantioselective Synthesis of Cassane-Type Furanoditerpenoids: Total Synthesis of Sucutiniranes C and D.:"** Pitsinos, E., Mavridis, I., Tzouma, E., *Vidali, V., P.* *Eur. J. Org. Chem.* **2020**, 4730-4742 (2020). DOI: 10.1002/ejoc.202000724
11. **"Synthesis and Biological Evaluation of Hydroxylated Monocarbonyl Curcumin Derivatives as Potential Inducers of Nephilysin Activity"** Matiadis, D.; Ng, S.-T.; Chen, E.H.-L.; Nigianni, G.; *Vidali, V.P.*; Canko, A.;

CHAPTERS IN BOOKS

"**Positive Molecular Resists**", P. Argitis, V. P. Vidali, D. Niakoula, *Frontiers of Nanoscience*, **2016**, Vol. 11, Chapter 9, pages: 319-348.

PATENTS

1. "**Molecular resists based on functionalized polycarbocycles**" P. Argitis, E. Gogolides, D. Niakoula, V. Vidali, E. Couladouros, R. Gautam, US8247158 (2012)
 2. "**Polycarbocyclic derivatives for modification of resist, optical and etch resistance properties**" P. Argitis, E. Gogolides, E. Couladouros, V. Vidali, M. Vasilopoulou, G. Cordoyanis, US7326510 (2009)
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AWARDS

1. "**Stochastic simulation studies for the dissolution of molecular resists**",
D. Drygiannakis, G. P. Patsis, I. Raptis, D. Niakoula, **V. Vidali**, E. Couladouros, P. Argitis, E. Gogolides, (32nd International Conference on Micro- and Nano-Engineering 2006, 17-20 September **2006**, Barcelona, **Spain**, book of abstracts: page 775. (**poster presentation award**),
 2. "**Autophagy in Myelodysplastic Syndromes: The Role of HIF-1 α /REDD1 Molecular Pathway**"
I. Stergiou, K. Kampas, S. Giannouli, Th. Katsila. A. Dimitrakopoulou, **V. Vidali**, E. Sinolaki, A. Papageorgiou, A. Nezos, G. Patrinos, P. Sideras, K. Ritis, A. Tzioufas, M. Voulgarelis, 29th Congress of the Hellenic Society of Haematology, 1st-4th November **2018**, Congress Center I. Vellidis, Helexpo-Thessaloniki, Greece (**oral presentation award**)
 3. "**Synthesis of novel pyrazolopyridines with affinity for β -amyloid plaques**"
Vidali Veroniki P., Nigianni Georgia, Athanassopoulou Georgia D, Canko Aleksander, Mavroidi Barbara, Matiadis Dimitris, Pelecanou Maria, Sagnou Marina, 18th Hellenic Symposium on Medicinal Chemistry, Hellenic Society of Medicinal Chemistry, February 25-27, 2021, (best poster presentation award)
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