

Curriculum Vitae

INFORMAZIONI PERSONALI

Nome PATRIZIA
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AMBITI DI RICERCA

Diana Patrizia - Curricula Vitae

Biography

- Born in Palermo on March 26th 1967. March 1990 Degree in Pharmacy with honor at the University of Palermo.
- From April 1990 to August 1992 research fellow at the Medicinal Chemistry Department of the University of Palermo.
- From September 1992 to March 2000 Researcher in Medicinal Chemistry at the University of Palermo.
- From May 1994 to May 1995 fellowship spent at CRC Experimental Cancer Chemotherapy Research Group working with professor Malcolm F. G. Stevens at University of Nottingham (UK).
- From April 2000 to October 2011 Associate Professor of Medicinal Chemistry at the University of Palermo.
- From November 2011 Full Professor of Medicinal Chemistry at the University of Palermo.
- From 2005 to 2010 Vice-Director of the Department Farmacochimico Tossicologico e Biologico.
- From 2009 to 2010 Vice-Coordinator of PhD Course in "Scienze Farmaceutiche".
- From 2012 to January 2014 Vice-Coordinator of PhD Course in "Scienze Molecolari e Biomolecolari".
- From December 2014 to date delegate to the curricular training (30 CFU) of graduate programs in "Pharmacy" and "Pharmaceutical Chemistry and Technology"
- From 2010 to 2013 member of the Committee on International Relations (CoRI) of University of Palermo.
- From 2011 to 2012 Responsible for the section "Medicinal Chemistry and Biology" of the Department "Scienze Molecolari e Biomolecolari" (STEMBIO).
- From 2013 to date Responsible for the section "Medicinal Chemistry and Biology" of the Department "Scienze e Tecnologie Biologiche Chimiche e Farmaceutiche" (STEBICEF)
- From 2014 to 2021, Coordinator of the Ph.D. Program in "Pharmaceutical Sciences" (XXIV Cycle), "Cell Biology and Pharmaceutical Sciences and Technologies" (XXV and XXVI Cycle), and "Molecular and Biomolecular Sciences" (XXIX, XXX, XXXI, XXXII, XXXIII, XXXIV, and XXXV Cycle) at STEBICEF, University of Palermo.
- From 2021 to date, Coordinator of the CLASSE LM-13 Council of Pharmacy and Industrial Pharmacy, Department of "Biological, Chemical, and Pharmaceutical Sciences and Technologies" (STEBICEF), University of Palermo.
- From 2021 to date, Vice-Director of the Department of "Biological, Chemical, and Pharmaceutical Sciences and Technologies" (STEBICEF), University of Palermo.

Organizational activity

- Member of the Organizing Committee of the Regional Meeting of SCI – Sicilia Section, Palermo 4,5-Dicember 2000.
- Member of the Organizing Committee of 20Th "International Congress of Heterocyclic Chemistry", Palermo 31 July - 5 August 2005.
- Member of the Local Organizing Committee of "EORTC Pharmacology and Molecular Mechanisms Group", Palermo 30 January – 2 February 2008.
- Member of the Organizing Committee of 21st "National Meeting on Medicinal Chemistry, Palermo 17 - 20 July 2012.
- Member of the Organizing Committee "Italian-Spanish-Portuguese Joint Meeting in Medicinal Chemistry – MedChemSicily2018", Palermo 17 - 20 July 2018.
- Member of the Scientific Committee 13° "Young Medicinal Chemistry Symposium – Nuove Prospettive in Chimica Farmaceutica", Evento virtuale – Firenze 26 - 29 Aprile 2021.
- Member of the Organizing and Scientific Committee of the National meeting "SUSTAINABLE PRACTICES IN MEDICINAL CHEMISTRY (SUPRAMED): A - National Meeting on Environmental Assessment, Valorization Pathways and Green Chemistry Applied to Drug Discovery and Production", Palermo 28 April 2022.
- Member of the Scientific Committee XXVII "National Meeting on Medicinal Chemistry", Bari 11 - 14 Settembre 2022.
- Member of the Scientific Committee and the Organizing Committee XXVIII "National Meeting on Medicinal Chemistry", Chieti 17 - 20 Settembre 2023.

Evaluations

- Ministerial reviewer for the VQR 2004-2010
- Ministerial reviewer for the FIRB 2013
- From 2010 to date Ministerial reviewer for the evaluation of MIUR research programs
- Member of the Scientific Committee of the University of Palermo - Area 03 CUN Chemical Sciences - For the evaluation of research and the allocation of funds for research projects under 60%
- Technical-Scientific Expert in the evaluation of the projects presented on the priority technological trajectories of the Campania RIS3

Funding participation to:

- PRIN 1997 – “Polycondensated nitrogenated heterocycles with potential biological activity”
- PRIN 2002, 2004, 2006 – “Azaindolic systems with antineoplastic activity”
- PRIN 2010-2011 - "Natural and synthetic systems with antineoplastic activity"
- PON02004513361785 DIMESA project - Valorization of typical products of the Mediterranean diet and their use for health and nutraceutical purposes " 2012
- Heal Italia – Health Extended Alliance for Innovative Therapies, Advanced Lab-Research, and Integrated Approaches of Precision Medicine” – PE00000019 - Spoke 3, University of Palermo – CUP B73C22001250006 - 2022.

Vice-Coordinator:

PRIN 2008 - "Natural and synthetic systems with antineoplastic activity"

Responsible of a research unit

- CIPE 2" project funded by MIUR "Design, synthesis and biological activity of heterocyclic derivatives with antitumor activity on HCC HCC cells" – 2008
- CORI Fund (International Cooperation for Training and the research) for the development of international collaborations of the University - year 2012
- CORI fund "Contribution to the mobility of scholars for teaching or research activities at the University of Palermo" - 2016
- National coordinator - PON ARS0100432 Project "PROGEMA - Green Projects for the extraction of active ingredients and purification of waste and non-waste matrices" - 2018.
- National Coordinator PRIN 2017 "DEVELOPMENT OF NATURAL AND SYNTHETIC COMPOUNDS AS KINASE INHIBITORS TARGETING CANCER CELLS AND CANCER STEM CELLS."
- PON ARS0100934 Progetto "INSAIL" – “Interventi a supporto dello sviluppo avanzato, integrato e sostenibile dell'acquacoltura” – 2021

Conferences in international events by invitation:

Keynote:16th ISHC Congress August 10-15, 1997 Bozeman, MT, USA

Plenary Lecture: XXIII Congresso Nazionale della Società Chimica Italiana July 5-10, 2009, Sorrento, Italy

Keynote: 31st Annual EORTC-PAMM Winter Meeting January 28 – 30, 2010 Toulouse, France

Keynote: XXIII National Meeting on Medicinal Chemistry September 6-9, 2015 Salerno, Italy

Plenary Lecture: 37th EORTC-PAMM Winter Meeting February 10-12, 2015 Antwerp, Belgium

Editorial Experience:

Editorial Board of Journal "Marine Drugs".

Editorial Board of Journal "Arkivoc"

Editorial Board of Journal "International Journal of Clinical Pharmacology and Pharmacotherapy"

Editorial Board of Journal "European Journal of Medicinal Plants"

Editorial Board of Journal "Annales of Advances in Chemistry"

Guest Editor of Special Issue "Synthesis of Antitumor Marine Alkaloids and Related Analogues" Marine Drugs

Guest Editor of Special Issue " The Biomedical Importance of Indoles and Their Derivatives" Molecules

Reviewer of several International Journal including: Journal Medicinal Chemistry, Bioorganic Medicinal Chemistry, Arkivoc, Bioorganic Medicinal Chemistry Letters, Tetrahedron, Heterocyclic Communications, Marine Drugs, European Journal of Medicinal Chemistry, Molecules, Journal Organic Chemistry, Journal of Enzyme Inhibition and Medicinal Chemistry, Chemicobiological Interactions, ChemMedChem, ACS Medicinal Chemistry Letters, ACS Chemical Biology, Current Medicinal Chemistry, Cancer Drug Resistance, Natural Product Research, Heliyon, Folia Microbiologica; Saudi Pharmaceutical Journal, Arabian Journal of Chemistry, Future Medicinal Chemistry, European Journal of Pharmacology, International Journal of Biological Macromolecular, Results in Chemistry, Cancer Investigation, International Journal of Molecular Science.

Bibliometric indicators

Total publications No. 181; H-index 44; Total Citations N. 5513

Scopus 28.07.2024

Patents

1. Lorico A., Rappa G., Santos M., Corbeil D., Diana P., Cirrincione G., (2022), Use of triazole analogues for inhibition of a tripartite VOR protein complex in multicellular organisms. UK Patent Application GB2598624 A;
2. Diana P., Cirrincione G., Parrino B., Carbone A., Derivati di chinossalina, metodi per la loro produzione e loro uso come agenti tumorali 2013 RM2013A000588;
3. G. Cirrincione, P. Diana. "Isoindolo-Quinoxaline Derivatives Having Antitumor Activity, Process for Their Production and Their Use". International Patent: PCT WO 2008/041264 A1.
4. P. Diana, G. Cirrincione. "Derivati Isoindolo-chinossalinici ad Attività Antitumorale, Procedimento per la loro Produzione e loro Uso. Italian Patent "2006, RM2006A000518".

Books:

P. Diana, G. Cirrincione. Biosynthesis of Heterocycles: From Isolation to Gene Cluster 792 pagine - ISBN: 978-1-118-02867-4 - EDITORE Wiley-Blakwe

Monographs:

1. G. Cirrincione, P. Diana: "Eight-membered rings with two heteroatoms 1,2". In Comprehensive Heterocyclic Chemistry III, AR Katritzky, CA Ramsden, EFV Scriven and RJK Taylor, Eds.; Elsevier: Oxford, 2008; Vol. 14, pp 99 – 168.
2. G. Cirrincione, P. Diana: "Eight-membered rings with two heteroatoms 1,3". In Comprehensive Heterocyclic Chemistry III, AR Katritzky, CA Ramsden, EFV Scriven and RJK Taylor, Eds.; Elsevier: Oxford, 2008; Vol. 14, pp 169 – 254.
3. G. Cirrincione, P. Diana: "Eight-membered rings with two heteroatoms 1,5". In Comprehensive Heterocyclic Chemistry III, AR Katritzky, CA Ramsden, EFV Scriven and RJK Taylor, Eds.; Elsevier: Oxford, 2008; Vol. 14, pp 303 – 474.

4. B. Parrino, S. Cascioferro, D. Carbone, G. Cirrincione, P. Diana, "Eight-Membered Rings With Two Heteroatoms 1,2", In *Comprehensive Heterocyclic Chemistry IV*, AR Katritzky, CA Ramsden, EFV Scriven and RJK Taylor, Eds.; Elsevier: Oxford, 2022; Vol. 94, pp 149.
5. B. Parrino, S. Cascioferro, D. Carbone, G. Cirrincione, P. Diana. "Eight-Membered Rings With Two Heteroatoms 1,3", In *Comprehensive Heterocyclic Chemistry IV*, AR Katritzky, CA Ramsden, EFV Scriven and RJK Taylor, Eds.; Elsevier: Oxford, 2022; Vol. 150, pp 257.
6. Parrino B., Cascioferro S., Carbone D., Cirrincione G., Diana P., "Eight-Membered Rings With Two Heteroatoms 1,5", In *Comprehensive Heterocyclic Chemistry IV*, AR Katritzky, CA Ramsden, EFV Scriven and RJK Taylor, Eds.; Elsevier: Oxford, 2022; Vol. 285, pp 471

Institutional Activities:

- Main proponent of the new channel of the new course of studies in "Pharmacy" (Caltanissetta branch) that will be activated in the academic year 2024-2025.
- President of the organizing committee for the institution of the new course of studies in "Farmaceutica e Nutraceutica Animale" activated in the academic year 2023-2024.
- From 2023 to date: Delegate for the planning of teaching staff at the STEBICEF department.
- From 2021 to 2024: Coordinator of the LM-13 Pharmacy and Industrial Pharmacy program.
- February 2020 - November 2021: Delegate for internationalization at the STEBICEF department.
- From November 2015 to date: Erasmus delegate for the degree courses in "Pharmacy" and "Chemistry and Pharmaceutical Technology".(CTF).
- From December 2014 to date delegate for the curricular internships (30 CFU) of the Degree Courses in "Pharmacy" and "Pharmaceutical Chemistry and Technology" - University of Palermo
- From 2010 to date Member of the Council of the School of Specialization in Hospital Pharmacy of Palermo
- 2010 - 2013 Member of the International Relations Committee (CoRI) of the University of Palermo
- Member of the "Commissione paritetica" of the School of Basic and Applied Sciences
- President of the Didactic Commission for the CdS in Pharmacy and CTF.
- President of the CdS Traineeship Commission in Pharmacy and CTF.
- Member of the Quality Assurance Management Committee (AQ) CdS in Pharmacy

Teaching activities:

- Chimica Farmaceutica II (Medicinal Chemistry II). 4th year of the Degree Course in "Pharmacy"
- Chimica Farmaceutica II (Medicinal Chemistry II). 4th year of the Degree Course in "Chemistry and Pharmaceutical Technology"
- Analisi dei Farmaci (Drug Analysis). 3th year of the Degree in "Chemistry and Pharmaceutical Technologies"
- Metodologie Avanzate in Chimica Farmaceutica (Advances Methodologies in Medicinal Chemistry). 4th year of the Degree in "Pharmacy" and "Chemistry and Pharmaceutical Technologies"
- Metodologie Avanzate in Spettroscopia NMR nella Ricerca Farmaceutica (Advances Methodologies in NMR Spectroscopy in Pharmaceutical Research). For the "PhD course in in Pharmaceutical Sciences".
- Titolazioni in solventi non acquosi e relative determinazioni riportate nella Farmacopea Ufficiale Italiana (Titrations in non-aqueous solvents and related determinations reported in the Italian Official Pharmacopoeia). For the first year of the "School of Specialization in Hospital Pharmacy"

Professional Societies Membership:

- Member of the Division of Medicinal Chemistry of the Italian Chemical Society (DCF-SCI)
- Member of the "International Society of Heterocyclic Chemistry".
- Member of the European Organization for Research and Treatment of Cancer – Pharmacology and Molecular Mechanism (EORTC-PAMM) Group
- Member of Executive Committee of the Medicinal Chemistry Division of the Italian Chemical Society (DCF-SCI) 2019-2024

Research Summary

The research activity is primarily focused on the design, organic synthesis, and biological evaluation of nitrogen heterocyclic compounds, with specialized skills in the research of chemotherapeutic agents as potential alternatives to counteract drug resistance in oncology and microbiological contexts. In particular, the research encompasses the development of compounds that target specific proteins, especially kinases, which play critical roles in regulating various processes in tumor cells, such as the cell cycle, signal transduction, apoptosis, and cellular metabolism. By inhibiting these kinases, these compounds aim to disrupt the proliferation and survival of cancer cells, offering promising therapeutic strategies for treating resistant forms of cancer. In the microbiological context, the research also focuses on antivirulence agents that inhibit the pathogenic mechanisms of microorganisms, thereby reducing their ability to cause disease without necessarily killing them. This approach is crucial in minimizing the development of resistance and preserving the normal microbiota, presenting a novel and sustainable strategy to combat infections. These studies have been greatly facilitated by collaborations with various national and international research groups and institutions:

- Dr. Elisa Giovannetti – Amsterdam UMC-VU University
- Dr Nathalie Wauthoz - University of Bruxelles, Belgium
- Dr. Aurelio Lorico - Touro University Nevada College di Henderson (USA)
- Dr. Denis Corbeil – University of Dresden, Germany
- Prof. Bernard Wunsch – University of Münster
- Prof. Alan Prem Kumar – National University of Singapore
- Dr. Amir Avan – Queensland University of Technology, Brisbane, Australia
- Prof. Godefridus J Peters – Medical University of Gdansk, Poland
- Dr. Yehuda G Assaraf – Technion- Israel of Technology, Haifa, Israel
- Dr Dongmei Deng – Academic Dentistry of Amsterdam, University of Amsterdam
- Dr. Schoubben Aurelie – University of Perugia

- Dr. Nadia Zaffaroni -Fondazione IRCCS Istituto Nazionale dei Tumori
- Dr. Alessandro Padova – Fondazione Rimed
- Prof. Manlio Palumbo – University of Padova
- Prof. Stefano Moro - University of Padova
- Prof. Valentina Gandin - University of Padova
- Prof. Pietro Campiglia – University of Salerno
- Prof. Giulio Vistoli – University of Milano
- Prof. Isabella Screpanti – Sapienza University, Roma
- Prof. De Maria Ruggero – Policlinico Gemelli, Roma
- Prof. Francesco Dall'Acqua – University of Padova
- Prof. Malcolm F. G. Stevens - University of Nottingham (UK)