CV Professor Giorgia Miolo

Research Profile

1984, Laurea summa cum laude in Pharmaceutical and Technological Chemistry at the University of Padua.
1984 - 1985, fellow at the Department of Pediatrics of the University of Padua
1985-1988, fellow PhD in Pharmaceutical Sciences at the Department of Pharmaceutical Sciences in Padua:
1985 - 1986, visiting research scientist at the Department of Dermatology, Yale University, New Haven, USA.
1987, Visiting research scientist at the Institute Curie, Section de Biologie, Paris, France
1989, Doctor in Pharmaceutical Sciences (PhD)
1989, Researcher at the Department of Pharmaceutical Sciences of Padua University
2006, Associate Professor at the Department of Pharmaceutical Sciences of Padua University

2024 Position: Associate Professor of Medicinal Analysis -Quantitative analysis of Medicines, University of Padova
2019-2024, Vice-President of International Union of Photobiology (IUPB),

2019-2025, Treasurer of the European Society for Photobiology (ESP),

2012 -2018, President of the Italian Society of Photobiology, Società Italiana di Fotobiologia (SIFB)

Research activity

Mechanistic aspects of photosensitizing compounds in phototherapy, photoinduced drug toxicity and photostability. In particular: a) Photocytotoxic-photoantiproliferative activity of photosensitizing drugs in human tumour cell lines under UVA, Blue light and Red light; b) Photointeractions of phototherapeutics with biological substrates; c) Photostability studies: Photolysis of medicines and additives in vitro (in solution and in pharmaceutical formulation) under UVB, UVA and simulated solar light; characterization of the photoproducts. D) Stability and Photostability of Protein Drugs during their real-life.

2022-2026, PI for the 2020 Framework Programme Call: H2020-JTI-IMI2-2020-20-two-stage Project: 101007939 -RealHOPE - Handling of protein drug products and stability concerns.

Technical expertise

The experimental activity is focused on photobiology and photochemistry issues: the photoreactivity of drugs/illicit drugs and biological active compounds under selected wavelengths (UVA and UVB lamps) and solar light (sunlight simulator) in different matrices (solid, organic, aqueous solution, formulations); photosensitizing drug interactions, isolation and characterization of photoadducts with target substrates (salmon testes, calf thymus, plasmid- DNA, lipids, proteins, amino acids) and photodegradation products (UV-Vis spectroscopy, Fluorescence, LD-linear dichroism (DNA intercalating agents), Near and Far-UV Circular dichroism, Solid-Liquid chromatography (TLC, HPLC, UPLC), MS spectrometry (HRMS), DNA and protein electrophoresis (Native, PAGE), in vitro studies of phototoxic and photo-antiproliferative activity of compounds on human healthy or tumour cell cultures.

Publications

Author of about 70 peer review international papers and of more than 100 communications at international and national congresses. Editor and Author of the multi authored Book of RSC Comprehensive Series in Photochemical and Photobiological Sciences' "Light in Forensic Science, Issues and Applications", 2018; Editor of "Sensors", Book of Proceedings of the Fourth National Conference on Sensors, Springer, 2019.

Reviewer activity

Photochemistry and Photobiology; Journal of Photochemistry and Photobiology, A; Journal of Photochemistry and Photobiology; Photochemical and Photobiological Sciences; Frontiers in Pharmacology, section Pharmacogenetics and Pharmacogenomic; European Journal of Pharmaceutics and Biopharmaceutics; Chemico-Biological Interactions; Pharmaceutics; Editor of a Topical Collection for Biomolecules and Frontiers in medicine.