

Name TIZIANO MARZO
Address DEPARTMENT OF PHARMACY, UNIVERSITY OF PISA. VIA BONANNO PISANO 6, 56126, PISA, ITALY.
Citizenship Italian

Position (since November 2021): Assistant Professor (RTDb), general and inorganic chemistry, SSD CHIM/03, Dept. of Pharmacy University of Pisa.

Education

Nov 2018-October 2020: Junior Researcher (RTDa) at the Dept. of Pharmacy, University of Pisa.

Jan 2016-Oct 2018: Postdoctoral fellow, University of Pisa-University of Florence, Department of Chemistry and Industrial Chemistry (DCCI), University of Pisa and Department of Chemistry "U. Schiff", University of Florence (AIRC-FIRC three-years fellowship for Italy, "Cisplatin Analogues Bearing Different Halide Ligands for the Treatment of Colorectal Cancer"; Project Code: 18044).

Dec 2015: General and Inorganic Chemistry Expert (Cultore della Materia).

Jan 2006: PhD in chemical Sciences (Bioinorganic Chemistry, SSD CHIM/03).

Nov 2012-Nov 2015: PhD student in Chemical Sciences at the University of Florence. Research project: "New metal complexes with cytotoxic properties: synthesis, chemical and structural characterization, biological evaluation, mechanistic studies".

Research experience

He obtained his PhD in 2016 (University of Florence) with a thesis entitled "From conventional to novel Pt-based antineoplastic agents: mechanistic aspects and biological effects". In 2015 Dr. Marzo was awarded by AIRC a 3-year Fellowship for Italy (Project code 18044) entitled "Cisplatin Analogues Bearing Different Halide Ligands for the Treatment of Colorectal Cancer". The project, carried out at the Department of Chemistry and Industrial Chemistry, University of Pisa (DCCI), involved the development and testing of halido-replaced analogues of the currently approved platinum-based drugs, characterized by the ability of overcome resistance and safe profile. Since 2012 Dr. Marzo has been involved in several projects for the development and the study of innovative metal-based anticancer. Three of these projects were funded by AIRC (IG-12085, IG-16049, AIRC-ECR project ref. code 19650) and one by ITT (Istituto Toscano Tumori-Regional Institute for Cancer Research). In this latter Dr. Marzo acted as technical coordinator for the units involved in the research program. Dr. Marzo is currently PI of the 2-year project "Innovative Combinatory Chemotherapy Approaches for Colorectal Cancer treatment: advanced preclinical evaluation" supported by Beneficentia Stiftung Foundation (Vaduz) with 15.000 €, at the Dept. of Pharmacy, University of Pisa. His research activity is documented by 66 research papers published in international journals (h-index=21 >1000 citations, September 2021). Dr. Marzo is author of several communications to national and international congresses, mostly oral communications. He has been an active participant of European COST ACTION CM1105 (Functional metal complexes that bind to biomolecules) and within this action he spent a period as visiting PhD Student at the Universidad Autónoma de Madrid, Dept. of Inorganic Chemistry, to carry out the research focused on "Further insight in the reaction toward proteins of the cis and trans iodido analogues of cisplatin". He is a member of Italian National Consortium for Research on the Chemistry of Metal Ions in Biological Systems (Pisa Unit) and Italian Chemical Society (SCI). In 2018, he has obtained a position as 3-year Junior Researcher (RTDa) at the Dept. of Pharmacy, University of Pisa and since November 2020 he his Senior Researcher (RTDb) at the same Department. Dr. Marzo is permanent member of the reviewer board of Cancers (MDPI) and reviewer for several international journals (e.g. Eur. J. Med. Chem., Elsevier; Int. J. Mol. Sci., MDPI, Dalton Trans.). Recently, Dr. Marzo has been Guest Editor for three special issues for Antibiotics Journal, Molecules (MDPI) and Current Topics in Medicinal Chemistry (Bentham) entitled "Development of Effective Antibacterial Treatment: Lessons from the Past and Novel Approaches"; "Metal-Based Drugs: Bioinorganic Chemistry and Modes of Action—Dedicated to the Research Activity of Professor Luigi Messori" and "Looking Beyond DNA as the Target of Inorganic Chemotherapy Agents: The Key Role of Protein Metalation and Metal Homeostasis" respectively. His teaching activity (General Chemistry) is carried out at the Depart. of Pharmacy (UNIPI).

Technical Skills and Competences:

Dr. Marzo is expert in bioinorganic chemistry, medicinal inorganic chemistry and coordination chemistry. Particular interest is devoted to the development of cytotoxic anticancer complexes of gold, platinum and ruthenium and to their physico-chemical characterization by CHN, UV-Vis, NMR, ESI-MS, MALDI-MS, ICP. Dr. Marzo extensively works in the evaluations of the properties of these complexes either *in vitro* and *in vivo* as well as in the studies on the mechanistic aspects involved in their pharmacological activity. These studies are performed using ESI-MS, NMR and ICP techniques allowing the correlation between the chemical structures, and reactivity toward proteins and genomic targets, leading to the formulation of structure-reactivity relationships (SARs).