



Mauro Ravera

Curriculum vitae

PERSONAL DATA

Born in Torino on November 9, 1965.

BIO AND EDUCATION

He received his *Laurea* degree in Chemistry *cum laude* from the University of Torino in 1990 under the guidance of Professor Domenico Osella. From 1991 to 1993 he was a postgraduate fellow in Osella's laboratory, also spending some research period at the University of Lausanne (under the supervision of the late Professor Carlo Floriani) and at the Australasian Microscale Chemistry Center (AMC2, Deakin University, Geelong, Australia) involved in the synthesis and the study of the electron-transfer ability of metal complexes by modern electrochemical techniques. He is a member of the Italian Chemical Society and the Society of Biological Inorganic Chemistry (SBIC). Mauro Ravera published more than 120 articles and reviews in international scientific journals and other 24 publications (monographs, collections, conference proceedings with ISBN number, etc.). The sum of citations of his works is 2700, with average citations per article of 22.31 and a h-index value of 31 (source: Web of Science, September 2022).

UNIVERSITY CAREER

October 2022 – to date	Full Professor (General and Inorganic Chemistry), Università del Piemonte Orientale
November 2006 – September 2022	Associate Professor (General and Inorganic Chemistry), Università del Piemonte Orientale
November 1993 – October 2006	Researcher (Assistant Professor; General and Inorganic Chemistry), Università del Piemonte Orientale

UNIVERSITY POSITIONS

November 2018 – to date	Member of the <i>Presidio di Qualità</i> (Unit Responsible for the Internal Quality Assurance system), Università del Piemonte Orientale
November 2012- October 2015	Director of the Chemistry Degree Programs, Università del Piemonte Orientale
February 2011 – May 2014	Management Board President of the DiSIT Library and Member of the CAB (<i>Commissione di Ateneo per le Biblioteche</i>), Università del



	Piemonte Orientale
September 2008 - June 2009	Director of the First-Level Master in "Chemical Science and Technology", Università del Piemonte Orientale

SCIENTIFIC POSITIONS

2016 - to date	Scientific Director of the Local Unit (Università del Piemonte Orientale) of the Inter-University Consortium for Research on the Chemistry of Metal Ions in Biological Systems (Consorzio Interuniversitario di Ricerca in Chimica dei Metalli nei Sistemi Biologici, CIRCMSB)
2014	Member of the Scientific Committee of the 'Giornate Italo-Francesi di Chimica 2014' (GIFC2014 / JIFC2014, Torino, 5-6 May 2014, Italian and French Chemical Societies)
2011-2015	Member of the COST (European Cooperation in Science and Technology) Action CM1105 "Functional metal complexes that bind to biomolecules"
2009 - to date	Member for the Society of Biological Inorganic Chemistry (SBIC)
2008 - to date	Reviewer of several peer-reviewed scientific journals such as the <i>Journal of Inorganic Biochemistry</i> , <i>Dalton Transactions</i> , <i>Inorganic Chemistry</i> , <i>European Journal of Inorganic Chemistry</i> , <i>Journal of Biological Inorganic Chemistry</i> , <i>RSC Advances</i> , etc.
2006-2010	Member of the COST (European Cooperation in Science and Technology) Action D39 "Metallo-Drug Design and Action"
2000-2006	Member of the COST (European Cooperation in Science and Technology) Action D20 "Metal Compounds in the Treatment of Cancer and Viral Diseases"
1997	Secretary of the Local Organizing Committee of the XXV National Congress of Inorganic Chemistry (Alessandria, 1-4 September 1997, Italian Chemical Society)
1993 - to date	Member of the Inter-University Consortium for Research on the Chemistry of Metal Ions in Biological Systems (Consorzio Interuniversitario di Ricerca in Chimica dei Metalli nei Sistemi Biologici, CIRCMSB)
1993 - to date	Member of the Italian Chemical Society (Società Chimica Italiana)

MAIN FIELDS OF INTEREST

1. Metals in Medicine
2. Bioinorganic Chemistry
3. Inorganic electrochemistry
4. Synthesis and Characterization of platinum complexes as Potential Antitumor Drugs

CURRENT ISSUES OF RESEARCH

1. Drug Targeting and Delivery of platinum complexes

To improve the selectivity of the platinum complexes employed as antitumor drugs, biologically active or macromolecular vectors are used to selectively reach the tumor tissue and to deliver and



accumulate the drug there. For this purpose, suitably designed platinum-vector conjugates are synthesized, characterized, and biochemically/biologically tested.

2. Bifunctional platinum complexes

When two drugs co-administered are effective at similar doses, they can be substituted for a single 'bifunctional' molecule to increase their activity. Therefore, such a molecule, which is composed of platinum (as potential antitumor drug or prodrug) with one or two molecules of a second adjuvant drug linked to it, is synthesized, characterized, and biochemically/biologically tested.

3. Properties of Pt(IV) complexes

Pt(IV) complexes are considered antitumor prodrugs, which are reduced to the corresponding active Pt(II) metabolites in the hypoxic tumor environment. The choice of the coordinated ligands affects the chemico-physical properties and the antiproliferative activity of the resulting complexes. Therefore, upon a suitable design of the ligands, different complexes are synthesized and characterized, and their properties such as lipophilicity, reduction kinetics, reduction potential, etc. are studied.

TOP FIVE PAPERS

1. M. Ravera, E. Gabano, M. J. McGlinchey, D. Osella, Pt(IV) antitumor prodrugs: dogmas, paradigms, and realities. *Dalton Trans.*, **2022**, 51, 2121-2134. doi: 10.1039/D1DT03886A.
2. M. Sabbatini, I. Zanellato, M. Ravera, E. Gabano, E. Perin, B. Rangone, D. Osella, Pt(IV) bifunctional prodrug containing 2-(2-propynyl)octanoato axial ligand: induction of immunogenic cell death on colon cancer. *J. Med. Chem.*, **2019**, 62, 3395-3406. doi: 10.1021/acs.jmedchem.8b01860.
3. E. Gabano, M. Ravera, F. Trivero, S. Tinello, A. Gallina, I. Zanellato, M. B. Gariboldi, E. Monti, D. Osella, The cisplatin-based Pt(IV)-diclorofibrato multi-action anticancer prodrug exhibits excellent performances also in hypoxic conditions. *Dalton Trans.*, **2018**, 47, 8268-8282. doi: 10.1039/C7DT04614F.
4. M. Ravera, E. Gabano, I. Zanellato, A. Gallina, E. Perin, A. Arrais, S. Cantamessa, D. Osella, Cisplatin and valproate released from the bifunctional $[\text{Pt}^{\text{(IV)}}\text{Cl}_2(\text{NH}_3)_2(\text{valproato})_2]$ antitumor prodrug or from liposome formulations: who does what?, *Dalton Trans.*, **2017**, 46, 1559-1566. doi: 10.1039/C6DT03749F.
5. G. Pelosi, M. Ravera, E. Gabano, F. Fregonese, D. Osella, Unprecedented one-pot synthesis of



an unsymmetrical cisplatin-based Pt(IV)-acetamidato complex. *Chem. Commun.*, **2015**, *51*, 8051-8053. doi: 10.1039/C5CC02477C.

A complete list of the publications may be obtained from [ORCID](#), [Publons](#) (former Web of Science) or [Scopus](#).