Valentina Gandin

Nata a Padova (PD) il 14.02.1980

Attuale Posizione Accademica

Da Dicembre 2017 presta servizio presso il Dipartimento di Scienze dal Farmaco dell'Università di Padova in qualità di Professore Associato (SSD CHIM/08).

Formazione e Carriera Accademica

- Laurea in Chimica e Tecnologia Farmaceutiche conseguita con il massimo dei voti il 05.07.2005 presso l'Università degli Studi di Padova, discutendo una tesi sperimentale dal titolo "Effetti dell'auranofin in cellule tumorali cis-platino resistenti" (relatore Dott.ssa Cristina Marzano, co-relatori Prof. Alberto Bindoli e Dott.ssa Maria Pia Rigobello).
- Abilitazione alla professione di Farmacista ottenuta nel 2005.
- Dottorato di Ricerca in Scienze Molecolari, nell'indirizzo di Scienze Farmaceutiche, conseguito il 18.03.09 discutendo una tesi dal titolo "Metal complexes as potential anticancer agents", relatore Dott.ssa Cristina Marzano.
- Negli anni 2007-2008 svolge parte dell'attività di ricerca all'estero, frequentando il laboratorio del Prof. M. Björnstedt, Direttore del Dept. of Laboratory Medicine, Division of Pathology del Karolinska Institutet Hospital di Stoccolma.
- Dal 2009 al 2010 svolge attività di ricerca presso il Dipartimento di Scienza Farmaceutiche di Padova in qualità di vincitrice di una borsa di studio PRIN ("Progettazione e sintesi di complessi di rame per lo sviluppo di farmaci bioinorganici target-specifici", Coord. Naz. Prof. C. Santini, Università di Camerino).
- Dal 2010 al 2012 svolge attività di ricerca presso il Dipartimento di Scienza Farmaceutiche di Padova in qualità di titolare di un assegno di ricerca dal titolo "Antitumorali a base metallica mirati a target molecolari specifici" e come vincitrice di una assegno post-dottorato "Senior", sviluppando il progetto "Composti bioinorganici target-specifici come potenziali agenti antitumorali: relazione struttura attività e valutazione del loro meccanismo d'azione".
- Da maggio 2012 a novembre 2017 ha prestato servizio presso il Dipartimento di Scienze dal Farmaco dell'Università di Padova in qualità di Ricercatore Universitario (SSD CHIM/08).

Attività di Ricerca

L'attività scientifica svolta dalla Dott.ssa Valentina Gandin riguarda principalmente la scoperta e lo sviluppo di nuovi potenziali agenti antitumorali mirati a bersagli molecolari specifici e la caratterizzazione del meccanismo d'azione alla base dell'attività terapeutica di nuovi agenti ad azione antiproliferativa. Grazie alla messa a punto di opportuni modelli molecolari, subcellulari, e cellulari è possibile valutare l'interazione dei nuovi derivati con i loro potenziali target biologici a livello molecolare, oltre che il profilo di attività citotossica e genotossica in un opportuno pannello di linee cellulari umane. In particolare, questi studi hanno permesso di individuare, ove possibile, le opportune relazioni struttura-attività e di ottenere informazioni circa il meccanismo d'azione e l'efficacia farmacologica.

Le ricerche sviluppate in questi anni si sono concretizzate in 99 lavori in extenso pubblicati su riviste peer-reviewed a diffusione internazionale (citazioni totali senza autocitazioni: 3495, h index: 30), in quattro capitoli di libro, nel deposito di due brevetti di

interesse farmaceutico (US 9,220,705 e 9,114,149) e in oltre 100 comunicazioni a congressi nazionali ed internazionali (alcune delle quali su invito).

Progetti di Ricerca finanziati

- PRIN 2017, MIUR (2017E84AA4) “DEVELOPMENT OF NATURAL AND SYNTHETIC COMPOUNDS AS KINASES INHIBITORS TARGETING CANCER CELLS AND CANCER STEM CELLS.” (Associated investigator, Responsabile di Unità)
- Progetto di PRID2016 (C92F16002500005) “NUCLEIC ACIDS ALKYLATION BY BIS-CHLOROPIPERIDINES: NANOTECH EMPOWERED THERAPY IN CANCER CELLS” (Partecipante).
- Progetto di PRID2016 (C92F16002500005) “New selective Class III Receptor Tyrosine Kinase inhibitors for cancer treatment” (Partecipante).
- Progetto di Ricerca di Ateneo 2013 (CPDA131114/13) “Novel organoselenium derivatives as multitarget anticancer drugs” (Coordinatore).
- PROGETTO GIOVANI 2011 (GRIC117ET0) "Bioinorganic target-specific anticancer drugs: structure-activity relationships and biological investigation on their mechanism of action" (Coordinatore).
- Progetto di Ricerca di Ateneo 2011 (CPDA114144) "Transition metal carbene functionalized magnetic nanoparticles: design, synthesis, characterization and application in magnetic fluid hyperthermia" (Partecipante).
-Bilateral Project for Scientific and Technological Cooperation CNR (Italy) and MTA (Hungary) 2010-2012 "Metals in neurodegenerative diseases: a model study for a metal-targeted therapy" (Partecipante).
- PRIN 2007, MIUR "Progettazione e sintesi di complessi di rame per lo sviluppo di farmaci bioinorganici target-specifici" (20078EWK9B) (Partecipante).
- Progetto di Ricerca di Ateneo 2006 (CDPA065113) "Composti di coordinazione come agenti antitumorali: identificazione di nuovi target cellulari, subcellulari e molecolari" (Partecipante).

Collaborazioni continuative con Università/Istituzioni Nazionali ed Internazionali

Università/Istituzioni Nazionali

- Prof. G.Cavaletti, Scuola di Medicina e Chirurgia, Università degli Studi Milano-Bicocca;
- Proff. C.Santini e M.Pellei, Università di Camerino, School of Science and Technology - Chemistry Division;
- Proff. G.Natile e N.Margiotta, Università degli Studi di Bari, Dipartimento di Chimica;
- Prof. D.Osella, Università del Piemonte Orientale, Dipartimento di Scienze e Innovazione Tecnologica;
- Prof. L.Di Bari, Università di Pisa, Dipartimento di Chimica e Chimica Industriale;
- Prof. C.Gabbiani, Università di Pisa, Dipartimento di Chimica e Chimica Industriale;
- Prof. N.Giorgetti, Università di Bologna, Dipartimento di Chimica Industriale "Toso Montanari";
- Dott. F.Tisato e Dott.ssa M.Porchia, ICMATE-CNR, Padova.
- Prof. Daniele Barbaro, Sezione Endocrinologia Diabetologia e Malattie Metaboliche, USL 6, Livorno;

Università/Istituzioni Internazionali

- Prof. D.Gibson, The Hebrew University of Jerusalem, School of Pharmacy- Institute for Drug Research, Jerusalem, Israel;
- Prof. V.Brabec, Institute of Biophysics ASCR, Dept.t of Molecular Biophysics and Pharmacology, Brno, Czech Republic;
- Prof. Janice Aldrich-Wright, School of Science and Health, Western Sydney University, Sidney, Australia.

- Prof. A.Fernandes, Karolinska Institutet, Department of Medical Biochemistry and Biophysics (MBB), Division of Biochemistry, Stockholm, Sweden;
- Prof. A.Erxleben, NUI of Galway, School of Chemistry, Galway, Ireland;
- Dr. D.Montagner, Maynooth University, Department of Chemistry, Co. Kildare, Ireland;
- Prof. J.Hoeschele, Eastern Michigan University, Dept. of Chemistry, Ypsilanti, US;

Appartenenza a società e comitati scientifici

E' membro della Società Chimica Italiana con sede a Roma e Consigliere Regionale della Sezione Veneto per il triennio 2017-2019 della stessa Società.
Dal 2006 è membro del Consorzio Interuniversitario di Ricerca in Chimica dei Metalli nei sistemi Biologici (CIRCMSB) con sede a Bari.

Attività didattica

- A.A. 2011-2012: esercitazioni di laboratorio nell'ambito dell'insegnamento di "Analisi dei Medicinali I" per il Corso di Laurea in Chimica e Tecnologia Farmaceutiche (2 CFU).
- Dal A.A. 2012-2013 al A.A. 2019-2020: "Laboratorio propedeutico all'Analisi dei Medicinali" (A-L) per il Corso di Laurea in Farmacia (6 CFU).
- Dal A.A. 2013-2014 al A.A. 2019-2020: "Laboratorio propedeutico all'Analisi dei Medicinali" (M-Z) per il Corso di Laurea in Farmacia (6 CFU).
- Dal A.A. 2014-2015 al A.A. 2017-2018: "Produzioni industriali di cellule e biomolecole" per il Corso di Laurea magistrale in Biotecnologie Industriali (3 CFU).
- A.A. 2017-2018: "Chimica e Microbiologia" per il Corso di Laurea in Dietistica (3 CFU).
- Dal A.A. 2019-2020: "Sviluppo di farmaci biotecnologici" per il Corso di Laurea magistrale in Biotecnologie Industriali (3 CFU).
- E' relatore e co-relatore di 35 tesi di laurea sperimentale di studenti dei Corsi di Laurea in Chimica e Tecnologia Farmaceutiche e Farmacia .
- E' stata supervisore di un dottorando iscritto al XXX ciclo di Dottorato del Corso di Dottorato in Scienze Molecolari (indirizzo Scienze del Farmaco) dell'Università degli Studi di Padova.

Altre Attività Accademiche

Dal 2018: membro del Collegio Docenti e del Consiglio Direttivo del Corso di Dottorato in Scienze Molecolari dell'Università di Padova.
Da febbraio 2017: membro della Commissione Scientifiche dell'Area del Farmaco.
Dal 2016: Membro della Commissione Scientifica del Dipartimento di Scienze del Farmaco.
Dal 2013: delegata dal Rettore alla firma dei progetti formativi e di orientamento per stage attivati dal Dipartimento di Scienze del Farmaco.
Dal A.A. 2013/14 – oggi: referente per la Scuola di Medicina e Chirurgia (Area di Farmacia) nella Commissione Tutorato di Ateneo.
Dal A.A. 2014/15 – oggi: referente per la Scuola di Medicina e Chirurgia (Area di Farmacia) nella Commissione Orientamento di Ateneo.

2013-2015: membro della Commissione Ricerca e della Commissione di Orientamento del Dipartimento di Scienze del Farmaco.

Pubblicazioni scientifiche in riviste internazionali peer-reviewed

1. Marzano C., Pellei M., Colavito D., Alidori S., Gioia Lobbia G., Gandin V., Tisato F., Santini C. (2006) Synthesis, Characterization, and in Vitro Antitumor Properties of Tris(hydroxymethyl)phosphine Copper(I) Complexes Containing the New Bis(1,2,4-triazol-1-yl)acetate Ligand. *J Med. Chem*., 49, 7317-7324. AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036, ISSN: 0022-2623.
2. Sbovata S.M., Bettio F., Mozzon M., Bertani R., Venzo A., Benetollo F., Michelin R.A., Gandin V., Marzano C. (2007) Cisplatinum and transplatinum complexes with benzyliminoether ligands; synthesis, characterization, structure-activity relationships, and in vitro and in vivo antitumor efficacy. *J. Med. Chem.,* 50, 4775-4784. AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036, ISSN: 0022-2623.
3. Marzano C., Gandin V., Folda A., Scutari G., Bindoli A., Rigobello M.P. (2007) Inhibition of thioredoxin reductase by auranofin induces apoptosis in cisplatin-resistant human ovarian cancer cells. *Free Radic. Biol. Med.*, 42, 872-881. ELSEVIER SCIENCE INC, 360 PARK AVE SOUTH, NEW YORK, NY 10010-1710, ISSN: 0891-5849.
4. Marzano C., Gandin V., Pellei M., Colavito D., Papini G., Gioia Lobbia G., Del Giudice E., Porchia M., Tisato F., Santini C. (2008) In vitro antitumor activity of the water soluble copper(I) complexes bearing the tris(hydroxymethyl)phosphine ligand. *J. Med. Chem*., 51, 798-808. AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036, ISSN: 0022-2623.
5. Gandin V., Nyström C., Rundlöf A.K., Jönsson-Videsäter K., Schönlau F., Hörkkö J., Björnstedt M., Fernandes A.P. (2009) Effects of the antioxidant Pycnogenol on cellular redox systems in U1285 human lung carcinoma cells. *FEBS J*., 276, 532-540. WILEY-BLACKWELL, 111 RIVER ST, HOBOKEN 07030-5774, NJ, ENGLAND, ISSN: 1742-464X
6. Ferlin M.G., Marzano C., Gandin V., Dall'Acqua S., Dalla Via L. (2009) DNA binding ellipticine analogues: synthesis, biological evaluation, and structure-activity relationships. *ChemMedChem*, 4, 363-377. WILEY-V C H VERLAG GMBH, POSTFACH 101161, 69451 WEINHEIM, GERMANY, ISSN: 1860-7179.
7. Rigobello M.P., Gandin V., Folda A., Rundlöf A.K, Fernandes A.P, Bindoli A, Marzano C., Björnstedt M. (2009) Treatment of human cancer cells with selenite or tellurite in combination with auranofin enhances cell death due to redox shift. *Free Radic. Biol Med.*, 47, 710-721. ELSEVIER SCIENCE INC, 360 PARK AVE SOUTH, NEW YORK, NY 10010-1710, ISSN: 0891-5849.
8. Marzano C., Sbovata S.M., Gandin V., Michelin R.A., Venzo A., Bertani R., Seraglia R. (2009) Cytotoxicity of cis-platinum(II) cycloaliphatic amidine complexes: Ring size and solvent effects on the biological activity. *J. Inorg. Biochem.*, 103, 1113-1119. ELSEVIER SCIENCE INC, 360 PARK AVE SOUTH, NEW YORK, NY 10010-1710, ISSN: 0162-0134.
9. Ferreira A.P., da Silva J.L.F., Duarte M.T., da Piedade M.F.M., Robalo M.P., Harjivan S.G., Marzano C., Gandin V., Marques M.M. (2009) Synthesis and Characterization of New Organometallic Benzo[b]thiophene Derivatives with Potential Antitumor Properties. *Organometallics*, 28, 5412-5423. AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036, ISSN: 0276-7333.
10. Porchia M., Benetollo F., Refosco F., Tisato F., Marzano C., Gandin V. (2009) Synthesis and structural characterization of copper(I) complexes bearing N-methyl-1,3,5-triaza-7-phosphaadamantane (mPTA): cytotoxic activity evaluation of a series of water soluble Cu(I) derivatives containing PTA, PTAH and mPTA ligands. *J. Inorg. Biochem.*, 103, 1644-1651. ELSEVIER SCIENCE INC, 360 PARK AVE SOUTH, NEW YORK, NY 10010-1710, ISSN: 0162-0134.

11. Iafisco M., Palazzo B., Marchetti M., Margotta N., Ostuni R., Natile G., Morpurgo M., Gandin V., Marzano C., Roveri N. (2009) Smart delivery of antitumoral platinum complexes from biomimetic hydroxyapatite nanocrystals. *J. Mater. Chem.*, 19, 8385 – 8392. ROYAL SOC CHEMISTRY, THOMAS GRAHAM HOUSE, SCIENCE PARK, MILTON RD, CAMBRIDGE CB4 0WF, CAMBS, ENGLAND, ISSN: 0959-9428.

12. Margiotta N., Ostuni R., Gandin V., Marzano C., Piccinonna S., Natile G. (2009) Synthesis, characterization, and cytotoxicity of dinuclear platinum-bisphosphonate complexes to be used as prodrugs in the local treatment of bone tumours. *Dalton Trans.*, 48, 10904-10913. ROYAL SOC CHEMISTRY, THOMAS GRAHAM HOUSE, SCIENCE PARK, MILTON RD, CAMBRIDGE CB4 0WF, CAMBS, ENGLAND, ISSN: 1477-9226.

13. Gandin V., Fernandes A.P., Rigobello M.P., Dani B., Sorrentino F., Tisato F., Bjornstedt M., Bindoli A., Sturaro A., Rella R., Marzano C. (2010) Cancer cell death induced by phosphine gold(I) compounds targeting thioredoxin reductase. *Biochem. Pharmacol.*, 79, 90–101. PERGAMON-ELSEVIER SCIENCE LTD, THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, ENGLAND, ISSN: 0006-2952.

14. Marzano C., Mazzega Sbovata S., Gandin V., Colavito D., Del Giudice E., Michelin R.A., Venzo A., Seraglia R., Benetollo F., Bertani R. (2010) A new class of *in vitro* antitumor cationic *trans*-amine-amidine-Pt(II) complexes: influence of chemical structure and solvent on the toxicity against human tumor cells. *J. Med. Chem.*, 53, 6210-27. AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036, ISSN: 0022-2623.

15. Tisato F., Refosco F., Porchia M., Tegoni M., Gandin V., Marzano C., Pellei M., Papini G., Lucato L., Seraglia R., Traldi P. (2010) The relationship between the electrospray ionization behaviour and biological activity of some phosphino Cu(I) complexes. *Rapid. Commun. Mass Spectrom.,* 24, 1610-6. WILEY-BLACKWELL, 111 RIVER ST, HOBOKEN 07030-5774, NJ, ISSN: 0951-4198.

16. Zanella A., Gandin V., Porchia M., Refosco F., Tisato F., Sorrentino F., Scutari G., Rigobello M.P., Marzano C. (2011) Cytotoxicity in human cancer cells and mitochondrial dysfunction induced by a series of new copper(I) complexes containing tris(cyanoethyl)phosphines. *Invest New Drugs.*, 29, 1213-23. SPRINGER, VAN GODEWIJCKSTRAAT 30, 3311 GZ DORDRECHT, NETHERLANDS, ISSN: 0167-6997.

17. Santini C., Pellei M., Papini G., Gioia Lobbia G., Galassi R., Ricci S., Tisato F., Porchia M., Rigobello M.P., Gandin V., Marzano C. (2011) In Vitro Antitumour Activity of Water Soluble Cu(I), Ag(I) and Au(I) Complexes Supported by Hydrophilic Alkyl Phosphine Ligands. *J. Inorg. Biochem.,* 105, 232-40. ELSEVIER SCIENCE INC, 360 PARK AVE SOUTH, NEW YORK, NY 10010-1710, ISSN: 0162-0134.

18. Montagner D., Gandin V., Marzano C., Longato B. (2011) Synthesis, characterization and cytotoxic properties of platinum(II) complexes containing the nucleosides adenosine and cytidine. *J. Inorg. Biochem.,* 105, 919-26. ELSEVIER SCIENCE INC, 360 PARK AVE SOUTH, NEW YORK, NY 10010-1710, ISSN: 0162-0134.

19. Montagner D., Marzano C., Gandin V. (2011) Synthesis, characterization and cytotoxic activity of palladium(II) dithiocarbamate complexes with alpha,omega-diamines. *Inorg Chim Acta*, 376, 574-580, ELSEVIER SCIENCE SA, PO BOX 564, 1001 LAUSANNE, SWITZERLAND, ISSN: 0020-1693.

20. Rigobello M.P., Folda A., Citta A., Scutari G., Gandin V., Fernandes A.P., Rundloff A.K., Marzano C., Bjornstedt M., Bindoli A. (2011) Interaction of selenite and tellurite with thiol-dependent redox enzymes. Kinetics and mitochondrial implications. *Free Rad. Biol. Med*., 50, 1620-9. ELSEVIER SCIENCE INC, 360 PARK AVE SOUTH, NEW YORK, NY 10010-1710, ISSN: 0891-5849.

21. Marzaro G., Gandin V., Marzano C., Guiotto A., Chilin A. (2011) Psoralenquinones as a novel class of proteasome inhibitors: design, synthesis and biological evaluation. *ChemMedChem*, 6, 996-1000. WILEY-V C H VERLAG GMBH, POSTFACH 101161, 69451 WEINHEIM, GERMANY, ISSN: 1860-7179.

22. Michelin R.A., Sgarbossa P., Mazzega Sbovata S., Gandin V., Marzano C., Bertani R. (2011) Chemistry and Biological Activity of Platinum Amidine Complexes. *ChemMedChem*, 6, 1172-83. WILEY-V C H VERLAG GMBH, POSTFACH 101161, 69451 WEINHEIM, GERMANY, ISSN: 1860-7179.

23. Pellei M., Papini G., Trasatti A., Giorgetti M., Tonelli D., Minicucci M., Marzano C., Gandin V., Aquilanti G., Dolmella A., Santini C. (2011) Nitroimidazole and glucosamine conjugated heteroscorpionate ligands and related copper(II) complexes. Syntheses, biological activity and XAS studies. *Dalton Trans*., 40, 9877-88. ROYAL SOC CHEMISTRY, THOMAS GRAHAM HOUSE, SCIENCE PARK, MILTON RD, CAMBRIDGE CB4 0WF, CAMBS, ENGLAND, ISSN: 1477-9226.

24. Miolo G., Marzano C., Gandin V., Palozzo A.C., Dalzoppo D., Salvador A., Caffieri S. (2011) Photoreactivity of 5-fluorouracil under UVB light: photolysis and cytotoxicity studies. *Chem Res Toxicol.,* 24, 1319-26. AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036, ISSN: 0893-228X.

25. Iafisco M., Palazzo B., Martra G., Margiotta N., Piccinonna S., Natile G., Gandin V., Marzano C., Roveri N. (2011) Nanocrystalline carbonate-apatites: role of Ca/P ratio on the upload and release of anticancer platinum bisphosphonates. *Nanoscale,* 7, 4, 206-17. ROYAL SOC CHEMISTRY, THOMAS GRAHAM HOUSE, SCIENCE PARK, MILTON RD, CAMBRIDGE CB4 0WF, CAMBS, ENGLAND, ISSN: 2040-3364.

26. Gandin V., Pellei M., Tisato F., Porchia M., Santini C., Marzano C. (2012) A novel copper complex induces paraptosis in colon cancer cells via the activation of ER stress signalling. *J. Cell. Mol. Med.*, 16, 142-51. WILEY-BLACKWELL, 111 RIVER ST, HOBOKEN 07030-5774, NJ, ISSN: 1582-4934.

27. Selenius M., Hedman M., Brodin D., Gandin V., Rigobello M.P., Flygare J., Marzano C., Bindoli A., Brodin O., Björnstedt M., Fernandes A.P. (2012) Effects of redox modulation by inhibition of Thioredoxin reductase on radiosensitivity and gene expression. *J. Cell. Mol. Med,* 6, 1593-605. WILEY-BLACKWELL, 111 RIVER ST, HOBOKEN 07030-5774, NJ, ISSN: 1582-4934.

28. Galassi R., Burini A., Ricci S., Pellei M., Rigobello M.P., Citta A., Dolmella A., Gandin V., Marzano C. (2012) Synthesis and characterization of azolate gold(I) phosphane complexes as thioredoxin reductase inhibiting antitumor agents. *Dalton Trans.*, 41, 5307-18. ROYAL SOC CHEMISTRY, THOMAS GRAHAM HOUSE, SCIENCE PARK, MILTON RD, CAMBRIDGE CB4 0WF, CAMBS, ENGLAND, ISSN: 1477-9226.

29. Margiotta N., Marzano C., Gandin V., Osella D., Ravera M., Gabano E., Platts J.A., Petruzzella E., Hoeschele J.D., Natile G. (2012) Revisiting [$PtCl_2$(cis-1,4-DACH)]: an underestimated antitumor drug with potential application to the treatment of oxaliplatin-refractory colorectal cancer. *J Med Chem.*, 55, 7182-92. AMER CHEMICAL SOC, 1155 16^{TH} ST, NW, WASHINGTON, DC 20036, ISSN: 0022-2623.

30. Pellei M., Gandin V., Marinelli M., Marzano C., Yousufuddin M., Dias H.V., Santini C. (2012) Synthesis and biological activity of ester- and amide-functionalized imidazolium salts and related water-soluble coinage metal N-heterocyclic carbene complexes. *Inorg Chem.*, 51, 9873-82. AMER CHEMICAL SOC, 1155 16^{TH} ST, NW, WASHINGTON, DC 20036, ISSN: 0020-1669.

31. Fernandes A.P., Wallenberg M., Gandin V., Misra S., Tisato F., Marzano C., Rigobello M.P., Kumar S., Björnstedt M. (2012) Methylselenol formed by spontaneous methylation of selenide is a superior selenium substrate to the thioredoxin and glutaredoxin systems. *PLoS One.*, 7, e50727. PUBLIC LIBRARY SCIENCE, 1160 BATTERY STREET, STE 100, SAN FRANCISCO, CA 94111, ISSN: 1932-6203.

32. Peruzzo V., Pretzsch C., Tisato F., Porchia M., Refosco F., Marzano C., Gandin V., Schiller E., Walther M., Pietzsch H-J. (2012) Synthesis and characterization of novel tetrahedral copper(I) complexes comprising tridentate PNP-aminodiphosphines and tetradentate PN(X)P-substituted aminodiphosphines (X = O, S). *Inorg Chim Acta*, 387, 163-172. ELSEVIER SCIENCE SA, PO BOX 564, 1001 LAUSANNE, SWITZERLAND, ISSN: 0020-1693.

33. Porchia M., Dolmella A., Gandin V., Marzano C., Pellei M., Peruzzo V., Refosco F., Santini C., Tisato F. (2013) Neutral and charged phosphine/scorpionate copper(I) complexes: effects of ligand assembly on their antiproliferative activity. *Eur J Med Chem.*, 59, 218-26. ELSEVIER FRANCE-EDITIONS SCIENTIFIQUES MEDICALES ELSEVIER, 23 RUE LINOIS, 75724 PARIS, FRANCE, ISSN: 0223-5234.

34. Bolzati C., Carta D., Gandin V., Marzano C., Morellato N., Salvarese N., Cantore M., Colabufo N.A. (2013) (99m)Tc(N)-DBODC(5), a potential radiolabeled probe for SPECT of multidrug resistance: in vitro study. *J Biol Inorg Chem.*, 18, 523-38. SPRINGER, 233 SPRING ST, NEW YORK, NY 10013, ISSN: 0949-8257.

35. Sgarbossa P., Sbovata S.M., Bertani R., Mozzon M., Benetollo F., Marzano C., Gandin V., Michelin R.A. (2013) Novel imino thioether complexes of platinum(II): synthesis, structural investigation, and biological activity. *Inorg Chem.*, 52, 5729-41. AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036, ISSN: 0020-1669.

36. Gandin V., Porchia M., Tisato F., Zanella A., Severin E., Dolmella A., Marzano C. (2013) Novel mixed-ligand copper(I) complexes: role of diimine ligands on cytotoxicity and genotoxicity. *J Med Chem.*, 56, 7416-30. AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036, ISSN: 0022-2623.

37. Gandin V., Pellei M., Marinelli M., Marzano C., Dolmella A., Giorgetti M., Santini C. (2013) Synthesis and in vitro antitumor activity of water soluble sulfonate- and ester-functionalized silver(I) N-heterocyclic carbene complexes. *J Inorg Biochem*., 129C, 135-144. ELSEVIER SCIENCE INC, 360 PARK AVE SOUTH, NEW YORK, NY 10010-1710, ISSN: 0162-0134.

38. Dean A., Sija E., Zsigo E., Ferlin M.G., Marton D., Gandin V., Marzano C., Badocco D., Pastore P., Venzo A., Bertani R., Kiss T., Di Marco V. (2013) Possible Chelating Agents for Iron and Aluminium-4-Hydroxy-5-methyl- and 4-Hydroxy-1,5-dimethyl-3-pyridinecarboxylic Acid. *Eur J Inorg Chem.*, 8, 1320-1329. WILEY-V C H VERLAG GMBH, POSTFACH 101161, 69451 WEINHEIM, GERMANY, ISSN: 1434-1948.

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Brevetti concessi

- Method of treating colorectal cancer. Patent US 9,220,705. Authors: James D. Hoeschele, Nicola Margiotta, Valentina Gandin, Emanuele Petruzzella, Cristina Marzano.

Brevetti licenziati

- [Cu(thp)4]n[X]-n Compounds for the Treatment of a Broad Range of Human Solid Tumors, Including Refractory Tumors. Patent US 9,114,149. Authors: Cristina Marzano, Marina Porchia, Francesco Tisato, Valentina Gandin, Carlo Santini, Maura Pellei, Giancarlo Gioia Lobbia, Grazia Papini.

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