

Maribel Coromoto Navarro Acosta

Born in Maracaibo, Venezuela

14-09-1965

Full-Researcher

Chemistry Center

Venezuelan Institute of Scientific Researches (I.V.I.C.)

(Since May 1995)

Education:

Central University of Venezuela, Faculty of Sciences, School of Chemistry.

Lic. in Chemistry (1991).

Thesis supervisor : Dr. Reinaldo Compagnone.

Venezuelan Institute of Scientific Researches (I.V.I.C.), Chemistry Center .

PhD in Chemistry (March 1995).

Thesis supervisor : Dr. Roberto Sánchez-Delgado.

Postdoctoral work at the Purdue University, Indiana-USA, with Prof. Harry Morrison (1997-1998)

Professional Experience

Research area: inorganic/organometallic chemistry

Current research interests:

-Development of novel metallic drugs against different diseases (Leishmania, Cancer, Arthritis, Chaga's Disease, Malaria).

Synthesis and characterization of new DNA-interacting metal compounds in aqueous solution.

Use of bioactive metal complexes in homogeneous catalysts for oxygenation of aromatic molecules.

Teaching: Advances Inorganic Chemistry, Bioinorganic Chemistry, Coordination Chemistry, Metals in medicine.

Supervising: 14 undergraduates thesis, 3 PhD Theses; 3 Master Theses

Deputy Head of the chemistry Center (Nov 2002 –Feb 2004)

Member of the Commission Technical of Sciences in Chemistry-FONACIT (2001- 2003)

Member of the Academic Commission at IVIC (March-2003-2004)

Adjunct Assistant Professor of the University of North Carolina-USA (Jul.-Sep 2005)

Head of the Bioinorganic Chemistry Laboratory (June 2006)

Visiting professor at University of Western Australia (2008), with Prof. Sue Berners-Price

Full Researcher (October 2010)

Scientific Awards

-Visiting research Scholar at Belgium (University of Liege) from the Community Economic European (CEE) (Oct 91-March 92)

-Visiting research Scholar at France (Institute Jacques Monod /University of Paris) from the French Embassy (Nov.-Dec. 1993).

-"José Felix Ribas" Order (First Class) awarded to young people of outstanding achievement (Venezuelan Government, February 1994).

-"Orinoquia Prize" (second place) awarded to applies Investigation (1996)

-PPI National Research Council of Venezuela (FONACIT) July 1996- at present

Referee

Journal of Inorganic Biochemistry

European Journal of Medicinal Chemistry
Inorganica Chimica Acta
Journal of Medicinal Chemistry
Journal of Biological Inorganic Chemistry
Central European Journal of Chemistry
Bioorganic & Medicinal Chemistry
Inorganic Chemistry
Nanoscience and Nanotechnology
Referee of the scientific project at FONACIT

Research

Over than 55 oral and poster presentations in National and International meetings.
21 Invited lectures
50 publications.

Selected conferences:

M. Navarro. Metal Complexes as Potential Chemoterapeutic Agents Against Parasitic Diseases. Gordon Research Conferences, 24 July 2002. New London NH-USA.

M. Navarro. Metal Complexes as Leishmanicidal Agents. World Conferences on Magic Bullets Celebrating Paul Ehrlich's 150th Birthday. Septiembre 9-11 2004. Nurnberg , Alemania.

Navarro M. Metal Complexes against Parasitic Diseases. 24 de August 2005 Department of Chemistry University of North Caroline at Charlotte. USA.

Navarro M. Design and synthesis of DNA metal- intercalators with possible leishmanicidal activity. March 3th 2006. Facultad de Quimica. Universidad de la Republica, Montevideo- Uruguay.

Navarro M. Copper, Silver and gold complexes as leishmanicidal agents. 1st Georgian Bay International Conferences on Bioinorganic Chemistry. Parry Sound, Notario-Canada, 22-25 Mayo 2007.

M. Navarro. Metal-Chloroquine Complexes as Potential Chemotherapeutic Agents Against Different diseases. First Latin-American Organometallic Chemistry Symposium. Colombia-Bogota 29-31 Agosto 2007.

M. Navarro. Metal Complexes as Potential leishmanicidal Agents Pharmacy department Western Australia University. 22 October 2008.

M. Navarro. Antimalarial Inorganic Drugs and their mechanisms of action. Sao Carlos-Sao Paulo Brazil. February, 3 2010.

M. Navarro. Metal complexes as potential Drugs against Malaria and Leishmaniasis. .XV Brazilian Meeting on Inorganic Chemistry. II Latin American Meeting on Biological Inorganic Chemistry. Angra dos Reis, Rio de Janeiro -Brazil. August 16-20, 2010.

Selected publications:

Maribel Navarro, Flor Vásquez, Roberto A. Sánchez-Delgado, Hilda Pérez, Joseph Schrevel, Véronique Sinou. Toward a Novel Metal-Based Chemotherapy Against Tropical Diseases 7. Synthesis and in vitro Antimalarial Activity of new gold-chloroquine complexes. Journal of Medicinal Chemistry 47, 5204-5209, 2004.

Maribel Navarro, Prieto Peña Nayarit, Colmanares Ibis, González Teresa, Miriam Arsenak, Peter Taylor Synthesis and characterization of new palladium-clotrimazole and palladium-chloroquine complexes showing cytotoxicity for tumor cell lines in vitro. J. Inorg. Biochem. 100, 152-157, 2006

Maribel Navarro, Clara Hernández, Ibis Colmenares, Paola Hernández, Mercedes Fernández, Anibal Sierraalta, and Edgar Marchán. Synthesis and Characterization of $[\text{Au}(\text{dppz})_2]\text{Cl}_3$. DNA Interaction Studies and Biological Activity Against *Leishmania (L.) mexicana*. *Journal of Inorganic Biochemistry*. 101, 111-116, 2007.

Synthesis and Characterization of Platinum–sterol hydrazones complexes with Biological Activity Against *Leishmania (L.) mexicana*. *Journal of Inorganic Biochemistry* 102, 547-554, 2008.

Maribel Navarro. Gold complexes as potential anti-parasitic agents. *Coordination Chemistry Review*. 253, 1619-1626, 2009).

Maribel Navarro, Alexis Escobar, Vanessa R. Landaeta, Gonzalo Visbal, Francisco Lopez-Linares, Miguel Luis Luis, Alberto Fuentes. Catalytic oxidation of tetralin by biologically active copper and palladium complexes. *Applied Catalysis A: General* 363, 27-31, 2009.

Maribel Navarro, Angel Rubén Higuera-Padilla, Miriam Arsenak, Peter Taylor. Synthesis, characterization, DNA studies interaction and anticancer activity of new platinum-clotrimazole complexes. *Transition Metal Chemistry*, 34, 869-75, 2009.

Richard J. Bowen, Maribel Navarro, Anne-Marie J. Shearwood, Peter C. Healy, Brian W. Skelton, Aleksandra Filipovska, and Susan J. Berners-Price. 1:2 Adducts of copper(I) halides with 1,2-bis(di-2-pyridylphosphino)ethane: Solid state and solution structural studies and antitumour activity. *Dalton Transactions* 10861 – 10870, 2009.

Maribel Navarro, Chiara Gabbiani, Luigi Messori, Dinorah Gambino*. Metal-based drugs for malaria, trypanosomiasis and leishmaniasis: recent achievements and perspectives. *Drug Discovery Today*, 15, 23-24, 1070-1078, 2010.

Maribel Navarro, William Castro. Alberto Martinez, Roberto A. Sánchez Delgado. The mechanism of antimalarial action of $[\text{Au}(\text{CQ})(\text{PPh}_3)]\text{PF}_6$: structural effects and increased drug lipophilicity enhance heme aggregation inhibition at lipid/water interfaces. *Journal of Inorganic Biochemistry* , 105, 276-282, 2011.