

Química Inorgánica, DEC
Facultad de Química, Universidad de la República
Uruguay



Dinorah Gambino
Curriculum vitae

Personal Data

Date and place of birth:

01/03/1958, Montevideo, Uruguay

Work address:

General Flores 2124, CC 1157, Faculty of Chemistry, 11800, Montevideo, Uruguay
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Current Work Status:

Full Professor, full time commitment
Inorganic Chemistry, Estrella Campos Department, Faculty of Chemistry, Universidad de la República (**UDELAR**), Montevideo, Uruguay

First level Honorary Researcher of **PEDECIBA-QUÍMICA** (Program for the Development of Basic Sciences/ Chemistry area), Uruguay. Researcher of the program since 1993

Member of the National System of Researchers of Uruguay (SNI): level II (since 2009)

Member of the Faculty of Chemistry (**UDELAR**) Governing Council (since 2010) (alternate)

Director of the Department Estrella Campos (includes five areas: Inorganic Chemistry, Analytical Chemistry, Radiochemistry, Toxicology and Centre for flexible chemistry teaching), Faculty of Chemistry, **UDELAR**, Uruguay (since 2014).

Vice-director of the Department Estrella Campos, Faculty of Chemistry, **UDELAR**, Uruguay (2010-2014)

Member of the Education Committee of Faculty of Chemistry, **UDELAR** (since 2014)

Member of the Scientific Research Committee of Faculty of Chemistry, **UDELAR** (since 2006)

Química Inorgánica, DEC
Facultad de Química, Universidad de la República
Uruguay

Education

Faculty of Chemistry, UDELAR, Montevideo, Uruguay

Ph.D. in Chemistry (Inorganic Chemistry), 2001. Mark: excellent. Thesis advisors: Prof. Enrique J. Baran (Faculty of Exact Sciences, Universidad Nacional de La Plata, Argentina) and Prof. Eduardo Kremer (Faculty of Chemistry, UDELAR, Uruguay)

Doctor in Pharmaceutical Chemistry, 1986

Pharmaceutical Chemist, 1981 (with honors: Silver medal for relevant performance)

Bs. Sc. in Chemistry 1979 (with honors: Silver Medal for relevant performance)

Queen's Medical Centre (University Hospital), Radiopharmacy Unit, Nottingham, UK

Postdoctoral short studies 1988

Supervisor: Dr. Malcolm Frier. Topic: Development of new drug formulations using radiotracers. Fellowship by IAEA International Atomic Energy Agency, project URU/6/013 "Radiopharmacology" (Radiochemistry Department, Faculty of Chemistry, UDELAR, Uruguay).

Languages

Spanish (mother language), English/German (fluent), Italian (regular), Portuguese (regular)

Academic Positions

Faculty of Chemistry, UDELAR, Montevideo

Inorganic Chemistry Department:

Full Professor, since 2010

Associate Professor, 1998-2010

Joint Professor, 1990-1998

Assistant Professor, step 2, 1981-1989

Assistant Professor, step 1, 1979-1981

Radiochemistry Department:

Collaborator teacher, 1985-1991

Member of the Committee guiding the new curriculum of Faculty of Chemistry (2010-2014)

PEDECIBA-Chemistry

Member of the scientific committee of PEDECIBA Química (Program for the Development of Basic Sciences - Chemistry) (1997-2005, 2007-2010, 2015- alternate)

Member of the Council of **FUNDAQUIM** (Foundation for the progress of Chemistry, Uruguay) (2012-2014). Treasurer.

CYTED (Iberoamerican program for the development of science and technology):

Coordinator of the network "Red Iberoamericana de investigación y desarrollo de fármacos basados en compuestos metálicos" (Iberoamerican network for R&D of metal-based drugs), 209RT0380, 2009-2012. This network included eleven research groups from eight countries

Química Inorgánica, DEC
Facultad de Química, Universidad de la República
Uruguay

(Spain, Portugal, Argentina, Brazil, Mexico, Paraguay, Venezuela, Uruguay). Purpose: teaching and research.

Erasmus mundus program:

Teacher of a module on Bioinorganic Chemistry for master degree courses for EMQAL 2008-2010: University of Algarve, Portugal (2009), University of Gdansk, Poland (2010). Module AM313: Development of metal compounds for medicinal chemistry purposes.

Visiting professor for short periods at:

2001, 2002, 2006, 2007: Chemistry Department, Federal University of Minas Gerais, Belo Horizonte, Brazil

2002: Chemistry Institut, Anorganische und Analytische Chemie, Freie Universität Berlin, Germany

2003: Laboratory of biological evaluation and synthesis of bioactive compounds (Lassbio), Faculty of Pharmacy, Federal University of Rio de Janeiro, Brazil

2003, 2016: Faculty of Exact Sciences, National University of La Plata, Argentina

2004: Biochemistry Department, Federal University of Santa Catarina, Florianópolis, Brazil

2006: Instituto de Física de Sao Carlos, Universidad de San Pablo, Brazil

2006: Department of Chemistry, Vassar College, USA

2006: Department of Chemistry, City University of New York, Inorganic Chemistry Laboratory, New York, USA

2007: Faculty of Biochemistry and Pharmacy, Universidad de Buenos Aires, Buenos Aires, Argentina

2007: Institut für Anorganische und Analytische Chemie, Westfälische-Wilhelms Universität Münster, Germany

2007: Centro de Química del Instituto Venezolano de Investigaciones Científicas (IVIC, Venezuela Institut for Scientific Research), Caracas, Venezuela

2008: Chemistry Departments, Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto and São Carlos, Universidade de São Paulo, Brazil

2009: Instituto Superior Técnico, Lisbon, Portugal

2009: Posgraduation in Chemistry Section, Universidad de Los Andes, Mérida, Venezuela

2009, 2010, 2011: Department of Inorganic Chemistry, Universitat Barcelona, Spain

2010: Universidad de las Islas Baleares, Mallorca, Spain

Major distinctions

Nominated for the SBIC council in 2014

Postgraduate Programme Reviewer for the Comisión Nacional de Acreditación (Chilean National Accreditation Committee), Chile (2012).

Member of the **Registro de Pares Evaluadores de Acreditación Institucional** (Register of Evaluators for Institutional Accreditation), Comisión Nacional de Acreditación de Chile (since 2015).

Reviewer of projects and net-works for CYTED (Iberoamerican program for the development of science and technology) (2004, 2006, 2011).

Química Inorgánica, DEC
Facultad de Química, Universidad de la República
Uruguay

Reviewer of projects for Colciencias, Colombia (2010), Austrian Science Fund (FWF) (2011), Pontificia Universidad Católica del Perú (PUCP) (2012, 2014, 2015), Agencia Nacional de Promoción Científica y Tecnológica (ANPCyT), Argentina (2013-2015), Fondo de Ciencia y Tecnología (FONDECYT), Chile (2014), National Science Centre in Poland, Poland (2015).

Member of the **Committee of Reviewers** of research grants for undergraduate and graduate students of ANII (Agencia Nacional de Investigación e Innovación, National Agency for Research and Innovation), Uruguay (since 2012)

Chairwoman of the 12th International Symposium on Metal Ions in Biology and Medicine, Punta del Este, Uruguay, 2013.

Chairperson of sessions in different conferences:

1st International Symposium on Clinical and Experimental Metallodrugs in Medicine: Cancer Chemotherapy, 2015, Honolulu, Hawaii

13th International Symposium on Applied Bioinorganic Chemistry, 2015, Galway, Ireland

XV Simposio de la Sociedad Uruguaya de Biociencias (Symposium of the Society of Biosciences of Uruguay), 2014, Piriapolis, Uruguay

12th International Symposium on Applied Bioinorganic Chemistry, 2013, Guangzhou, China

12th International Symposium on Metal Ions in Biology and Medicine, 2013, Punta del Este, Uruguay

XXVI Congreso Peruano de Química, 2012, Arequipa, Perú

XIV Symposium of the Society of Biosciences of Uruguay, 2012, Minas, Uruguay

12th International Symposium on Applied Bioinorganic Chemistry (12th ISABC), 2011, Barcelona, Spain

3er Simposio Latinoamericano de Química de Coordinación y organometálica, 2011, La Serena, Chile

XII Symposium of the Society of Biosciences of Uruguay, 2007, Minas, Uruguay

X International Symposium on Bioinorganic Chemistry, Challenge for new generation, 2005, Szklarska Poręba, Poland

Member of the **organizing committee** of the First and Second Uruguayan Meetings in Chemical Sciences (2009, 2011)

Member of the **scientific committee** of the XXXI Congreso Latinoamericano de Química, Lima, Perú (2014) and XXXII Congreso Latinoamericano de Química, Chile (2016).

Most cited paper 2003-2006 award Bioorganic & Medicinal Chemistry: *Bioorganic Medicinal Chemistry* 12 (2004) 4885-4893.

Invited speaker in different meetings (invited, keynote or plenary lectures):

XI Brazilian Meeting on Inorganic Chemistry and Joint Brazilian / Italian Meeting on Inorganic Chemistry, Ouro Preto, Brazil, 2002

Primer Workshop Argentino de Bioinorgánica, Rosario, Argentina, 2004

13th International Conference on Bioinorganic Chemistry, Vienna, Austria, 2007

IV Reunión Nacional de Química Medicinal, Caracas, Venezuela, 2007 (plenary)

14th Brazilian Meeting on Inorganic Chemistry - First Latinamerican Meeting on Bioinorganic Chemistry, Foz de Iguaçu, Brazil, 2008 (plenary)

Química Inorgánica, DEC
Facultad de Química, Universidad de la República
Uruguay

Simposio Latinoamericano de Química de Coordinación y Organometálica, Maracaibo, Venezuela, 2009

7th International Symposium on the Chemistry and Biological Chemistry of Vanadium, Toyama, Japan, 2010

14th Brazilian Meeting on Inorganic Chemistry - II Latinamerican Meeting on Bioinorganic Chemistry, Angra dos Reis, Brazil, 2010

VII Reunión Científica de Bioinorgánica, Murcia, Spain 2011

Symposium Metal compounds as potential therapeutic agents in the 8th International Congress of Pharmaceutical Sciences, Riberao Preto, Brazil, 2011

46^o Congreso Mexicano de Química Queretaro, México, 2011

16th Brazilian Meeting on Inorganic Chemistry - III Latinamerican Meeting on Bioinorganic Chemistry, Florianópolis, Brazil, 2012

11th European Biological Inorganic Chemistry Conference, Granada, Spain, 2012 (keynote)

Chemical Interactions of Metal-related Therapeutic Drugs (Division of Inorganic Chemistry)

- 243rd ACS National Meeting, San Diego, CA, USA, 2012

XXVI Congreso Peruano de Química, Arequipa, Perú, 2012 (plenary lecture)

12th International Symposium on Applied Bioinorganic Chemistry, Guangzhou, China, 2013

9th International Vanadium Symposium, Padua, Italy, 2014

IV Latinamerican Meeting on Biological Inorganic Chemistry (IV LABIC), Chascomús, Argentine, 2014

9th International Vanadium Symposium (V9), Padova, Italy, 2014

V Latinamerican Meeting on Biological Inorganic Chemistry (V LABIC), Queretaro, México, 2016

10th International Vanadium Symposium: Chemistry, Biological Chemistry, & Toxicology (V10), Taipei, Taiwan, 2016

Reviewer for several international journals on Inorganic Chemistry, Bioinorganic Chemistry, Medicinal Chemistry and Biology:

Journal of Inorganic Biochemistry, Journal of Biological Inorganic Chemistry, European Journal of Inorganic Chemistry, Polyhedron, Dalton Transactions, Inorganic Chemistry, Inorganic Chemistry Communications, Journal of Organometallic Chemistry, Applied Organometallic Chemistry, Coordination Chemistry Reviews, E-Journal of Chemistry, Spectrochimica Acta part A, Phosphorus, Sulfur, and Silicon and the Related Elements, Arabian Journal of Chemistry, Journal of Saudi Chemical Society, Journal of the Argentine Chemical Society, Central European Journal of Chemistry, Research on Chemical Intermediates, Metal-based Drugs, Bioinorganic Chemistry and Applications, Biological Trace Element Research, International Journal of Biological Macromolecules, Journal of the Brazilian Society of Chemistry, Current Medicinal Chemistry, ACS Medicinal Chemistry Letters, Journal of Medicinal Chemistry, Expert Opinion on Drug Discovery, Memorias do Instituto Oswaldo Cruz, European Journal of Medicinal Chemistry, Bioorganic and Medicinal Chemistry, Minireviews in Medicinal Chemistry, ChemMedChem, Letters in Drug Design & Discovery, Letters in Drug Discovery, Future Medicinal Chemistry, Chemical Biology and Drug Design, Current Topics in Medicinal Chemistry, African Journal of Pharmacy and Pharmacology, Cell Biology and Toxicology, Oxidative Medicine and Cellular Longevity, Acta Tropica, Cancer Therapy, Expert Opinion On Therapeutic Patents.

Silver Medal as Pharmaceutical Chemistry student 1979, 1981

Química Inorgánica, DEC
Facultad de Química, Universidad de la República
Uruguay

Memberships

Member of the International Advisory Committee (IAC) of the conference series International Symposium on Applied Bioinorganic Chemistry (ISABC) (since 2012)

Permanent Member of the scientific committee of the Latinamerican Meeting on Biological Inorganic Chemistry (LABIC) (since 2011)

Permanent Member of the scientific committee of the Simposio Latinoamericano de Química de Coordinación y Organometálica (SILQCOM) (since 2011)

Society of Biological Inorganic Chemistry (SBIC), (since 2011)

American Chemical Society, Inorganic Chemistry division, 2006, 2012

Royal Society of Chemistry (RSC), (2013-2014)

Research interests

Areas: Bioinorganic Chemistry, Inorganic Medicinal Chemistry, Medicinal Chemistry, Metal-based chemotherapy, Inorganic Chemistry, Coordination compounds chemistry, Radiochemistry.

Research lines

Development of metal-based compounds for the therapy of parasitic diseases (mainly American Trypanosomiasis, African Trypanosomiasis and Leishmaniasis), cancer and tuberculosis

Bioorganometallic prospective drugs

Insight into the mechanism of action of metal-based prospective drugs

Vanadium complexes as prospective antitumor and/or antiparasitic agents

Interaction of bioactive complexes with biomolecules like DNA, serum proteins and relevant enzymes

Rhenium and technetium complexes with radiopharmaceutical potentiality (previous).

The research group working under my directives is currently especially interested in the development of new metal-based drugs bearing activity on *Trypanosoma cruzi*. This protozoan parasite is responsible of an endemic disease in Latin America, American Trypanosomiasis or Chagas disease. Due to the multidisciplinary aspects of the research, the group established strong collaborations with researchers working in different areas like Medicinal Organic Chemistry, Biochemistry, Molecular Biology, Physics, among others. In addition, the group showed a previous long-term research work on Bioinorganic Chemistry aspects related with Radiopharmacy.

Current research group members

One senior researcher, three PhD students, one Master student and three undergraduate students.

Química Inorgánica, DEC
Facultad de Química, Universidad de la República
Uruguay

PhD student Bruno Demoro (2009) Project (Chemistry): "Development of novel metal complexes bearing activity on *Trypanosoma cruzi* and their inclusion compounds"

PhD student Esteban Rodríguez Arce (2012) Project (Chemistry): "New bioorganometallic compounds with prospective antiparasitic activity"

PhD student Gabriel Arrambide (2015) Project (Chemistry): "A comparative study on biologically relevant vanadium(V) hydroxylamido- and peroxocompounds using a theoretical-experimental approach."

MSc student Feriannys Rivas (2015) Project (Chemistry): "Novel heterobimetallic ferrocene derivatives bearing interesting biological activities."

Students mentoring

Supervisor of PhD and MSc theses and tutorial work on research projects of young researchers and undergraduate students.

Research grants

International unilateral, bilateral or multilateral projects:

"Optimization of drug formulations using radiotracers.", 1985-1989, Radiochemistry Department, Faculty of Chemistry, UDELAR, International Atomic Energy Agency (IAEA), as part of the Technical Program URU/6/013. (**as Principal Investigator PI**)

"New Re(III) complexes with sulphur containing ligands.", 1997-1998, Third World Academy of Sciences, TWAS. (**PI**)

"New transition metal complexes of thiosemicarbazones and semicarbazones.", 2000-2001, TWAS. (**PI**)

"Medicinal Organic and Bioinorganic Chemistry.", 2003, Uruguay – Brazil bilateral cooperation project. Programa Sul-Americano de Apoio às Atividades de Cooperação em Ciência e Tecnologia, CNPq, Brazil. (**PI**)

"New metal complexes with thiosemicarbazones and semicarbazones, potentially bioactive against cancer and/or Chagas disease.", 2003-2004, TWAS. (**PI**)

"Synthesis and characterization of new metal based drugs for human and veterinary medicine.", 2003-2004, Program for development of technology (PDT)-SECYT, Bilateral Uruguay – Argentine cooperation project. (**PI**)

"Desenvolvimento de Protótipos de Fármacos através da Química Medicinal Orgânica e Inorgânica.", 2005-2007, Bilateral Uruguay – Brazil cooperation project, CNPq, Brazil. (**PI**)

"Platinum group" metal complexes with aromatic amine *N*-oxides bearing biological activity.", 2007-2008, TWAS. (**mentor**)

"Research and development of palladium thiosemicarbazone complexes active against Chagas disease.", 2005-2006, TWAS. (**mentor**)

"R+D of metal based drugs for potencial use in human medicine.", 2007-2008, Uruguay – Brazil bilateral Project, PDT- CNPq (Brazil). (**as Coinvestigator Col**)

"Desenvolvimento de Protótipos de Fármacos através da Química Medicinal Orgânica e Inorgânica. (II)", 2008-2009, PROSUL, Programa Sul-Americano de Apoio às Atividades de Cooperação em Ciência e Tecnologia, ASCIN/CNPq, PROGRAMAS MULTILATERAIS, Brazil, Participants: Facultad de Química (Uruguay), Universidad Federal de Minas Gerais, Belo Horizonte and Universidad Federal de Rio de Janeiro (Brazil) and CEQUINOR, UNLP, La Plata and Universidad de Buenos Aires (Argentine). Project Prosul-CNPq Proc. 490.600/2007-8. (**PI**)

Química Inorgánica, DEC
Facultad de Química, Universidad de la República
Uruguay

“Red Iberoamericana de Investigación y Desarrollo de Fármacos basados en Compuestos Metálicos.”, 2009-2012, CYTED network, Spain. (**coordinator and PI**)

“Avaliação do potencial de complexos metálicos incorporados em sistemas nanoestruturados contra a Tuberculose.” 2013-2015, CNPq/GSK nº 41/2012, Cooperation MCTI-CNPq / GSK (GlaxoSmithKline), General Coordination for international cooperation – CGCIN, CNPq, Brazilian Ministry for Science, Technology and Innovation – MCTI, Laboratorio de Micobacteriología FCFAR-UNESP, Laboratorio de Nanotecnología Farmacéutica (FCFAR-UNESP), Departamento de Química (Universidad Federal de São Carlos), Instituto de Química (UNESP) (Brasil) y Cátedra de Química Inorgánica (DEC) Facultad de Química (Uruguay). (**PI**)

National projects:

“Synthesis and characterization of cationic complexes of technetium.”, 1988-1995, PEDECIBA, Uruguay. (**CoI**)

“Synthesis, characterization and biological evaluation of phenanthroline technetium complexes.”, 1993-1995, CSIC, Uruguay. (**CoI**)

“Using ligand substitution methods for the synthesis of rhenium coordination compounds.”, 1995-1998, CONICYT, Uruguay. (**PI**)

“Comparative study of $[\text{ReCl}_3(\text{NCCH}_3)(\text{PPh}_3)_2]$ and $[\text{Re}(\text{tiourea})_6]\text{Cl}_3$ as precursors for the synthesis of Re(III) compounds.”, 1998-1999, CSIC, Uruguay. (**mentor**)

“Metal complexes of ligands bioactive against *T. cruzi*. Synthesis, characterization and biological evaluation.”, 2001-2003, CONICYT, Uruguay. (**mentor**)

“Development of new metal complexes of organic compounds bearing antitumor activity as potential drugs for bioreductive therapy of cancer.”, 2002, Honorary Commission for the fight against cancer, CHLCC, Uruguay. (**PI**)

“Development of new insulin-mimetic vanadium complexes with tridentate semicarbazone ligands.”, 2002, CSIC, Uruguay. (**mentor**)

“R&D on bioreductive therapy of cancer: synthesis, characterization and evaluation of metal compounds.”, 2005-2006, Honorary Commission for the fight against cancer, CHLCC, Uruguay. (**PI**)

“New palladium metal-based drugs with bioactive thiosemicarbazones as ligands and their interaction with biomolecules”, 2005-2006, Prof. Clemente Estable Foundation (FCE), Uruguay. (**PI**)

“New copper and vanadium complexes as potential agents for the bioreductive therapy of cancer.”, 2005-2007, CSIC, Uruguay. (**PI**)

“Development of metal complexes with antitumor activity with semicarbazones and thiosemicarbazones as ligands.”, 2005-2006, CSIC, Uruguay. (**mentor**)

“Palladium complexes with potential activity against Chagas disease.”, 2005-2006, CSIC, Uruguay. (**CoI**)

“Metal complexes as potencial antichagasic agents.”, 2007-2009, CSIC, Uruguay. (**CoI**)

“Platinum complexes with ligands bioactive against *Trypanosoma cruzi*: synthesis, characterization, biological evaluation and interaction with DNA.”, 2007-2009, CSIC, Uruguay. (**mentor**)

“Rational design of ruthenium complexes with thiosemicarbazones bearing anti-*Trypanosoma cruzi* activity.”, 2009 – 2011, ANII, FCE 188, Uruguay. (**CoI**)

“Metal-bisphosphonates systems with antichagasic activity: inclusion of co-ligands to improve bioavailability.”, 2011-2013, ANII, Uruguay. (**CoI**)

Química Inorgánica, DEC
Facultad de Química, Universidad de la República
Uruguay

“Metal-bisphosphonates systems with antichagasic activity: strategies to modulate antichagasic activity.”, 2011-2013, CSIC, Uruguay. (**CoI**)

“1,3,5-Triaza-7-phosphoadamantane (PTA) as coligand in antichagasic metal complexes.” 2013-2015, ANII, Uruguay (**CoI**)

“New bioorganometallic ruthenium compounds.”, 2013-2015, CSIC, I+D. 800/2012. (**PI**)

“Heteroleptic metal-bisphosphonates-intercalators compounds as prospective antichagasic agents.”, 2015-2017, CSIC, I+D. 419/2014. (**CoI**)

“Metallomics, proteomics and transcriptomics of a new vanadium-based prospective drug.”, 2015-2017, FMV-ANII_1_2014_1_103957. (**CoI**)

Scientific publications in international peer-reviewed journals and books

About 90 peer-reviewed scientific international publications, six reviews, nine book chapters, three patent proceedings and nine national and regional publications on education of inorganic and bioinorganic chemistry (not mentioned).

* *correspondence author*

- 1) Solid phase reduction of $^{99m}\text{TcO}_4^-$ with Zn: A method for the preparation of difficult ^{99m}Tc complexes. C. Kremer, A. León, **D. Gambino**, S. Cartesio, C. Ures, E. Savio, E. Campos, E. Kremer. *Journal of Labelled Compounds and Radiopharmaceuticals* 27 (1989) 1331.
- 2) Using Tc-Re analogy to synthesize and identify new Tc-99m complexes. **D. Gambino**, C. Kremer, S. Cartesio, A. León, E. Kremer. *Journal of Radioanalytical and Nuclear Chemistry - Letters* 136 (1989) 341.
- 3) Electrolytic $^{99}\text{TcO}_4^-$ reduction at inert electrodes: an alternative synthetic route to Tc complexes. C. Kremer, **D. Gambino**, A. León, E. Kremer. *Journal of Radioanalytical and Nuclear Chemistry - Letters* 145 (1990) 123.
- 4) Synthesis and properties of dioxo Tc(V) cationic complexes with nitrogen containing ligands. **D. Gambino**, C. Kremer, E. Savio, A. León, E. Kremer. *Journal of Radioanalytical and Nuclear Chemistry- Letters* 146 (1990) 15.
- 5) Electrolytic $^{99m}\text{TcO}_4^-$ reduction: A different pathway to obtain Tc-99m labelled compounds. E. Savio, C. Kremer, **D. Gambino**, E. Kremer, A. León. *Applied Radiation and Isotopes* 42 (1991) 669.
- 6) Electrolytic formation of Technetium complexes with π acceptor ligands. F. Cerdá, C. Kremer, **D. Gambino**, E. Kremer. *Journal of Radioanalytical and Nuclear Chemistry- Letters* 186 (1994) 291.
- 7) Preparation of ^{99m}Tc -Thiourea complex as precursor for Tc(III) labelled compounds. A. Rey, M. Terán, C. Kremer, S. Molina, **D. Gambino**, E. Kremer, A. León. *Journal of Radioanalytical and Nuclear Chemistry - Letters* 214 (1996) 499.
- 8) Synthesis, characterization and spectroscopic properties of $[\text{Cu}^{\text{I}}(\text{alkylisocyanide})_4]\text{BF}_4$ complexes, X-ray crystal structures of $[\text{Cu}(\text{MIBI})_4]\text{BF}_4$ and $[\text{Cu}(\text{CPI})_4]\text{BF}_4$. B. Deicas, **D. Gambino**, C. Kremer, E. Kremer, A. Mombrú, L. Suescun, R. Mariezcurrena, O. González, A. Rey, L. Mallo, A. León. *Polyhedron* 16 (1997) 2397.
- 9) Synthesis, characterization and crystal structure of hexakis (thiourea-S) rhenium(III) trichloride: a potential precursor to low valent rhenium complexes. **D. Gambino***, L. Otero, E. Kremer, O. Piro, E. Castellano. *Polyhedron* 16 (1997) 2263.
- 10) New Re(III) complexes with alkylthioureas as precursors to other Re(III) compounds. Crystal structures of hexakis(N-ethylthiourea-S) rhenium(III) tri(hexafluorophosphate) and hexakis(N,N'-dimethylthiourea-S) rhenium(III) tri(hexafluorophosphate). **D. Gambino***, J.

Química Inorgánica, DEC
Facultad de Química, Universidad de la República
Uruguay

- Benítez, L. Otero, E. Kremer, E. J. Baran, O. Piro. *Polyhedron* 18 (1999) 2099.
- 11) Synthesis, characterization and crystal structure of $[\text{ReO}(\text{tmtu})_4](\text{PF}_6)_3$. **D. Gambino***, E. Kremer, E.J. Baran, A. Mombrú, L. Suescun, R. Mariezcurrena, M. Kieninger, O. N. Ventura. *Zeitschrift für Anorganische und Allgemeine Chemie* 625 (1999) 813.
 - 12) $[\text{Re}^{\text{III}}(\text{thiourea-S})\text{Cl}_3 \cdot 4\text{H}_2\text{O}$ and $\text{Re}^{\text{III}}(\text{N-methylthiourea-S})\text{Cl}_3$ as precursors to other Re(III) complexes: A kinetic study in aqueous media. Crystal structure of hexakis(N-methylthiourea-S) rhenium(III) tri(hexafluorophosphate) hydrate. **D. Gambino***, L. Otero, J. Benítez, E. Kremer, E.J. Baran, A. Mombrú, L. Suescun, R. Mariezcurrena. *Zeitschrift für Anorganische und Allgemeine Chemie* 625 (1999) 1866.
 - 13) Characterization of $[\text{Re}^{\text{VO}}(\text{tetramethylthiourea})_4](\text{PF}_6)_3$ in solution: electrochemical, NMR and ligand substitution studies. **D. Gambino***, B. Parajón-Costa, H. Cerecetto, M. González, E. Kremer, E.J. Baran. *Journal of Coordination Chemistry* 55 (2002) 1441.
 - 14) Infrared spectra of new Re(III) complexes with thiourea derivatives. **D. Gambino**, E. Kremer, E.J. Baran. *Spectrochimica Acta, A*, 58 (2002) 3085.
 - 15) Crystal structure of $\text{trans-}[\text{ReCl}_2(\text{dppp})_2]\text{Cl} \cdot \frac{1}{2}\text{H}_2\text{O}$ ($\text{dppp} = \text{Ph}_2\text{P}(\text{CH}_2)_3\text{PPh}_2$). O.E. Piro, **D. Gambino***, J. Benítez, E. Kremer, E. J. Baran. *Zeitschrift für Naturforschung* 57b (2002) 1189.
 - 16) Synthesis and characterization of new ruthenium complexes with active ligands against Chagas' disease. L. Otero, P. Noblía, **D. Gambino***, H. Cerecetto, M. González, R. Di Maio, J. Ellena, O.E. Piro. *Inorganica Chimica Acta* 344 (2003) 85. [Commented by the editor in Platinum Metals Review, Johnson Matthey, 47\(2\), abril 2003, 87.](#)
 - 17) New Re(V) nitrofuryl semicarbazone complexes. Crystal structure of $\text{ReOCl}_2(\text{PPh}_3)(3\text{-}(5\text{-Nitrofuryl)acroleine semicarbazone})$. L. Otero, P. Noblía, **D. Gambino***, H. Cerecetto, M. González, R. Sanchez-Delgado, E. E. Castellano, O.E. Piro. *Zeitschrift für Anorganische und Allgemeine Chemie* 629 (2003) 1033.
 - 18) New vanadium(V) complexes with salicylaldehyde semicarbazone derivatives: Synthesis, characterization and in vitro insulin mimetic activity. Crystal structure of $[\text{V}^{\text{VO}_2}(\text{salicylaldehyde semicarbazone})]$. P. Noblía, E. J. Baran, L. Otero, P. Draper, H. Cerecetto, M. González, O. E. Piro, E. E. Castellano, T. Inohara, Y. Adachi, H. Sakurai, **D. Gambino***. *European Journal of Inorganic Chemistry* 2 (2004) 322.
 - 19) Ruthenium (II) nitrofurylsemicarbazone complexes: New DNA binding agents. E. Cabrera, H. Cerecetto*, M. González, **D. Gambino***, P. Noblía, L. Otero, B. Parajón-Costa, A. Anzellotti, R. Sánchez-Delgado, A. Azqueta, A. López de Ceráin, A. Monge. *European Journal of Medicinal Chemistry* 39 (2004) 377.
 - 20) In vitro activity and mechanism of action against the protozoan parasite *Trypanosoma cruzi* of 5-nitrofuryl containing thiosemicarbazones. G. Aguirre, L. Boiani, H. Cerecetto, M. González, A. Denicola, L. Otero, **D. Gambino**, C. Rigol, C. Olea-Azar, M. Faundez. *Bioorganic Medicinal Chemistry* 12 (2004) 4885. [Most cited paper 2003-2006 award Bioorganic & Medicinal Chemistry](#)
 - 21) Vanadium(V) complexes with salicylaldehyde semicarbazone derivatives bearing in vitro anti-tumor activity toward kidney tumor cells (TK-10). Crystal structure of $[\text{V}^{\text{VO}_2}(5\text{-bromosalicylaldehyde semicarbazone})]$. P. Noblía, M. Vieites, B. Parajón-Costa, E.J. Baran, H. Cerecetto, P. Draper, M. González, O.E. Piro, E.E. Castellano, A. Azqueta, A. López, A. Monge-Vega, **D. Gambino***. *Journal of Inorganic Biochemistry* 99 (2005) 443.
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Facultad de Química, Universidad de la República
Uruguay

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Química Inorgánica, DEC
Facultad de Química, Universidad de la República
Uruguay

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 - 8) Química Médica y Salud, autores: Marisabel Saravay, Alberto Lahore, mentores: **Dinorah Gambino**, Hugo Cerecetto in: Aportes de la Química al mejoramiento de la calidad de vida, libro de UNESCO proyecto "Docentes aprendiendo en red (DAR)", 2012, pp. 133-161. ISBN: 978-92-9089-187-1.
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Seminars or lectures

More than 50 invited lectures or seminars held in national or regional courses, regional scientific meetings and workshops, iberoamerican workshops or foreign universities.

Presentations in international conferences

About 190 oral and poster presentations in major international conferences and regional meetings.

Participation in Networks

- 1) PEDECIBA (Program for the development of basic sciences/PNUD UNPD) since 1993.
- 2) RIIDDMED, Iberoamerican net-work for research, design and development of drugs, Subprogram X, Química Fina Farmacéutica, Red Temática XE, CYTED (Iberoamerican

Química Inorgánica, DEC
Facultad de Química, Universidad de la República
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program for the development of science and technology) (2000-2003).

- 3) AMSUD / Pasteur Institute Net-work (Uruguay - Mercosur) since 2002: Research and development of chemotherapeutic agents.
- 4) RIDIMEDCHAG, Iberoamerican net-work for research, development and innovation in drugs for Chagas disease, CYTED (2007-2010).
- 5) RIIDFCM, Iberoamerican net-work for research and development of metal-based drugs. CYTED (2009-2012).

Member of editorial boards

Journal of Nanomedicine & Biotherapeutic Discovery (since 2012)

SM Tropical Medicine Journal (since 2016)

Teaching

Teaching to undergraduate students on Radiochemistry (1985-1991) and Inorganic, General and Bioinorganic Chemistry (since 1979).

Several postgraduate courses on: Rhenium and technetium chemistry, Inorganic Chemistry, Metal compounds in Medicinal Chemistry, Metals in biological systems, Bioinorganic Chemistry, Metal complexes as antitumor or anti-parasitic agents, Cancer diagnosis: new strategies, Metals in Medicine, Inorganic Medicinal Chemistry.

Postgraduate courses abroad:

Organization and partial teaching of CYTED regional postgraduate courses: Inorganic drugs and their mechanism of action (Montevideo, Uruguay 2009); Relevant techniques in the development of metal-based drugs (Florianópolis, Brazil 2010); Development of metal-based drugs: techniques for biological evaluation (México, México 2011); Inorganic chemistry in the development of drugs (Asunción, Paraguay 2012).

Erasmus Mundus, module "Development of metal compounds for inorganic medicinal chemistry purposes" for the Joint European Master in Quality in Analytical Laboratories (EMQAL), Algarve University, Portugal (2009) and Gdansk University, Poland (2010).

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Metales en medicina y sistemas biológicos: técnicas, usos y aplicaciones terapéuticas en cancer, diabetes y enfermedades parasitarias, La Plata, Argentina (2016).

Current scientific collaborations (abroad)

Enrique J. Baran and Susana Etcheverry, Centro de Química Inorgánica, Facultad de Ciencias Exactas, Universidad Nacional de La Plata, Argentina.

Hernán Terenzi, Departamento de Bioquímica, Universidad Federal de Santa Catarina, Florianópolis, Brazil.

Fernando Pavan, Faculdade de Ciências Farmacêuticas, Unesp, Araquara (SP), Brazil.



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Joao Costa Pessoa, Ma. Helena García, Isabel Correia, Isabel Tomaz, Fernanda Marques, Bioinorganic Chemistry and Drug Development Group (BIOIN), Centro de Química Estrutural, Instituto Superior Técnico, Universidade de Lisboa, Portugal.

Roberto Docampo, Center for Tropical and Emerging Global Diseases and Department of Cellular Biology, University of Georgia, Athens, USA

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