



## ***CURRICULUM VITAE Francisco J. Barrantes***

### **Personal data**

*Name:* Francisco José BARRANTES  
*Place of Birth:* Buenos Aires, Argentina  
*Marital Status:* Married, 3 offspring, 6 grandchildren

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### *Present Positions:*

- Director, Laboratory of Molecular Neurobiology, Institute of Biomedical Research, Faculty of Medicine, Pontif. Cath. University of Argentina-CONICET (*National Scientific and Technical Research Council of Argentina*).
- "*Investigador Superior*" Highest rank research category in the National Scientific and Technical Research Council (CONICET) of Argentina (1994-to date).
- ORCID <https://orcid.org/0000-0002-4745-681X>
- Web of Science ResearcherID: HCH-0258-2022.

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*Current Address:* Institute of Biomedical Research (BIOMED) UCA – CONICET  
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### *Academic Degrees:*

M.D., Faculty of Medicine, Univ. of Buenos Aires, Argentina (12-1968).  
Ph. D., University of Buenos Aires, Argentina (03-1973).

### **Research Posts held:**

2011 to date. Director, Laboratory of Molecular Neurobiology, Institute of Biomedical Research, Faculty of Medicine, Pontif. Cath. University of Argentina-CONICET (National Scientific and Technical Research Council of Argentina).

2015-2017. Science Without Borders Visiting Senior Scientist, Federative Republic of Brazil, at the Institute of Biophysics Carlos Chagas Filho, Federal Univ. of Rio de Janeiro, Brazil.

2014- Visiting Adjunct Professor, Tata Institute of Fundamental Research, Mumbai, India.

2007-2009/2009-2011. Director of CONICET-Bahia Blanca (*National Scientific and Technological Research Council of Argentina, Centro Científico Tecnológico CONICET-Bahía Blanca: Institutes of Chemical Engineering, Mathematics, Physics, Electrical Engineering, Chemistry, Oceanography, Biochemistry, Agronomy, Geology and Economy and Regional Development*), Argentina (2007-2009) (and second term, 2009-2011).

1983-2011. Director of Institute of Biochemical Research (INIBIBB), Bahía Blanca, Arg. Natl. Research Council (CONICET), Argentina.

2009-2013. Visiting scientist. National Center for Biological Sciences (NCBS), Tata Institute for Fundamental Research, Bangalore, India.

1993-1994. Visiting Professor, Biochemistry Dept. Oxford University, England.

1994-to date. Highest rank research category in the National Scientific Research Council (CONICET) of Argentina.

1993. Visiting professor, Dept. of Biochemistry and Molecular Biology, Univ. of Extremadura, Spain.

1992-1994. Visiting Professor, Biochemistry Dept., Univ. Bath, England.

1991 Royal Society (London) Guest Research Fellow at the Medical Research Council, Laboratory of Molecular Biology, Cambridge, U.K. Trinity College, University of Cambridge.

1990-1991. Human Frontier Research Fellow. Medical Research Council, Laboratory of Molecular Biology, Cambridge, U.K. Trinity College, University of Cambridge.

1987 Visiting professor. Dept. Neurobiology, Weizmann Institute of Science, Rehovot, Israel.

1986-1987 Visiting professor. Dept. Neurobiology and Behavior, State University of New York at Stony Brook, N.Y., U.S.A.

1986 Fellow. The Neurosciences Institute, Rockefeller University, New York, U.S.A.

1983-1994. Principal Career Investigator, National Scientific Research Council (CONICET) of Argentina

1978-1983. Joint Head of the Membrane Biophysics Group (Gruppe 14, Barrantes-Neher-Sakmann) together with Drs. Erwin Neher and Bert Sakmann at the Max-Planck-Institute for Biophysical Chemistry, Göttingen, Germany.

1974-1977. Member of Research Staff. Department of Molecular Biology, Max-Planck Institute for Biophysical Chemistry, Göttingen, Germany. (Dr. T. Jovin).

1973-1974. Research Associate, Inst. Cell Biology, Fac. Medicine, Univ. of Buenos Aires.

1972-1973. Research Associate. Department of Biochemistry, School of Chemical Sciences, Univ. of Illinois. Urbana-Champaign (Prof. G. Weber).

1969-1971. Research Fellow, Argentine Scientific Research Council, Inst. Cell Biology, Faculty of Medicine, Univ. Buenos Aires (Prof. E. De Robertis).

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### **Other appointments and positions held**

2018- Elected President of the Alumni Association of the Alexander von Humboldt Foundation in Argentina.

2017- Appointed member of the Editorial Board, Alzheimer's and Parkinson's Diseases.

2017- Appointed member of the selection committee for the Weber Thesis Award 2017.

2016- Appointed member of the Editorial Board, *OBM Neurobiology*.

2016- Appointed Associate Editor, *Frontiers in Cell and Developmental Biology*.

2016- Appointed Associate Editor, *Frontiers in Physics*, *Frontiers in Molecular Biosciences*.

2014- Appointed Associate Editor, *Frontiers in Synaptic Neurosciences*.

2014- Appointed member of Editorial Board, *Journal of Advanced Neuroscience Research*.

2014- Appointed member of Editorial Board, *World Journal of Neuroscience*.

2012- Appointed member, Scientific Exchange Programme of the German-Argentinian Center for University Exchange, having acted as reviewer of proposals since.

2010- Appointed member of the Research Council, Pontifical Catholic University of Argentina.

2011- Appointed Senior Editor, *Internat. J. Biochemistry & Molec. Biology*.

2010- Appointed Associate Editor of *Frontiers in Membrane Physiology and Biophysics*, a specialty section of *Frontiers in Physics*.

2009-2012. One of the two members of the Scientific Advisory Board of the FP7 European Project NeuroCypres on Cys-loop Receptors.

2008- Associate Editor, *Biochemica et Biophysica Acta (BBA)*, *Biomembranes*.

2008- Member of Advanced School Committee, ISN.

2008-2012 Member of the editorial board, *Biophysical Reviews*.

2006-2008. Appointed Member of Council, International Union for Pure and Applied Biophysics (IUPAB).

2006-2007. Chairman, Biochemistry Reviewing Committee, Arg. Scientific Research Council (CONICET).

2007- Member of the Editorial board, *The Open Structural Biology Journal*.

2006-to-date. Appointed member of the Basic Science Subcommittee, International League Against Epilepsy (ILAE).

2006. Co-chairman, Biochemistry Reviewing Committee, Arg. Scientific Research Council (CONICET).

2004- Appointed member of the editorial board of the *Braz. Journal of Medical and Biological Research*.

2003-to date. Reviewer for *Am. J. Physiology*, *Biochemistry*, *BBA*, *Biophys. J.*, *Chem. Phys. Lipids*, *Eur. Biophys. J.*, *Eur. J. Pharmacol.*, *Mol. Brain Res.*, *Nature Biotechnology*, *J. Neuroscience*, *Brit. J. Pharmacol.*, *Biophys. J.*,

2003-to date. Member of the External Reviewing Board of FONDAP, Catholic University of Chile.

2002- Appointed Member of the Biology Committee of the Latin American Network for Biological Sciences (RELAB). UNESCO.

1997-1998. Editor, ISN News, International Society for Neurochemistry.

1994 Member of the Special Evaluation Commission, Secretariat of Science and Technology, Universidad Nacional del Sur.

1993 Appointed Member of the Banco de Evaluadores de Actividades Científicas and Tecnológicas and de Posgrado del Consejo Interuniversitario Nacional.

1991-1998. Member of the editorial board, *Comments on Molecular and Cellular Biophysics*.

1991-1993. Member of the Scientific Advisory Committee of the Argentinian-Brazilian Center for Biotechnology (CABBIO).

1988 External reviewer, Instituto Nacional de Tecnología Industrial (INTI).

1986-1989. Member of the Chemistry Reviewing Committee, Arg. Scientific Research Council (CONICET).

- 1988-1990. Member of the Council of the Sociedad de Biofísica Latinoamericana (Latin American Biophysical Society, SoBLA).
- 1988-1990. Member of the Special Commission on Cell and Membrane Transport of the International Union for Pure and Applied Biophysics (IUPAB).  
Elected member of the Executive Committee of the above commission
- 1988-1990. Member of the editorial board, *Neurochemistry International*.  
Member of the Biology Committee of the Latin American Network for Biological Sciences (RELAB). UNESCO.
- 1987-1989. Elected Secretary of the Argentine Neurochemical Society.
- 1988-to date Reviewer. Scientific Research Council (CONICIT), Chile.
- 1987(Oct) Consultant of the Biotechnology Program of the Argentine Secretariat of State for Science and Technology (SECYT) in the Federal Republic of Germany.
- 1979-1988. External reviewer of the National Science Foundation (NSF), U.S.A.
- 1984-1987. Member (nominated) of the Special Commission on Cell and Membrane Biophysics of the International Union of Pure and Applied Biophysics (IUPAB).

### **Membership/activities in Scientific Academies**


2022. Elected Corresponding National Member, Academy of Medical Sciences in Cordoba, Argentina.
2018. Elected Full Member, National Academy of Medicine, Buenos Aires, Argentina. Seat No. 30 (J.A. Domínguez), formerly occupied by his supervisor, Prof. E. De Robertis.
2015. Elected member of the 2016-2018 Council Nominating Committee, TWAS.
- 2013-2015. Elected Vicepresident, World Academy of Sciences (TWAS) (2<sup>nd</sup>. Term).
2011. Elected Corresponding Member, Natl. Academy of Sciences, Argentina.
- 2010-2012. Appointed member, TWAS Programmes, Policy and Planning Committee.
- 2010-2012. Elected Vicepresident, World Academy of Sciences (TWAS).
- 2009-2012. Re-elected Member, Executive Council, Latin American Regional Office of the TWAS, Rio de Janeiro, Brazil.
- 2007-2009. Appointed Chairman, TWAS Prize Committee in the field of Biology.
- 2006-2012. Elected by direct vote member of the Council, Latin American Academy of Science (Academia de Ciencias de América Latina, ACAL).
2005. Elected Member of the Board of Directors (Council), International Society for Neurochemistry (ISN) (2006-2009 period).
2005. Elected Foreign Fellow, Indian National Science Academy (INSA).
1998. Elected Corresponding Member, Brazilian Academy of Sciences (ABC).
1996. Designated one of the five members of the Nominations Committee for the election of the Council of the Academy of Sciences for the Developing World for the 1997-1999 period.
- 1995-1998. Elected Member of the Membership Committee in Biology of the Academy of Sciences for the Developing World (TWAS).
2004. Appointed Member, Executive Council, Latin American Regional Office of TWAS, Rio de Janeiro, Brazil.
2004. Appointed Full Member, European Academy of Sciences and Arts.
1999. Elected Corresponding Member, National Academy of Medicine, Buenos Aires, Argentina.



1994. Elected Full Member, Latin American Academy of Sciences (ACAL).  
 1993. Elected Fellow, The World Academy of Sciences, Trieste, Italy.  
 1991. Elected Corresponding Fellow, The World Academy of Sciences, Trieste, Italy.

### **Awards and Honours**

- 2021 “Master of Medicine” Award. The Argentine Medical Press.  
 2021 Gregorio Weber Award for Excellence in Fluorescence Theory and Applications, Biophysical Society, USA.  
 2017. Argentine Biochemical Association Prize 2017. Together with Drs. Mariela L. Paz, Paula N. Manuelli, Florencia Aguirre, Andres Villa and Juliana Leoni for the work “Cell-free fluorescent microbead-based autoantibody diagnostic test for myasthenia gravis”. Argentina.  
 2017. Award together with Drs. Pablo. G. Sanz and Lina Grasso: “Strategies to improve quality of life for the elderly with Alzheimer’s Disease through transdisciplinary assistance and translational research” within the framework of the call “Developing ideas and talents”, Universidad Católica Argentina.  
 2016. Bernardo Houssay Award from the Center for the Study & Development of the Chemical-Pharmaceutical Industry in Argentina (CEDIQUIFA).  
 2015. “Science without Frontiers” award from the Ministry of Education (MEC) and the Ministry of Science and Technology (MCT) of Brazil, through their respective funding agencies - CAPES and CNPq.  
 2013. The World Academy of Sciences (TWAS) Medal.  
 2011. Elected Member. National Academy of Sciences of Argentina.  
 2009. Awarded the 2009 Senior Consacration Prize of the National Academy of Exact, Physical and Natural Sciences of Argentina.  
 2008. Awarded the Miguel Lillo Medal. Society for Biology, Tucuman, Argentina.  
 2006. Awarded the Prémio União Latina, Lisbon, Portugal, together with Prof. Dr. M. Prieto.  
 2006. Elected member of Council of the International Union of Pure and Applied Biophysics (IUPAB). (2006-2008).  
 2006. Chancellor’s Award in the Neurosciences, Univ. Louisiana, U.S.A.  
 2005. Fulbright Scholar, Harvard Medical School, Boston, MA, USA.  
 2004. Awarded the Eduardo De Robertis Medal and delivered the 2004 De Robertis Lecture of the Argentine Society for Neurosciences.  
 2003. Awarded one of the five 2003 Konex Foundation awards in Science and Technology, in the discipline Molecular Biology and Cytology, Argentina (“one of the five most relevant Argentine scientists in Neurobiology in the decade; awarded every 10 years).  
 2002. Awarded the Sarojini Damodaran International Trust Award, India.  
 1999. Elected President, Argentine Society for Neurochemistry (SAN). (1999-2001).  
 1997-1999. Designated Chairman of the Committee for Aid in Neurochemistry, International Society for Neurochemistry (ISN).  
 1997-1999. Elected Vicepresident, Argentine Society for Neurochemistry (SAN). (1997-1999).  
 1998. Awarded the Alexander von Humboldt Research Prize (AvH Forschungspreis). Germany.  
 1995-1997. Elected member of the Committee for Molecular and Cellular Neurosciences, International Union of Physiological Sciences (IUPS).

- 1995-1997. Elected chairman of the Committee for Aid in Neurochemistry, International Society for Neurochemistry (ISN).
- 1994-1996. Elected member of the Special Commission on Cell and Membrane Biophysics (IUPAB, International Union of pure and Applied Biophysics).
- 1993-1996. Elected member of the Board of Directors (Council), International Society for Neurochemistry (ISN).
1993. Elected member of the Argentine Association for the Advancement of Sciences.
1993. Elected member of the Committee for Aid in Neurochemistry of the International Society for Neurochemistry (ISN).
1992. Guest Research Fellow, Royal Society, London, U.K. At the Laboratory for Molecular Biology (LMB), Medical Research Council (MRC), Cambridge, UK 
1991. Human Frontier Science Program Fellowship at the At the Laboratory for Molecular Biology (LMB), Medical Research Council (MRC), Cambridge, UK.
- 1990-1991. Awarded Fellowship of the John Simon Guggenheim Memorial Foundation, New York.
1989. The World Academy of Sciences (TWAS) 1988 Award in Biology.
1987. "Bernardo Houssay Award" from the Argentinian Scientific Research Council (CONICET) for work on neurotransmitter receptors.
1986. Fellow, The Neurosciences Institute, New York, U.S.A.
1971. Daniel Goytía Award of the Argentinian Association for the Advancement of Science for the work on "Structure and Function of Biomembranes". Award presented by Nobel Awardee in Chemistry, Prof. Luis F. Leloir.
1970. Wellcome Trust Fellowship, U.K., to conduct short training period with Prof. B. Finean, Univ. Birmingham, England.

### Teaching Posts held

- 1962-1968 Teaching Assistant. Chair of Histology and Cytology (Prof. E. De Robertis), Faculty of Medicine, Univ. of Buenos Aires, Argentina.
- 1968-1971 Assistant Lecturer. Same address as above.
- 1971-1974 Reader in Cytology and Histology. Same address as above. Fulfillment of the requirements for admission to the professorship level at the University of Buenos Aires.
- 1972-1974 Lecturer in graduate courses on Membrane Biophysics. Faculty of Sciences, Univ. of Buenos Aires, Argentina.
- 1983-2009. Full Professor (*Ordinarius*), Biological Chemistry, Department of Biochemistry, Biology, and Pharmacy, Universidad Nacional del Sur, Argentina.
- 1984-1987 Member of the Council, Graduate School. Universidad Nacional del Sur, Bahía Blanca, Argentina.
- 1984 (Nov.) Professor at the postgraduate course on "Ionic Channels", Center of Scientific Studies of Santiago (CECS), Santiago, Chile.
- 1985 Professor at the postgraduate course on "Physical properties of biological membranes" organized by the Center of Scientific Studies of Santiago, Chile and sponsored by the PNUD-UNESCO, September 23-October 31.
- 1986-1987. Member of Council. Department of Biology. Universidad Nacional del Sur.

- 1987 August-September. Visiting Professor. Department of Neurobiology, Weizmann Institute of Science, Rehovot, Israel.
- 1991 Professor at the postgraduate course on “Molecular approaches to the study and function of ionic channels”, Santiago, Chile. 20 November-6 December.
- 1993 (Apr.) Professor at the postgraduate course on Molecular Neurobiology, Dept. of Biochemistry & Molecular Biology, University of Extremadura, Spain.
- 1993-to date Visiting Professor, Department of Biochemistry, University of Bath, U.K.
- 1994 Professor in charge of postgraduate course on “Expression and functional evaluation of membrane proteins in cellular heterologous systems”, Argentinian-Brazilian School of Biotechnology (CABBIO), Bahía Blanca, Argentina, 4-19 October.
- 1995 Professor in charge of the postgraduate course “Introduction to the study of synaptic transmission”, Depart. de Bioquímica e Inmunología - ICB - UFMG, Belo Horizonte, Brazil (08/95).
- 1995 Professor in charge of the postgraduate course “Introduction to Molecular Neurobiology and Membrane Biophysics”, Dept. of Biochemistry, Biology and Pharmacy, Universidad Nacional del Sur, Bahía Blanca, Argentina, September 5-November 30.
- 1996 Professor in charge of the postgraduate course “Neuropharmacology: Molecular Aspects of Synaptic Transmission in the Nervous System” together with Prof. M.F. Pediconi, Dept. of Biochemistry, Universidad Nacional del Sur, Bahía Blanca, Argentina (April-July).
- 1997 Professor, postgraduate course "Cell Biology", National Centre for Biological Sciences, TIFR Centre, IISC Campus, Bangalore, India (January).
- 1997 Professor in charge of the postgraduate course “Molecular biology. Methods for the study of protein-protein interactions” together with Dr. R. Rivera, Max-Planck Institut für biophysikalische Chemie, Göttingen. Dept. of Biochemistry, Biology and Pharmacy, Universidad Nacional del Sur, Bahía Blanca, Argentina (11/97).
- 1998 Professor, postgraduate course "Fluorescence spectroscopy applications in biology", National Centre for Biological Sciences, TIFR Centre, IISC Campus, Bangalore, India (January).
- 1998-2009. Professor and Chairholder, UNESCO Chair of Biophysics and Molecular Neurobiology, Universidad Nacional del Sur, Argentina.
- 1999 UNESCO BAC-Professor in Biotechnology. National Center for Biological Sciences, Bangalore, India (1/99).
- 1999 Professor in charge of postgraduate course "Topics in Biophysics of Membranes", at the UNESCO Chair of Biophysics and Molecular Neurobiology, Universidad Nacional del Sur, Bahía Blanca (April-November).
- 2000 Professor in charge of the ICRO/IBRO/TWAS postgraduate course “Novel spectroscopic and physiological approaches to Neurobiology”, UNESCO Chair of Biophysics and Molecular Neurobiology, Universidad Nacional del Sur, Bahía Blanca, Argentina (May 22-31).
- 2001 Professor in charge of the postgraduate course “Spectroscopic and physiological advances in Neurobiology”, UNESCO Chair of Biophysics and Molecular Neurobiology, Universidad Nacional del Sur, Bahía Blanca, Argentina (April-August).

- 2002 Professor in charge of the postgraduate course “Spectroscopic and physiological advances in Neurobiology”, UNESCO Chair of Biophysics and Molecular Neurobiology, Universidad Nacional del Sur, Bahía Blanca, Argentina (April-June).
- 2003 Professor in charge of the postgraduate course “Spectroscopic and physiological advances in Neurobiology”, UNESCO Chair of Biophysics and Molecular Neurobiology, Universidad Nacional del Sur, Bahía Blanca, Argentina (May-July).
- 2004 Professor in charge of the postgraduate course “Biochemistry and Biophysics of Lipid-Protein Interactions in Biomembranes”, UNESCO Chair of Biophysics and Molecular Neurobiology, Universidad Nacional del Sur, Bahía Blanca, Argentina (June-September).
- 2005 Professor in charge of the postgraduate course “Biochemistry and Biophysics of Lipid-Protein Interactions in Biomembranes”, UNESCO Chair of Biophysics and Molecular Neurobiology, Universidad Nacional del Sur, Bahía Blanca, Argentina (June-October).
- 2005 Organizer of the First Encounter of Young Scientists of the Academy of Sciences for the Developing World (TWAS). This activity took place in Angra dos Reis, Brazil, during the TWAS 10th General Meeting. The success of the meeting of young scientists from Latin American countries was subsequently adopted by other Regional Offices of TWAS in other regions of the world.
- 2006 Organizer and professor at the International Brain Research Organization (IBRO) International Course “*From Molecules to Networks and Behavior*” (IBRO International Workshop), Mahabaleshwar, India, January 8-15.
- 2005-2007. Adjunct Faculty, Visiting Professor, Tata Institute for Fundamental Research, National Center for Biological Sciences (NCBS) and Department of Biological Sciences (DBS), Bangalore, India.
- 2010-2012. Visiting Professor, Tata Inst. of Fundamental Research, NCBS, Bangalore, India.
2013. Organizer and Professor. International School of the ISN “Synapses and dendritic spines in health and disease”, Buenos Aires, Argentina, and Montevideo, Uruguay, September 1-15.
2013. Professor at Workshop and Course on “Advances of Super-resolution optical microscopy”, November 18-22, CIBION, Buenos Aires, Argentina.
2014. Organizer and Professor. Advanced international School «Experimental approaches to brain diseases - 3rd ISN Latin American School of Advanced Neurochemistry», Montevideo, Uruguay, Nov 24 - Dec 4. USD 40.000.
2014. Member of the International Advisory Board. 6<sup>th</sup>. Special Conference of the International Society for Neurochemistry: “*Dynamic change of nanostructures in the brain in Health and Disease. Cutting Edge of the Technical Innovation*”. Tokyo, Japan. Sept. 20-22, 2014.
2016. Professor at Advanced Course on “Correlative light-electron microscopy (CLEM): Theoretical principles and biological applications. Mendoza Argentina, 14-19 March.
2016. Professor at Practical Workshop on Advanced Microscopy, 3<sup>rd</sup>. MIC@ITT Nanoscopy 2.0 at Istituto Italiano di Tecnologia, Genoa, Italy, December 13-16.
2017. Teaching staff. Bangalore Microscopy Course 2017. Bangaluru, India, September 17-24.
2018. Organizer and profesor of “From the Fundamentals of Optics to Advanced microscopy Techniques” Theory and hands-on course, Buenos Aires, October 15-19.



**Other teaching and organizational responsibilities:**

1970. Coordination of the 5th edition of "Cell Biology" (De Robertis, Nowinski and Saenz).
1986. Organizer, together with Dr. P. R. Adams, of the International Symposium on "Acetylcholine Receptors". The Neuroscience Institute, Rockefeller University, New York, U.S.A., December 4-8.
1988. Member of the Organizing Scientific Committee of the 16<sup>th</sup> Congress of the Latin American Societies of Physiological Sciences, Buenos Aires, Argentina, May 16-20.
1988. Organizer of the Minicourse and International Workshop on "Acetylcholine receptors and related membrane proteins: current strategies and future developments". Bahía Blanca and San Martín de los Andes, Argentina, Aug. 30-Sep. 8.
1991. Organizer of the International Workshop on "Structure and Engineering of Proteins (With Special Emphasis on Membrane and Channel-Forming Proteins)", Bahía Blanca, Argentina, November 10-17.
1993. Co-organizer of the Mini-course on "Frontiers in Neurosciences". Sponsored by ICRO-UNESCO and South American Brain Research Organization (SABRO/IBRO-UNESCO). Buenos Aires, Córdoba and Bahía Blanca, Argentina. March 31-April 7.
1994. Organizer of the International Workshop and Postgraduate Course on "Expression in heterologous cell systems and evaluation of functional properties of channel-forming proteins" (Argentine-Brazilian Centre for Biotechnology, CABBIO, SABRO/IBRO-UNESCO), Bahía Blanca, Argentina, October 4-19.
1995. Appointed member of the Programme Committee of the XI Congress of the International Society for Neurochemistry (ISN), Boston, U.S.A., held in 1996.
1999. Appointed member of the Programme Committee of the XI Congress of the International Society for Neurochemistry (ISN), Buenos Aires, Argentina, held in 2001.
1999. Appointed member of the Programme Committee of the Latin American Congress of Physiology, Cancun, Mexico, held in September 2000.
2006. Organizer of the International Brain Research Organization (IBRO) International Course "*From Molecules to Networks and Behavior*" (IBRO International Workshop), Mahabaleshwar, India, January 8-15.
2006. Member, Program Committee of 2<sup>nd</sup> Special Conference of the International Society for Neurochemistry (ISN) "*Neural Glycoproteins and Glycolipids*", held in Antigua, West Indies, December 1-5.
2008. Member, International Program Committee of the International Symposium on Cholinergic Mechanisms ("*Neuronal and Non-Neuronal Cholinergic Systems: Molecular and Translational Significance*"), held in Foz do Iguazu, Brazil, Aug. 16-20.
2009. Professor at ISN Advanced School on "Cellular communication in the nervous system" held on August 19-23, 2009, in Gyeongju, organized by Profs. E. Gundelfiger and Eujung Kim.
2009. Organizer, together with Dr. Teresa Manera, of the International Workshop "*Bridging the gap. Darwin: from Molecule to Cultural Implications*". Held at CONICET Bahía Blanca, October 10-12.

2012. Organizer of the International School of the ISN “Synapses and dendritic spines in health and disease”, Buenos Aires, Argentina, and Montevideo, Uruguay, September 1-15.
2012. Organizer of the 5th. Special Conference of the International Society for Neurochemistry, “Synapses and Dendritic Spines in Health and Disease”, Buenos Aires, Argentina, 12-15 September 2012.

### **Supervision of research activities**

- 1972-1973 M.C.L. de Carlin. Biochemistry of lipoproteins. Inst. Cell Biology, Univ. Buenos Aires.
- 1972-1973 J. Saraceno, Fellow, Arg. Pharmacological Society. Cholinergic receptors. Supervisor of research.
- 1976-1976 W. Folkhard (Inst. Physical Chem., Univ. Graz, Austria) Acetylcholine receptor. EMBO Fellowship at the Max-Planck Inst. Biophysical Chemistry, Göttingen.
- 1975-1977 Robert Bonner (John Hopkins University) Acetylcholine receptor kinetics. Max-Planck-Society Fellowship at the Max-Planck Inst. Biophysical Chemistry, Göttingen. Currently: Head of Section, NIH, Bethesda, MD, USA.
- 1977-1981 Yusuf Tan (Middle East Technical Univ. Turkey), Ford Foundation. Acetylcholine receptor. Thesis supervisor at the Max-Planck Inst. Biophysical Chemistry, Göttingen. Currently Professor of Biochemistry, Univ. Ankara and Visiting Scientist, CNRS, France.
- 1979-1981 Bernat Soria-Escoms (Dep. of Physiology, Alicante). Cholinergic electrophysiology. Fellow, March Foundation, Spain, at the Max-Planck Inst. Biophysical Chemistry, Göttingen. Currently Prof. of Physiology, Univ. Alicante, Elche, and formerly Director of Institute.
- 1980-1981 Benjamín Suárez-Isla. Cholinergic electrophysiology and pharmacology. Fellow, Max-Planck-Society at the Max-Planck Inst. Biophysical Chemistry, Göttingen. Currently Professor of Physiology and formerly Dean, Dept. of Physiology, Fac. Medicine, Univ. Santiago, Chile.
- 1980-1983 Manuel Criado. Acetylcholine receptor biochemistry. Fellow of the Alexander von Humboldt Foundation and the Max-Planck Society at the Max-Planck Inst. Biophysical Chemistry, Göttingen. Currently Professor, Institute of Neurobiology, Alicante.
- 1981-1982 Fred Hagen (Univ. California, Davis). Local anesthetics, cholinergic receptors. Fellow of the DAAD, W. Germany, at the Max-Planck Inst. Biophysical Chemistry, Göttingen.
- 1981-1982 P. Regenfuss (Univ. Erlanger). Fast kinetics, receptor-ligand interactions. Max-Planck-Society Fellow, at the Max-Planck Inst. Biophysical Chemistry, Göttingen.
- 1983-1987 Alejandra Braceras de Ocaranza. Acetylcholine receptor research. Fellow Natl. Sci. Res. Council Argentina (CONICET). At the Inst. Invest. Bioquímicas (INIBIBB).
- 1983-1987 Nora P. Rotstein. Lipid-protein interactions. Fellow Natl. Sci. Res. Council Argentina. At the Inst. Invest. Bioquímicas. Thesis co-supervision with Prof. M. Aveldaño. Currently Career Investigator, CONICET, Argentina.
- 1984-1986 Susana A. Morelli de Liberti. Lipid metabolism and neurotransmission in the CNS. Fellow CONICET. Currently teaching assistant, Dept. Biochem. Univ. Sur.

- 1986-1990 Gabriela Amodeo. Fellow of the Sci. Res. Commission Province of Buenos Aires. Patch-clamp studies on *Zea mays*. Co-director of fellowship together with Dr. N. Curvetto. Currently Research Assistant, Physiology, Fac. Medicine, Univ. Buenos Aires.
- 1987-1989 Edgardo Buzzi. Study of muscarinic acetylcholine receptors. Fellow of the Univ. Nac. del Sur. Currently teaching assistant, Dept. Biology, Univ. Nac. Sur.
- 1991-1992 Silvia S. Antollini. Student Fellowship. Undertook research studies under my supervision on the acetylcholine receptor at the Instituto de Invest. Bioquímicas de Bahía Blanca.
- 1991-1992. Sergio A. Kaiser. Student Fellowship Univ. Nac. Sur. Undertook research studies under my supervision on the acetylcholine receptor.
1991. K. MacDonald. Fellow of the Thomas J. Watson Foundation, USA. Undertook research project under my supervision on "The Degenerative Neurological Disorders" at the Inst. Invest. Bioquímicas.
- 1992-1993 Jan Werkman. Fellow of the University of Waegeningen, Holland. Undertook research studies under my supervision on the acetylcholine receptor at the Instituto de Invest. Bioquímicas de Bahía Blanca.
- 1994-1996 Sergio A. Kaiser. Fellow Arg. Res. Council. Undertook research studies under my supervision on the acetylcholine receptor at the Instituto de Invest. Bioquímicas de Bahía Blanca. Continued at School of Biol. Sciences, Univ. Bath to obtain Ph.D. Univ. California at Davis. Merc Co.
- 1993-1995 Iliana C. Sawkó. Fellow of the Comisión de Investigaciones Científicas de la Provincia de Buenos Aires, at the Instituto de Investigaciones Bioquímicas de Bahía Blanca. Currently staff, Boehringer Ingelheim. Buenos Aires branch.
- 1996-2005. Ingrid Garbus. Fellow of the Universidad Nac. del Sur and CONICET at the Inst. Invest. Bioquímicas. Currently member CONICET, CERZOS.
- 1997-2000 Ramiro Massol. Fellow of the Universidad Nac. del Sur at the Inst. Invest. Bioquímicas. Currently Assistant Professor, Dept. Pediatrics, Harvard Medical School, U.S.A.
- 1999-2005. María B. Rauschemberger. Molecular genetics of epilepsies associated with the acetylcholine receptor. Fellowship of Comisión de Investigaciones Científicas de la Provincia de Buenos Aires. At the Instituto de Invest. Bioquímicas de Bahía Blanca.
- 1999 Dr. Saleena Mathew, Cochin Univ. of Science and Technology, India. Effect of phospholipids on cell membrane alterations caused by peroxides. At the Instituto de Invest. Bioquímicas de Bahía Blanca, within the framework of the CONICET-TWAS agreement.
- 2000-2001. Javier Baier. Studies on the nicotinic acetylcholine receptor. Fellowship of the Comisión de Investigaciones Científicas de la Provincia de Buenos Aires (CIC). Currently postdoctoral fellow, Univ. Buenos Aires.
- 2000-2001. Cristina Gallegos. Effect of lipid modifications on the properties of the acetylcholine receptor. Fellowship for advanced students of the Secretariat of Science & Technology. Currently postdoctoral fellow, Atomic Energy Comiss., Buenos Aires.
- 2000-2001. Ariel Suárez. Lipid environment of the acetylcholine receptor. Fellowship for advanced students of the Dept. of Biology, Biochemistry and Pharmacy, Universidad Nacional del Sur.

- 2000-2001. María Eugenia Mormina. Studies of  $\alpha 7$  acetylcholine receptor and its possible involvement in inherited epilepsies. Fellowship "Ramón Carrillo-Arturo Oñativia" Ministry of Health, Argentina.
- 2001-2004. Dr. Jorge Wenz. Studies of acetylcholine receptor in native membranes and cell systems. Postdoctoral fellowship of the Natl. Agency for the Promotion of Science & Technology.
- 2002-2007. Javier Baier. Studies on the nicotinic acetylcholine receptor. Fellowship of the Natl. Sci. Res. Council Argentina. At the Inst. Invest. Bioquímicas.
- 2002-2007. Cristina Gallegos. Cholesterol effects on the nicotinic receptor. Fellowship of the Natl. Sci. Res. Council Argentina. At the Inst. Invest. Bioquímicas.
- 2002-2003. Virginia Borroni. Studies of  $\alpha 7$  acetylcholine receptor in inherited epilepsies. Fellowship "Ramón Carrillo-Arturo Oñativia", Ministry of Health, Argentina. At the Inst. Invest. Bioquímicas.
- 2004-2011. Virginia Borroni. Cell biology studies of acetylcholine receptors. Fellowship of the Natl. Sci. Res. Council of Argentina. At the Inst. Invest. Bioquímicas.
- 2004-2011. Sofía Vallés. Expression of the human  $\alpha 7$  nicotinic acetylcholine receptor and characterization of the effect of steroids on this receptor. Fellowship from the Natl. Sci. Res. Council of Argentina. At the Inst. Invest. Bioquímicas.
2005. Matías Sánchez. Effect of the lipid microenvironment on the structure and activity of the nicotinic acetylcholine receptor. Fellow of the Natl. Agency for the Promotion of Science & Technology. At the Inst. Invest. Bioquímicas.
- 2004-2006. Gaspar A. Fernández Nievas. Nicotinic acetylcholine receptor in health and disease. Fellowship of the Natl. Agency for the Promotion of Science & Technology. At the Inst. Invest. Bioquímicas.
- 2007-2009. Gaspar A. Fernández Nievas. Nicotinic acetylcholine receptor in health and disease. Fellowship of the Natl. Sci. Res. Council of Argentina. At the Inst. Invest. Bioquímicas .
- 2008-2010. Victoria Ayala. Cholesterol and sphingomyelin effects on the distribution and functionality of the  $\alpha 7$  AChR in endothelial cells. Implications of the action of nicotine on this receptor. Fellowship of the Universidad Nacional del Sur. At the Inst. Invest. Bioquímicas.
- 2009-2014. Constanza Kamerbeek. Regulation of the synthesis, assembly and trafficking of the nicotinic acetylcholine receptor by diacylglycerols. Fellowship of the Natl. Scie. Res. Council of Argentina. At the Inst. Invest. Bioquímicas.
- 2010-2014. Vanesa Perillo. Organization of the nicotinic acetylcholine receptor in simple and complex models. Fellowship of the Natl. Scie. Res. Council of Argentina. At the Inst. Invest. Bioquímicas. Co-director: Dr. Silvia Antollini.
- 2012-2015. Francisco Sánchez. Fellowship Catholic University of Argentina. At BIOMED, UCA-CONICET, Buenos Aires.

### **Supervision of doctoral theses**

- 1977-1981 Y. Tan (*Middle East Technical Univ.*, Turquía), Fellowship of Ford Foundation. *Acetylcholine receptor*. Thesis supervision at Max-Planck-Institute for Biophysical Chemistry, Göttingen, Germany.

- 1983-1987 N. Rotstein. Lipid protein interactions. Thesis supervision at the Inst. of Biochemical Research of Bahía Blanca. In 1987 she was supervised by Dr. M.I. Aveldaño. Degree awarded: Ph. D. in Biochemistry, highest mark.
- 1985-1990 Luis E. Politi. Study of the development and pathology of photoreceptors in tissue culture. Thesis supervision jointly with Dr. R. Adler (The Wilmer Ophthalmological Institute, John Hopkins University, Maryland, Baltimore, U.S.A.). Degree awarded: Ph. D. in Biology, highest mark. Currently Group Leader, Career Investigator of CONICET at INIBIBB.
- 1987-1990 Hugo R. Arias. Lipid-AChR protein interactions. Thesis supervision at the Inst. of Biochemical Research, CONICET/Univ. Nac. Sur. Degree awarded: Ph. D. in Biochemistry, highest mark. Currently assoc. Prof. Univ. Phoenix, AZ, USA. Degree awarded: Ph. D. in Biochemistry, highest mark.
- 1986-1990 Cecilia B. Bouzat. Acetylcholine receptors. Fellow Natl. Sci. Res. Council Argentina. Thesis supervision at the Inst. of Biochemical Research of Bahía Blanca. Degree awarded: Ph. D. in Biochemistry, highest mark. Currently Group Leader, Career Investigator of CONICET at INIBIBB.
- 1987-1991 María F. Pediconi. Biochemical bases of cerebral asymmetry: coupling between muscarinic cholinergic neurotransmission and lipid metabolism in mammalian brain. Thesis supervision at the Inst. of Biochemical Research of Bahía Blanca. Degree awarded: Ph. D. in Biochemistry, highest mark. Currently Professor, Univ. del Sur, Argentina and Career Investigator of CONICET at INIBIBB.
- 1988-1994 Laura P. Zanello. Characterization of a potassium channel in vesicles from *Chara contraria*. Thesis supervision at the Inst. of Biochemical Research of Bahía Blanca. Degree awarded: Ph. D. in Biology, highest mark. Currently Assist. Professor, Univ. California at Riverside.
- 1994-1999 Eugenio Aztiria. Nicotinic receptors: interaction with the lipid environment and aspects that regulate its heterologous expression. Fellowship of the Arg. Res. Council. Thesis supervision at the Inst. of Biochemical Research of Bahía Blanca together with Dr. Telma Alonso. Univ. Nac. Sur. Degree awarded: Ph. D. in Biology, highest marks.
- 1991-1996 Lía I. Pietrasanta. Study of nicotinic acetylcholine receptor. Thesis supervisor at the Universidad Nacional del Sur, together with Dr. T.M. Jovin, Max-Planck Inst. of Biophysical Chemistry, Göttingen, Germany. Degree awarded: Ph. D. in Biochemistry, highest mark. Currently head of microscopy, Fac. Sciences, Univ. of Buenos Aires.
- 1994-1999 Silvia S. Antollini. Lipid microenvironment of the nicotinic acetylcholine receptor. Degree awarded: Ph. D. in Biochemistry. Thesis supervision at the Inst. of Biochemical Research of Bahía Blanca. Degree awarded: Ph. D. in Biochemistry, highest mark.
- 1995-2000 Ida Bonini. Lipid environment of the cholinergic nicotinic receptor. Thesis supervision at the Inst. of Biochemical Research of Bahía Blanca. Degree awarded: Ph. D. in Biochemistry, highest marks.
- 1996-2000 Ramiro H. Massol. Lipid-protein interactions of the nicotinic acetylcholine receptor: Molecular and biophysical aspects. Thesis supervision at the Inst. of Biochemical Research of Bahía Blanca. Degree awarded: Ph. D. in Biochemistry.
- 2001-2004 María B. Rauschemberger. Molecular Genetics of epilepsy associated to the nicotinic acetylcholine receptor. Thesis supervision at the Inst. of Biochemical Research of Bahía Blanca. Degree awarded: Ph. D. in Biochemistry.

- 2002-2007. Javier Baier. Studies on the nicotinic acetylcholine receptor. Thesis supervision at the Inst. of Biochemical Research of Bahía Blanca. Degree awarded: Ph. D. in Biochemistry, highest mark.
- 2002-2007. Cristina Gallegos. Cholesterol effects on the nicotinic receptor. Thesis supervision at the Inst. of Biochemical Research of Bahía Blanca. Ph. D. in Biochemistry, highest mark.
- 2002-2009 Ana M. Roccamo. Role of lipids in the structure and function of the nicotinic acetylcholine receptor. Thesis supervision at the Inst. of Biochemical Research of Bahía Blanca. Degree awarded: Ph. D. in Biochemistry, highest mark.
- 2004-2009. Virginia Borroni. Cell biology studies of acetylcholine receptors. Thesis supervision at the Inst. of Biochemical Research of Bahía Blanca. Degree awarded: Ph. D. in Biochemistry, highest mark.
- 2004-2009. Sofía Vallés. Characterization of the interaction between the anticonvulsant Lamotrigine and the nicotinic acetylcholine receptor. Thesis supervision at the Inst. of Biochemical Research of Bahía Blanca. Degree awarded: Ph. D. in Biochemistry, highest mark.
- 2004-2009. Gaspar A. Fernández Nievas. Biochemical and biophysical studies of the interaction between the nicotinic acetylcholine receptor and free fatty acids and steroids. Thesis supervision at the Inst. Biochem. Res. in Bahía Blanca. Degree awarded: Ph. D. in Biology.
- 2004-2011. Vicente Bermúdez, thesis supervision together with Dr. M.I. Aveldaño at the Inst. of Biochemical Research of Bahía Blanca. Degree awarded: Ph. D. in Biochemistry, highest mark.
- 2009-2014. Constanza Kamerbeek, thesis supervision with Dr. M.F. Pediconi at the Inst. of Biochemical Research of Bahía Blanca.
- 2010-2014. Vanesa Perillo. Organization of the nicotinic acetylcholine receptor in simple and complex models. Fellowship of the Natl. Scie. Res. Council of Argentina. At the Inst. Invest. Bioquímicas. Co-director: Dr. Silvia Antollini. As from 2012 Dr. Antollini Director, F.J. Barrantes Co-director.
- 2017-to date. Ezequiel Serrano. Doctoral Thesis candidate in Biomedical Sciences. Catholic University of Argentina (UCA). Thesis supervisor Co-dorector: Dr. Pablo G. Sáenz.

### **Fellowships awarded**

- 1970-1972 Fellow. Argentine Scientific Research Council. Faculty of Medicine Univ. Buenos Aires, Argentina. (Prof. E. De Robertis).
1970. Fellow. The Wellcome Trust. U.K. Univ. of Birmingham, U.K. (Prof. B. Finean).
- 1972-1973 Pan American Health Organization / WHO Fellow. Research Associate at the Dept. of Biochemistry, Univ. of Illinois, U.S.A. (Prof. G. Weber).
- 1974-1974 Max-Planck-Society Fellowship. Dept. Molecular Biology, Max-Planck Institute for Biophysical Chemistry, Goettingen. (Dr. T.M. Jovin).
- 1975 European Molecular Biology (EMBO). Two short-term fellowships. Neurobiologie Moleculaire, Institut Pasteur, France (Prof. Dr. J.-P. Changeux).
- 1991 Royal Society Guest Research Fellow. Lab. Molec. Biology, MRC, Cambridge, England (Dr. N. Unwin).
- 1991 Fellow. Human Frontier Research Program, at Lab. Molec. Biology, MRC, Cambridge, England (Dr. N. Unwin).

2004 Fulbright Scholar to conduct studies at Harvard Medical School, Harvard University.

### **Some of the grants awarded**

- 1979-1981 Deutsche Forschungsgemeinschaft (German Scientific Research Council). Grant Ba 671/1 (Subject: Kinetische Untersuchungen der molekularen Grundlagen der Signalübertragung an cholinergen Synapsen")
- 1982-1983 Deutsche Forschungsgemeinschaft (German Scientific Research Council): grant Ba 671/3-2.
- 1983-to date Argentinian Scientific Research Council (CONICET). Various research grants.
- 1988-1990 Volkswagen Stiftung Grant, together with Prof. Dr. T. M. Jovin of the Dept. Molecular Biology, and Dr. D. Marsh, Dept. of Spectroscopy, Max-Planck Institute for Biophysical Chemistry, Göttingen.
- 1990 (Dec.)-1991 (Mar.). Human Frontier Programme. To conduct research at the Laboratory of Molecular Biology, MRC, Cambridge, U.K.
- 1990-1993. International Center for Genetic Engineering and Biotechnology (ICGEB, UNIDO). Grant to support research program on: "Ionic channels in plant cells: Molecular basis for plant improvement in semi-arid regions".
- 1991-1992. Latin American Botanical Network. To undertake joint research project with Dr. R. Latorre, Univ. of Chile, on ionic channels in plant cells.
- 1992-1993. Joint grant with Prof. C. Gutiérrez-Merino, Department of Biochemistry and Molecular Biology, University of Extremadura, Spain, within the framework of the Programme for Cooperation with Iberoamerica.
- 1991-1994 ALAS, British Council. To undertake joint research project with Prof. G.G. Lunt, Department of Biochemistry, University of Bath, United Kingdom.
- 1992-1995 Inter-American Development Bank/CONICET.
- 1995-1996. Argentinian-Brazilian Biotechnology Commission (CABBIO). Joint grant with Prof. M. Armelin-Sogayar, Univ. of Sao Paulo, Brazil, to undertake a collaborative research project on the action of pesticides on the nicotinic acetylcholine receptor.
- 1995-1997 European Union. To undertake research on acetylcholine receptors. Collaborative grant with Prof. G. G. Lunt, Univ. of Bath, U.K.
- 1996-1997 Volkswagen Stiftung grant, together with Dr. T. M. Jovin of the Dept. Molecular Biology, Max-Planck Institute for Biophysical Chemistry, Göttingen. Renewal.
- 1996-1997 Joint grant with Prof. C. Gutiérrez-Merino, Department of Biochemistry and Molecular Biology, University of Extremadura, Spain, within the framework of the Programme for Cooperation with Iberoamerica.
- 1999-2001 British Council-Fundación Antorchas. Collaborative grant with Dr. Anthony Watts, Dept. of Biochemistry, Oxford University.
- 2000-2002 "Ramón Carrillo-Arturo Oñativia" Grant. Studies of  $\alpha 7$  acetylcholine receptor and its possible involvement in inherited epilepsies. Ministry of Health, Argentina.
- 2000-2003 NIH Fogarty International Center Award (FIRCA). Collaborative grant with Dr. Michael White, Dept. Pharmacology, Allegheny University (now Drexel University), Philadelphia, Pennsylvania, U.S.A.
2003. Antorchas Foundation grant.
- 2004-2006. DAAD-Antorchas Foundation Research grant together with Prof. Stefan W. Hell, Max-Planck Institute for Biophysical Chemistry, Göttingen (*High-resolution optical microscopy of nicotinic receptor*).

- 2003-2005. Associate investigator in Grant No. 1 R01-DA15389 issued by the Department of Health and Human Services (DHS), National Institutes of Health (NIH), National Institute on Drug Abuse (NIDA), USA, together with Dr. R. Lukas, Catholic Healthcare West, St. Joseph's Hospital & Medical Center, Barrow Neurological Institute (“*Nicotinic receptors*”).
- 2006-2008. Associate investigator in Grant No. R01-DA-15389 issued by the National Institutes of Health, USA, to Dr. R. Lukas, catholic healthcare west, St. Joseph's Hospital & Medical Center, Barrow Neurological Institute (“*Nicotinic receptors*”).
- 2007-2009. Principal Investigator. Research grant from the Philip Morris Research Program of the Philip Morris Corp. on “*Lipid rafts, alpha 7-nicotinic receptor and hypercholesterolemic Endothelial Cell Impairment*”.
- 2008-2012 PICT-Max-Planck 2006-00559 Grant. Ministerio de Ciencia, Tecnología e Innovación Productiva de Argentina, and Max-Planck Gessellschaft, Germany, “*Nanoscopy of acetylcholine receptor supramolecular organization*”.
- 2010-2014 Subsidio PICT-2008-1003. Ministerio de Ciencia, Tecnología e Innovación Productiva de Argentina, “Correlation between acetylcholine receptor and surrounding lipids”.
- 2012-2016 PICT-2011-0604 Grant. Ministerio de Ciencia, Tecnología e Innovación Productiva de Argentina, “Organization and stability of nicotinic acetylcholine receptors in health and disease”. \$343.000.
- 2012-1015. PIP N°: 112-201101-01023. Argentinian Res. Council (CONICET). “Organization and dynamics of neuronal acetylcholine receptors” \$ 300.000.
2013. “Synapses and dendritic spines in health and disease”, International Symposium, International Society for Neurochemistry, \$ 150.000.
2013. International School of the ISN “Synapses and dendritic spines in health and disease”, Buenos Aires, Argentina, and Montevideo, Uruguay, September 1-15. \$ 40.000.
- 2013-2015. Marie Curie Action- FP7-People-2009-IRSES Acronym: LAEL (Latin America-Europe Liaison, an exchange programme involving SISSA in Trieste, Italy, the University of Cambridge, U.K.
2014. 3rd ISN Latin American School of Advanced Neurochemistry- Experimental approaches to brain diseases. Directors: Prof. F. Dajas and F. J. Barrantes. Montevideo, Uruguay. \$ 40.000.
2016. PIP N°: 11220150100858 (Res.D.N° 011/16) del CONICET. “*Supramolecular structure, stability and dynamics of nicotinic receptors in health and disease*”. \$ 450.000.
2016. PICT 2015-2654 (Res. N° 240-16) Ministerio de Ciencia, Tecnología e Innovación Productiva de Argentina, “*Lipid modulation of nicotinic acetylcholine receptors in health and synaptopathies*”. \$ 777.263.
2019. Grant from Nvidia Corporation of a 110 Deep Learning Teraflop Volta-based Nvidia Titan V GPU graphics card.

### **Membership in Scientific Societies:**

- 1969-to date: British Biochemical Society, U. K.  
 1972-to date: Pharmacological Society, Argentina.  
 1973-to date: Biophysical Society, Argentina.



1974-1982 Sonderforschungsbereich 33 (Neurosciences) of the German Scientific Research Council (elected).

1977-to date: German Society of Biological Chemistry (elected).

1979-1983. Member of the Schwerpunktprogramm "Molekulare Grundlage der Signalübertragung" of the Deutsche Forschungsgemeinschaft (German Research Council).

1983-to date: Biochemical Society, Argentina.

1985-to date: American Chemical Society, U.S.A. / Biophysical Society, U.S.A.

1986-to date: International Society for Neurochemistry.  
 Sociedad Argentina de Neuroquímica (SAN).  
 Sociedad Iberoamericana de Neuroquímica (Ib.S.N.).  
 American Biophysical Society (nominated).

1986-1989. Secretary of the Sociedad Argentina de Neuroquímica (SAN).

1989-to date: Member, International Brain Research Organization (IBRO).

1994-to date: Member of the American Society for Neurochemistry (ASN).

1997-1999. Vicepresident, Argentine Society for Neurochemistry (SAN).

1999-2001. Member of the Programme Committee, ISN/ASN Biennial meeting Buenos Aires 2001.

1999. Member of the Program Committee, Latin American Physiological Congress, Cancun, August 2000.

1999-2001. President, Argentine Society for Neurochemistry (SAN).

2005. Elected Member of the Board of Directors (Council), International Society for Neurochemistry (ISN) (2005-2008 period).

2006- Appointed member of the Basic Basic Science Subcommittee, International League Against Epilepsy (ILAE).

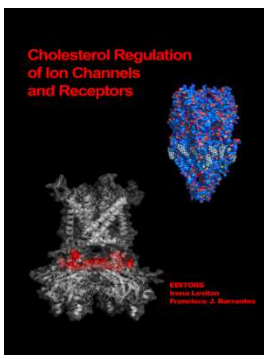
2006-2008. Elected member of Council of the International Union of pure and Applied Biophysics (IUPAB).

## Publications:

### 1) Books



Barrantes, F.J. (1998). *The nicotinic acetylcholine receptor: Current views and future trends*. Neuroscience Intelligence Unit. Springer Verlag, Berlin/Heidelberg and Landes Publishing Co., Georgetown, TX 226 pp.



Levitan, I. & Barrantes, F.J. Eds. (2012) *Cholesterol Regulation of Ion Channels and Receptors*. John Wiley & Sons. 289 pp. ISBN-13: 978-0470874325

*II) Review articles, monographs and chapters in books*

1. Barrantes, F.J. (1971). Biomembranas: Enfoques actuales en el estudio de su estructura. *Ciencia e Invest.* 28 111-124.
2. Barrantes, F.J. (1979). Endogenous chemical receptors: Some physical aspects. *Annu. Rev. Biophys. Bioeng.* 8 287-321.
3. Tan, Y.P., Stender, W., Harvey, A.L., Soria, B. and Barrantes, F.J. (1980). Interactions of fluorescent cholinergic antagonists with the membrane-bound acetylcholine receptor. In: *Molecular Aspects of Bioelectricity* (E. Schoffeniels and E. Neumann, eds.). Pergamon Press, Oxford, Nueva York, p. 257.
4. Zingsheim, H.P., Neugebauer, D.-Ch., Barrantes, F.J. and Frank, J. (1980). Image averaging of membrane-bound acetylcholine receptor from *Torpedo marmorata*. In: *Electron Microscopy at Molecular Dimensions* (W. Baumeister and W. Vogell, eds.) Springer-Verlag, Berlin, pp. 161-169.
5. Zingsheim, H.P., Barrantes, F.J., Haenicke, W., Neugebauer, D.-Ch. and Frank, J. (1980). Single particle image averaging of the acetylcholine receptor from *Torpedo marmorata*. In: *Electron Microscopy*, vol. 2 (P. Braderoo and W. De Priester, eds.), pp. 592-593.
6. Neugebauer, D.-Ch., Barrantes, F.J. and Zingsheim, H.P. (1980). Oxidation-dependent clustering of the acetylcholine receptor from *Torpedo marmorata*. In: *Electron Microscopy*, vol. 2 (P. Braderoo and W. De Priester, eds.), pp. 614-615.
7. Barrantes, F.J. (1982). Interactions between the acetylcholine receptor and the non-receptor, peripheral nu-peptide (Mr 43,000). In: *Neuroreceptors* (F. Hucho, ed.). W. de Gruyter, Berlin, Nueva York, pp. 315-328.
8. Barrantes, F.J. (1983). Structural, dynamic and functional aspects of the acetylcholine receptor: current state and open problems. *Period. Biol.* 85 Suppl. 2 61-66.
9. Barrantes, F.J. (1983). Recent developments in the structure and function of the acetylcholine receptor. *Int. Rev. Neurobiol.* 24 258-341.
10. Walzthoeny, D., Barrantes, F.J., Eppenberger, H.M. and Wallimann, T. (1984). Localization of B-creatine kinase on acetylcholine receptor rich membrane vesicles with the immuno-gold technique. In: *Electron Microscopy* (A. Csanady, P. Roehlich and D. Szabo, eds.). Progr. Com. 8th Eur. Congr. Electron Microscopy, Budapest, Hungría, pp. 1609-1610.
11. Barrantes, F.J. (1986). Correlation of molecular structure with functional properties of the acetylcholine receptor protein. In: *Ionic Channels in Cells and Model Systems* (R. Latorre, ed.), Plenum Publ. Corp., Nueva York, EEUU, 385-400.
12. Barrantes, F.J. (1988). The acetylcholine receptor and its membrane environment. In: *Physical properties of biological membranes and their functional implications* (C. Hidalgo, ed.) Plenum Publishing Corp. Nueva York, 147-175.
13. Barrantes, F.J. (1988). Muscle Endplate Receptors. In: *Pharmacology & Therapeutics* 38 331-385.

14. Barrantes, F.J. (1989). The lipid environment of the nicotinic receptor in native and reconstituted membranes. In: *Crit. Rev. Biochem. Molec. Biol.* 24 (G. Fassman, ed.) (CRC Press, Boca Raton, Fl., EEUU), pp. 437-489.
15. Barrantes, F.J. (1992). Structural and functional crosstalk between the acetylcholine receptor and its membrane environment. *Molec. Neurobiol.* 6, 463-482.
16. Ortells, M.O., Cockroft, V.B., Lunt, G.G., Marsh, D. and Barrantes, F.J. (1992). The nicotinic acetylcholine receptor and its lipid microenvironment. *Membrane Proteins: Structures, Interactions, and Models.* (A. Pullman, B. Pullman, and J. Jortner, eds.), Kluwer Academic Publishers, pp. 185-198.
17. Barrantes, F.J. (1993). Lipid effects on nicotinic acetylcholine receptor gating and kinetics: a structural-functional correlation. *Braz. J. Med. Biol. Res.* 26 553-571.
18. Barrantes, F.J. (1993). The lipid annulus of the nicotinic acetylcholine receptor as a locus of structural-functional interactions. In: *Protein-Lipid Interactions.* New Comprehensive Biochemistry, vol. 26 (Watts, A., ed.) Elsevier, Amsterdam, pp. 231-257.
19. Barrantes, F.J. (1993). Structural-functional correlates of the nicotinic acetylcholine receptor and its lipid microenvironment. *FASEB J.* 7 1460-1467 [cover].
20. Barrantes, F.J. (1995). Pharmacological sites for some local anaesthetic and steroid ligands at the nicotinic acetylcholine receptor-lipid interface. Proc. 24th Central European Congress on Anesthesiology. Viena, Austria. Monduzzi Editore S.p.A., Bologna, Italia, pp. 487-492.
21. Barrantes, F.J. (1995). Learning about channel-forming proteins from an archetype cell membrane macromolecule: The acetylcholine receptor. In: *Science in Latin America and the Caribbean and its Role in Regional Development.* (A. Hamende, M.H.A. Hassan, J.L. Villaveces and G. Violini, eds.). Editora Guadalupe Ltda., Vol. II, pp. 682-725.
22. Bouzat, C.B. and Barrantes, F.J. (1995). Identification of functional domains of the nicotinic acetylcholine receptor. *Comunic. Biol.* 13 1-34.
23. Barrantes, F.J. (1996). Canales activados por ligandos. Capítulo 13 In: *Biofísica and Fisiología Celular* (R. Latorre, J. López-Barneo, F. Bezanilla and R. Llinás, eds.), Ediciones Univ. Sevilla, España, pp. 337-351.
24. Barrantes, F.J. (1997). The acetylcholine receptor ligand-gated channel as a molecular target of disease and therapeutic agents. *Neurochem. Res.* 22 391-400.
25. Barrantes, F.J. Physical state of the nicotinic acetylcholine receptor membrane and modulation of the receptor channel by lipid effectors. In: *From Ion Channel to Cell-to-Cell Conversations.* (R. Latorre and J.C. Saenz, ed). Plenum Press, New York, (1997) pp. 199-216.
26. Barrantes, F.J. (1998). Introduction: Structure meets function at the acetylcholine receptor. In: *The nicotinic acetylcholine receptor: Current views and future trends* (F.J. Barrantes, ed.). Springer Verlag, Berlin/Heidelberg and Landes Publishing Co., Georgetown, TX, pp. 1-10.
27. Ortells, M.O., G.E. Barrantes and F.J. Barrantes (1998). Molecular modelling of the nicotinic acetylcholine receptor. In: *The nicotinic acetylcholine receptor: Current views and future trends* (F.J. Barrantes, ed.). Springer Verlag, Berlin/Heidelberg and Landes Publishing Co., Georgetown, TX. pp. 85-108.

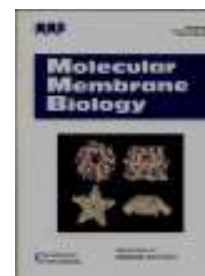


28. Barrantes, F.J. (1998). Molecular pathology of the acetylcholine receptor. In: *The nicotinic acetylcholine receptor: Current views and future trends* (F.J. Barrantes, ed.). Springer Verlag, Berlin/Heidelberg and Landes Publishing Co., Georgetown, TX pp. 175-212.
29. Barrantes, F.J., Antollini, S.S. and Massol, R. (1999). Fluorescence studies of the nicotinic acetylcholine receptor in its membrane environment. *Bioscience Report* 19 335-344.
30. Barrantes, F.J., Antollini, S.S., Bouzat, C.B., Garbus, I. and Massol, R.H. (2000). Nongenomic effects of steroids on the nicotinic acetylcholine receptor. *Kidney Internat.* 57 1382-1389.
31. Massol, R.H. and Barrantes, F.J. (2001). Organochlorine insecticides: Ligand-gated ion channels as potential targets? *Anal. Pharmacology* 2, 9-21 **[selected cover page article]**.



32. Barrantes, F.J. (2001). Cholinergic neurotransmission in health and disease. *Boletin Acad. Med.* 78 297-314.
33. Barrantes, F.J. (2001). Structural studies of the acetylcholine receptor in the membrane environment. *Current Science* 81 983-991.
34. Barrantes, F.J. (2001). Fluorescence studies of the acetylcholine receptor: Structure and dynamics in the membrane environment. *J. Fluoresc.* 11 273-285.

35. Barrantes, F.J. (2002). Lipid matters: nicotinic acetylcholine receptor-lipid interactions. *Molec. Memb. Biol.* 19 277-284 **[cover page article]**.



36. Barrantes, F.J. (2003). Modulation of nicotinic acetylcholine receptor function through the outer and middle rings of transmembrane domains. *Current Opinion in Drug Discovery & Development* 6, 620-632.

37. Antollini, S., Baier, J., Blanton, M., Bonini, I., De los Santos, B., Gallegos, M.C., Garbus, I., Pediconi, M.F., Prieto, M., Roccamo, A.M., Wenz, J. and Barrantes, F.J. (2004). Structure and dynamics of acetylcholine receptor and its lipid microenvironment: from molecule to the cell. In: *Cholinergic Mechanisms*. Editorial: Taylor & Francis Group, London, U.K., pp. 33-38 (ISBN 1841840750).

38. Barrantes, F. J. (2004). Structural basis for lipid modulation of nicotinic acetylcholine receptor function. *Brain Res. Rev.* 47, 71-95. **[cover page article]**

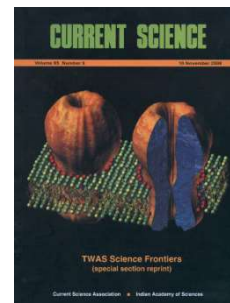


39. Garbus, I., Wenz, J. and Barrantes, F.J. (2005). Nongenomic effects of steroids on the nicotinic acetylcholine receptor. *Current Topics in Neurochem.* 4, 21-34.

40. Antollini, S. and Barrantes, F.J. (2007). Laurdan Studies of Membrane Lipid-Acetylcholine Receptor Protein Interactions. Cap. 36. In: *Methods in Membrane Lipids* (A.M. Dopico, ed.). Humana Press Inc., Totowa, New Jersey, EEUU, pp. 531-542. ISBN 978-1-58829-662-7. ISSN 1064-3745.

41. Barrantes, F.J. (2007). Cholesterol effects on nicotinic acetylcholine receptor. *J. Neurochem.* 103 (Suppl. 1), 72-80.

42. Barrantes, F.J. (2008). Dialogue between membrane lipids and acetylcholine receptor. Science Frontiers, TWAS Silver Jubilee, D. Balasubramanian, Ed. *Current Science* 95, 1150-1164. [cover page article]



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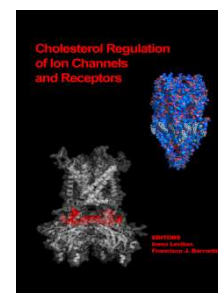
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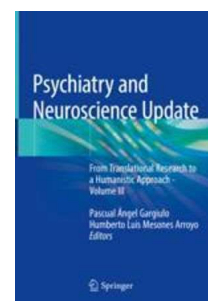
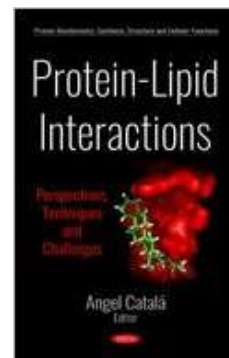
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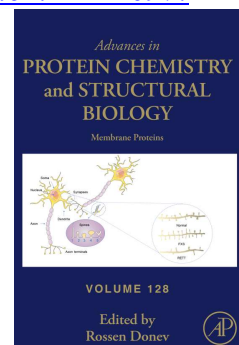


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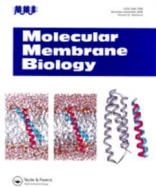
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