

LUZ BIRNBAUMER

Born: February 6, 1939 in Vienna, Austria
1948 - 1967: Lived in Argentina
1967: Migrated to USA
Citizenship: United States
Status: Married to Mariel Birnbaumer (née Despuy), Ph.D.; no children

Education

Up to 1958: Primary and secondary education in Buenos Aires, Argentina
1958-1962: Study of Pharmacy, University of Buenos Aires. *Degree* - M. Sc. in Pharmacy.
1958-1964: Study of Biochemistry, University of Buenos Aires. *Degree* - M. Sc. in Biochemistry.
1964-1967: Predoctoral Fellow, Department of Biological Chemistry, Faculty of Sciences, University of Buenos Aires, Argentina. *Degree* - Ph.D. in Biochemistry: Regulation of Glycogen Biosynthesis. Thesis advisors: Dr. Luis F. Leloir and Héctor N. Torres.
1967-1971: Postdoctoral Fellow, Section on Endocrinology, National Institute of Arthritis and Metabolic Diseases, Bethesda, Maryland, USA. *Major* - Molecular Endocrinology: Regulation of Adenyl Cyclase by Hormones. Preceptor: Dr. Martin Rodbell.

Professional Experience

1960-1961: Teaching Assistant, Department of Inorganic and Analytical Chemistry
1962-1964: Teaching Assistant, Pharmacology, Faculty of Pharmacy and Biochemistry
1964-1966: Teaching Assistant, Department of Biological Chemistry, Faculty of Sciences

1971-1974: at Northwestern University

1971-1974 Associate Professor, Department of Physiology, Northwestern University Medical School.
1974-1975 Visiting Scientist, Department of Molecular Medicine, Mayo Clinic, Rochester, Minnesota,

1975-1994: at Baylor College of Medicine, Houston, Texas

1975-1994 Professor, Department of Cell Biology,
10/81-6/82 Visiting Scientist, Institute National de la Sante, Hopital Henri Mondor, Creteil, France (sabbatical leave).
1986-1994 Professor, Department of Physiology and Molecular Biophysics,
1990-1994 Professor, Division of Neurosciences
1992-1994 Director, Diabetes Research Center, Department of Medicine
1993-1994 Professor, Department of Medicine (Endocrinology)

1994-2001: at UCLA, Los Angeles, California

1994-2001 Professor, Department of Anesthesiology, School of Medicine
1994-2001 Professor, Department of Biological Chemistry, School of Medicine.
1994-2001 Full Member, Molecular Biology Institute
1995-2001 Member, Brain Research Institute
1996-2000 Director, Embryonic Stem Cell and Transgenic Mouse Facility, UCLA Jonsson Comprehensive Cancer Center.
1997-2001 Professor and Chair, Department of Molecular, Cell and Developmental Biology, College of Letters and Science, UCLA

2001-present: at NIEHS (NIH, DHHS), Research Triangle Park, North Carolina.

2001-2007 Sr. Investigator (Full Professor equivalent)
2001-2006 Scientific Director, Division of Intramural Research, National Institute of Environmental Health Sciences (NIEHS), National Institutes of Health (NIH), Department of Health and Human Services (DHHS)
2001-2007 Head, Transmembrane Signalling Group, Laboratory of Signal Transduction, DIR, NIEHS.
2007- Head, Transmembrane Signalling Group, Laboratory of Neurobiology, NIEHS

2010- (Aug)- Adjunct Professor, Department of Pharmacology and Cancer Biology,
Medical School, Duke University Medical Center.
2011 (Jan)- Adjunct Professor, Department of Pharmacology, University of North
Carolina School of Medicine, Chapel Hill, NC

Languages

English, German and Spanish: fully. French: understanding and reading. Italian: reading only.

Scientific Standing

1982 -Ranked at position 542 among 1,000 most cited scientists during period of 1965-1978 (c.f. Current Contents, Oct., 1982).

2002 -Ranked among most cited authors by the ISI Web of Science. Total times cited from 1980 through 2002: 14,676 times.

2009 -Total times cited from 1966 through 2009: 32,4348 (peer reviewed: 25,779; reviews/book chapters: 6,655). Average citations per peer reviewed publication: 88.5. Average citations per invited publication (notes, reviews, book chapters): 97.4 Number of peer reviewed articles quoted more than 100 times: 85. *h Factor*: 92 (92 papers quoted more than 92 times).

Honors and Awards

- 1962-1966: Predoctoral Fellowship, National Research Council, Argentina.
1967: Prize "Faculty of Pharmacy and Biochemistry" (1966 best thesis) University of Buenos Aires.
1967-1968: U. S. Public Health Service Visiting Fellowship.
1968-1969: National Institutes of Health Postdoctoral Fellowship.
1981-1982: Macy Foundation Faculty Scholar Award.
1985: Society for the Study of Reproduction Research Award.
1986: C. C. Bell Research Professorship of Cell Biology, Baylor College of Medicine.
1986: MERIT Award, National Institute of Diabetes, Digestive and Kidney Diseases.
1989: Honorary Professor, Faculty of Sciences, University of Buenos Aires, Argentina.
1992: Wellcome Visiting Professor in the Basic Medical Sciences.
1995: Doctor *Honoris Causa* (Honorary Doctorate), School of Medicine, Universidad Complutense, Alcalá de Henares/Madrid, Spain.
1995: Member, U.S. National Academy of Sciences.
1997: The 1997 "H.W. Magoun Lecture" UCLA Brain Research Institute.
2002: The "Mavis P. Kelsey Lecture" Texas A&M Inst. of Biosciences and Technology, Houston, TX
2003: 2003 Memorial Lecture "Conferencia Orias", Society of Biology of Córdoba, Argentina.
2004: Foreign Associate Member, Argentine National Academy of Sciences.
2006: Foreign Associate Member, National Academy of Medicine, Argentina.
2007: NIH Distinguished Investigator.
2009: NIH Director's Challenge Award "DNA Methylation in Health and Disease" (Award: \$450,000).
2011: Prize "Lius Federico Leloir for Interantional Cooperation in Science, Technology and Innovation" conferred by the Ministry of Science, Technology and Innovation, Republic of Argentina.

Memberships in Scientific Societies

- 1971: Endocrine Society (USA).
1972: American Society of Biological Chemists.
1976: Society for the Study of Reproduction (USA).
1977: American Association for the Advancement of Science.
1980: American Chemical Society.
1986-1988: Awards Committee, Society for the Study of Reproduction.
1989-1992: Governing Council of the Endocrine Society (USA).

Visiting Professorships (2007- present)

2007

-March 13 - Department of Pharmacology, University of Washington School of Medicine, Seattle, Washington [TRPCs-Orai, CCE=ROCE].

- April 12 - Laboratory of Cell Biology, NHLBI, NIH, Bethesda Maryland [CCE=ROCE].
- April 24 - Department of Internal Medicine, Wake Forest University Medical Center, Winston-Salem, North Carolina [Gnas Imprinting - Phenotypic correlates].
- May 16 - Department of Pharmacology and Experimental Toxicology, University of Marburg School of Medicine, Marburg, Germany (Orai-TRPC CCE=ROCE)
- May 21 - Department of Pharmaceutical Sciences, University of Tuebingen, Germany. [TRPC-Orai, CCE=ROCE]
- June 8 - Instituto de Ingeniería Genética y Biología Molecular (INGEBI), Buenos Aires, Argentina [TRPCs-Orai-II]
- June 14 - Instituto "Luis F. Leloir", Buenos Aires, Argentina. [TRPC-Orai-IP3R].
- October 9 - Center for Neurosciences and Department of Psychiatry, University of Texas Southwestern Medical School, Dallas, Texas.
- November 6 - John A. Moran Eye Center and Department of Ophthalmology, University of Utah School of Medicine, Salt Lake City, Utah.
- November 22 - Department of Molecular and Cellular Biology, School of Biochemical Sciences and Pharmacy, University of Rosario, Argentina. [TRPC and Orai]

2008

- April 24 - The Solomon H. Snyder Department of Neurosciences/Graduate Program in the Neurosciences, Johns Hopkins School of Medicine, Baltimore, Maryland [TRPCs and Orai].
- October 6 - Institute of Membrane and Systems Biology, Faculty of Biological Sciences, University of Leeds, Leeds, United Kingdom [Roles for TRPC and Orai in ROCE and SOCE]
- October 7 - London Pain Consortium, Department of Physiology, University College London, United Kingdom [Roles for TRPC and Orai in ROCE and SOCE].
- October 13 - Institute of Experimental and Clinical Pharmacology and Toxicology, School of Medicine, University of the Saarland, Homburg-Saar, Germany [Roles for TRPC and Orai in ROCE and SOCE].
- October 15 - Laboratory of Ion Channel Research, Department of Molecular and Cell Biology, Catholic University of Leuven, Leuven, Belgium [Roles for TRPC and Orai in ROCE and SOCE].
- October 17 - Institute Mondor of Biomedical Research - INSERM U841, Hôpital Henri Mondor, Paris-Créteil, France [Roles for TRPC and Orai in ROCE and SOCE].

2009

- March 6 - Instituto de Ingeniería Genética y Biología Molecular (INGEBI), Buenos Aires, Argentina [TRPCs-Orai-III]
- March 10 - Instituto de Ingeniería Genética y Biología Molecular (INGEBI), Buenos Aires, Argentina [Approaches to Study the Mammalian Methylome]
- March 24 - Laboratory of Allergic Diseases, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland. [TRPCs-Orai-Ca entry]
- May 6 - Department of Pharmacology, University of Tennessee Medical Center, Memphis, Tennessee. [TRPCs - Orai - Ca Entry.]
- May 13 - Laboratory of Molecular Biophysics, National Institute of Diabetes, Kidney and Digestive Diseases, Bethesda, Maryland. [Solexa sequencing approach to study the Methylome]
- September 14 - Department of Pharmacology, University of Illinois School of Medicine, Chicago, Illinois. [TRPCs - Orai - Ca Entry.]

2010

- September 15 - Intercenter for PHarmacogenomics and Drug Research (IZePhA), University of Tuebingen, Germany [Galpha GTPase].
- September 17 - Department of Pharmacology, University of Munich, Germany. [Galpha GTPase]
- September 28 - Max Delbrück Center for Molecular Medicine, Berlin-Buch, Germany [Methylome-Imprinting]
- September 29 - Institute of Experimental and Clinical Pharmacology and Toxicology, School of Medicine, University of the Saarland, Homburg-Saar, Germany [Galpha GTPase].

Invited presentations about laboratory research and views at national and international scientific meetings
(2007-present):

2007

- 4th SFB 530 Colloquium "Spatio-Temporal Interactions of Cellular Signalling Molecules" Lecture on "TRPCs, Orai, STIMs and IP3Rs: Their Roles in Receptor and Store-operated Calcium Entries." Homburg-Saar, Germany, May 18-19, 2007.
- Incorporation Lecture, Academia Nacional de Medicina, June 12, Buenos Aires, Argentina (GNAS Imprinting).
- Keystone Symposia on Molecular and Cellular Biology "The Transient Receptor Potential Ion Channel Superfamily." Session on Activation Mechanisms. September 18-23, Beaver Run Resort, Breckenridge, Colorado.

2008

- Erlich II, Second World Conference on Magic Bullets, "Structure Function of the Ubiquitous TRPC Channels: Targets in Need of Magic Bullets." Session on CNS - Pharmacological Options in Diseases of the Central Nervous System, Nuernberg, Germany, October 3-5.

2010

- "TRP Channels 2010", Leuven, Belgium. Session on TRPC Channels "Interplay between Orai and TRPC Channels," September 22-25.
- "Berlin Brain Days 2010" Keynote Speaker