

# CURRICULUM VITAE

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## Education:

1976-1980 Pharmacy Degree (M.Sc.), University of Buenos Aires, Argentina  
1976-1983 Biochemistry Degree (M.Sc.), University of Buenos Aires, Argentina.  
1985 Ph.D. in Pharmacy and Biochemistry, University of Buenos Aires, Argentina

## Employment History:

2015-present Professor, Department of Pharmacology  
Associate Director of Basic Science, UC San Diego Moore's Cancer Center  
1998-2015 Chief, Oral and Pharyngeal Cancer Branch, National Institute of Dental and Craniofacial Research, NIH, Bethesda, USA  
1997-2015 Chief, Cell Growth Regulation Section and Molecular Carcinogenesis Unit, Oral and Pharyngeal Cancer Branch, National Institute of Dental and Craniofacial Research, NIH, Bethesda, USA  
1996-1997 Acting Chief, Oral and Pharyngeal Cancer Branch, National Institute of Dental Research, NIH, Bethesda, USA  
1993-1997 Chief, Molecular Signaling Unit, Laboratory of Cellular Development and Oncology, National Institute of Dental Research, NIH, Bethesda, USA.  
1992-1993 Head, Molecular Signaling Group, Laboratory of Cellular Development and Oncology, National Institute of Dental Research, NIH, Bethesda, USA.  
1989-1992 Visiting Associate, Laboratory of Cellular Development and Oncology, National Institute of Dental Research, NIH, Bethesda, USA.  
1988-1989 Fogarty Visiting Fellow, Laboratory of Cellular Development and Oncology, National Institute of Dental Research, NIH, Bethesda, USA.  
1987-1988 Fogarty Visiting Fellow, NIDR, Guest Researcher at the Laboratory of Cellular and Molecular Biology, National Cancer Institute, NIH, Bethesda, USA.  
1986-1987 International Fogarty Fellow, Laboratory of Clinical Science, National Institute of Mental Health, NIH, Bethesda, USA.  
1983-1986 Research Assistant, Department of Pharmacology, School of Pharmacy and Biochemistry, University of Buenos Aires, Argentina.  
1981-1983 Part-time Instructor, Department of Pharmacology, School of Pharmacy and Biochemistry, University of Buenos Aires, Argentina.

1979-1980 Part-time Instructor, Department of Organic Chemistry, School of Pharmacy and Biochemistry, University of Buenos Aires, Argentina.

### **Honors and Awards:**

- 2017 International Association of Dental Research (IADR), Distinguished Scientist Award  
Keynote Lecture, ASPET 2017, Division for Molecular Pharmacology  
Postdoctoral Scientist Award
- 2015 Pharmaceutical Research and Manufacturers of America (PhRMA), 2015 Research & Hope Award for “Excellence in Academic Research”, for the seminal work on GPCR Function in Cancer  
Keynote Lecture, ASPET Upstate New York Pharmacology Society 4th Annual Meeting, Rochester, NY
- 2014 Keynote Lecture, 2014 American Head and Neck Society (AHNS) Annual Meeting and 5th World Congress-IFHNOS  
Distinguished Lecture Series at Massachusetts Eye and Ear Infirmary/Schepens Eye Research Institute, Harvard University, MA  
Keynote Speaker, Dental Research in Review, University of North Carolina, Chapel Hill, NC  
Keynote Speaker, Fifth Annual Cancer Biology Research Retreat, University of Maryland-Baltimore
- 2013 PABMB (Pan-American Association for Biochemistry and Molecular Biology) Plenary Lecture, Madrid, Spain  
Elected, Keynote Lecture, 2014 American Head and Neck Society (AHNS) Annual Meeting and 5th World Congress-IFHNOS  
Elected, Councilor, Basic Research, International Academy/Association of Oral Oncology (IAOO)  
International Keynote speaker at the Weizmann-Brazil Signal Transduction meeting, “Novel Angiogenic and Antiangiogenic Signaling Circuitries”, The Weizmann Institute of Science, Israel  
Honorary Professor, West China School of Stomatology, Sichuan University, Chengdu, China
- 2012 Elliot Osserman Award, Israel Cancer Research Foundation
- 2011 Raices Award, Ministry of Science, Presidency of Argentina, for scientific contributions and efforts in enhancing research training and technology development, Argentina.  
Keynote Speaker, (IADR, Chile) Asociación Internacional de Investigación Dental – División Chile, Chile  
Keynote Speaker, NCI Frederick Spring Research Festival, Frederick, MD  
Visiting Professor, Georgetown University, Washington DC
- 2010 Visiting Professor and Clinical Ground Round Speaker, Memorial Sloan Kettering Cancer Center, New York, NY  
Keynote Speaker, 6th Annual International Head and Neck Symposium, Los Angeles, CA, July 2010  
Honorary Professor, University of Buenos Aires, Argentina

- 2009 Keynote Speaker, The First South American Spring Symposium in Signal Transduction and Molecular Medicine, SISTAM 2010, Cordoba, Argentina  
 Keynote Lecture, Symposium on Molecular Medicine, Virginia Commonwealth University, Richmond, VA  
 Keynote Speaker, School of Dentistry University of Michigan Research Day, Ann Arbor, MI  
 Keynote speaker at the Annual Meeting of the Chilean Society of Biochemistry and Molecular Biology, Concepcion, Chile  
 Keynote Inaugural Lecture, Annual meeting of the Argentine Society of Research in Biochemistry and Molecular Biology, Tucuman, Argentina
- 2008 Hyman Niznik Memorial Keynote Lectureship, Annual Joint Meeting of the Great Lakes: G Protein-Coupled Receptor Retreat, Bromont, Canada  
 Merk Frosst Lecture, Institut de Recherches Cliniques de Montreal (IRCM), Montreal, Canada  
 R.M. Tiwari Oration, National Conference, Foundation for Head and Neck Oncology, Bhubaneswar, India
- 2007 Frank Brook Memorial Lecture, American Pancreatic Association, Chicago, IL
- 2006 Elected, Co-chair, Gordon Research Conference, "Phosphorylation & G-Protein Mediated Signaling Networks", 2008
- 2006 Miguel Aleman Lecture, Miguel Aleman Foundation, Mexico DF, Mexico
- 2005 NIH Director's Award
- 2005 Elliot Osserman Award, Israel Cancer Research Foundation
- 2004 International Association of Dental Research (IADR) Distinguished Scientist Award, Oral Medicine and Pathology
- 2003 NIH Hispanic Heritage Month Celebration: Hispanic Contributions to Research in the United States, Lecture
- 2000 NIDCR Director's Exemplary Service Award
- 1999 EEO Special Achievement Award, NIDCR, NIH
- 1998 Appointment as member of the Senior Biomedical Research Services (SBRs)
- 1997 NIDR Director's Exemplary Service Award
- 1996 NIH Merit Award
- 1989 Funds for Young Scientists, Travel Award, Organizing Committee of the 7th International Conference on Protein Phosphorylation, Kobe, Japan
- 1986 International Fogarty Fellowship, National Institutes of Health, USA
- 1983 Gold Medal Award and Diploma of Honor, first rank student of the School of Pharmacy and Biochemistry, University of Buenos Aires, Argentina.

### **Editorial Responsibilities:**

- 1998-2003 Member, Editorial Board, Journal of Biological Chemistry
- 1998-2000 Editor, Book on Signaling Networks and Cell Cycle Control, Humana Press
- 2000-2003 Co-Editor, Book on Head and Neck Cancer, Emerging Perspectives, Wiley & Co
- 2000-present Member, Editorial Board, Oral Oncology
- 2001-2011 Member, Editorial Board, Biochemistry
- 2001-2006 Member, Editorial Board, Revista de Oncologia, Mexico-Spain
- 2002-2003 Co-Editor, Book on Signal Transduction and Human Disease, Wiley & Co

2002-present Member, Faculty 1000, Reviewing Editor  
 2003-2005 Member, Editorial Board, Drug Discovery Today: Disease Mechanisms  
 2005-present Member, Editorial Board, Molecular Biology of the Cell  
 2008-present Member, Editorial Board, Cancer Prevention Research  
 2009-present Member, Editorial Board, Molecular and Cellular Biology  
 2009-present Member, Editorial Board, Genes & Cancer  
 2010-2014 Member, Editorial Board, Journal of Biological Chemistry  
 2012-present Member, Editorial Board, Science Signaling  
 2013 Co-editor, Current Opinion in Cell Biology, Cell Regulation Issue, April 2013  
 2015-present Member, Editorial Advisory Board for Molecular Pharmacology  
 2017-2018 Co-Editor, Journal of Dental Research, Oral Cancer Special Issue

### **Ad-hoc Reviewer:**

Biochemical and Biophysical Acta; Blood; British Journal of Cancer; Cancer Cell; Cancer Research; Clinical Cancer Research; Cell; Cell Stem Cell; Cell Growth and Differentiation; Clinical Cancer Research; Current Biology; Developmental Cell; EMBO Journal; FEBS letters; Journal of Biological Chemistry; Journal of Cell Biology; Journal of Cell Physiology; Journal of Clinical Investigation; Journal of Immunology; Journal of Neurochemistry; Molecular and Cellular Biology; Molecular and Cellular Neurobiology; Molecular Cell; Molecular Pharmacology, Nature; Nature Cell Biology; Nature Genetics; Nature Medicine; Oncogene; Oral Oncology; Trends in Biological Science; Proceedings of the National Academy of Science, USA; Science, Science Signaling, Science Translational Medicine

### **Membership and Activity in Professional Societies:**

Executive Committee Member, American Society for Pharmacology and Experimental Therapeutics (ASPET)  
 American Association of Cancer Research (AACR)  
 American Society for Biochemistry and Molecular Biology (ASBMB)  
 International Association for Dental Research (IADR)  
 American Association for Dental Research (AADR)  
 Founding Member, International Academy of Oral Oncology (IAOO)

### **Extramural Activities:**

#### **NIH Extramural**

1997 Ad-hoc member, Program Project Review Panel, DER, NCI  
 1999-2000 Member, Grant Review Panel, Division of Basic Science, NCI  
 2002 Ad-hoc Member, NIH Study Section, CDF-4  
 2002 Co-chair, FY2004 NIDCR Initiatives, Head and Neck Cancer, Molecular Anatomy of Head and Neck Cancer: A Genomic/Proteomic Approach  
 2003-2004 Member AIDS Malignancies Consortium, NIH  
 2003 Member, Biological Pathways and Networks Group, NIH Road Map Initiative  
 2004-2007 Member, NIH extramural Study Section, NDT

2005 Member, NIGMS, Special Emphasis Review Panel

2005 Member, Review Panel NRSA-NIH, Fellowships: Molecular and Cellular Mechanisms

2007 Ad-hoc Member, NIH extramural Study Section, Intercellular Interactions (ICI)

2008 Ad-hoc Member, NIH extramural Study Section, Tumor Microenvironment (TME)

Ad-hoc Member, NIH extramural Study Section, Molecular and Integrative Signal Transduction (MIST)

2008-2012 Member, NIH extramural Study Section, Tumor Microenvironment (TME)

2009 Member, NIH extramural Study Section, NIH Challenge Grants in Health and Science Research, American Recovery and Reinvestment Act of 2009

2010 Site Visit Review Panel, Laboratory of Biochemistry, Office of Biotechnology Products, Center for Biologics Evaluation and Research, FDA

2012 Reviewer, NIH extramural Study Section, Center for Scientific Review Special Emphasis Panel, Cancer Biology -2

2012 Reviewer, PREVENT Cancer Preclinical Drug Development Program, NCI

2013 Reviewer, NIH extramural Study Section, NCI Omnibus R03/R21 Grant Application Review, Cancer Biology-2

2013 Reviewer, NIH extramural Study Section, Special Emphasis Panel/Scientific Review Group Basic Translational (OBT)

2014 Participant, Center for Scientific Review's Pilot Study, evaluation of relative quality of grant applications, NIH

2014 Reviewer, NIH/NCI extramural Study Section, Center for Scientific Review Special Emphasis Panel/Scientific Review Group ZCA1 SRB-C R

2014 Reviewer, PREVENT Cancer Preclinical Drug Development Program, NCI

2015 Reviewer, NCI Outstanding Investigator Award (OIA)

2016 Reviewer, NIH Study Section, Basic Mechanisms of Cancer Therapeutics (BMCT)

2016 Reviewer, PREVENT Cancer Preclinical Drug Development Program, NCI

2016 Reviewer, NCI Special Emphasis Panel, PROGRAM PROJECT III (P01)

2017 Reviewer, NIH Study Section, Basic Mechanisms of Cancer Therapeutics (BMCT)

2017-2023 Member, NIH Study Section, Basic Mechanisms of Cancer Therapeutics (BMCT)

### **Extramural**

1995-2004 Reviewer, Wellcome Trust Foundation

1997-2006 Reviewer, National Science Foundation

1998-2001 Member, Cancer Genome Anatomy Program

1999-2002 Advisor, Howard Hughes Research Scholar Program

2002-2004 Member, External Advisory Board, The Johns Hopkins University, School of Medicine, Spore in Head and Neck Cancer

2002-2004 Member, External Advisory Panel, South Carolina COBRE for Oral Health in Vulnerable Populations, South Carolina

2002-2003 Member, Reviewing Panel, FAMRI. Flight Attendants Medical Research Institute, Young Clinical Scientist Awards Program

2003 Reviewer, Phillip Morris Research Grants  
2005-2010 Adjunct Professor, University of Maryland, Dental School  
2007 Reviewer, Phillip Morris Research Grants

### **International**

1996-present Reviewer, The Israel Science Foundation  
1997-present Reviewer, Italian Association for Scientific Research  
1997-2002 Reviewer, German-Israeli Foundation for Scientific Research & Development  
1997-2006 Reviewer, National Science Foundation  
1998-2001 Member, Cancer Genome Anatomy Program  
1998-2004 Member, Reviewing Council, FONCYT, Argentina  
2003-2005 Member Reviewing Panel, The Israel Cancer Research Foundation  
2008-present Member Scientific Advisory Board, Max Planck Institute for Heart and Lung Research, Bad Nauheim, Germany, Germany  
2009 Review Panel, Regional Collaborative Program SFB/TR23, Vascular Differentiation, and Remodeling, Mannheim, Germany  
2010-present Comité Científico Asesor Externo de la Red Temática de Investigación Cooperativa en Cáncer (RTICC), Spain  
2010-2012 Member Reviewing Panel, The Israel Cancer Research Foundation  
2013 Review Panel, Regional Collaborative Program SFB/TR23, Vascular Differentiation, and Remodeling, Mannheim, Germany  
2013 Site Visit Review, Foundation Leloir Institute, Buenos Aires, Argentina  
2015 Site Visit Review, Life Sciences Center, McGill University, Montreal, Canada  
2016 Site Visit Review, Foundation Leloir Institute, Buenos Aires, Argentina  
2018 Review Panel, Collaborative Research Centre (CRC) 1366 "Vascular Control of Organ function", Mannheim, Germany

### **Intramural Activities outside the NIDCR DIR**

1996 Member, Search Committee for SBRS position, LCMB, NCI  
1996 Chair, Search Committee for Tenure Track Scientist, NCI-Navy Clinical Oncology Branch  
1996 Ad-hoc member, NIH Central Tenure Committee  
1998-2000 Chair, Head and Neck Cancer Consortium, NIH  
1998-2001 Member, NIH Central Tenure Committee  
1999 Member, Search Committee, Director Division of Basic Sciences, NCI  
2000 Member, Search Committee, Structural Biology, NIDDK  
2000 Member, Grant Review Panel, Division of Basic Science, NCI  
2001 Member, Search Committee, Structural Biology, NIDDK  
2001 Member, Search Committee, Tenure Track Investigator, NIAID  
2001-2004 Member, Steering Committee, NIH-NCI Upper Aerodigestive Track Cancer Intramural Faculty  
2002-2003 Chair, Search Committee, Tenure Track Investigator, NIAMS

2002 Member, Search Committee, Structural Biology, NIDDK  
 2002 Co-Chair, Inter-Institute Head and Neck Cancer Consortium, NIH  
 2002 Member, Search Committee, Laboratory Chief, NCI  
 2002 Member, Search Committee, Deputy Director, DBS Frederick, NCI  
 2003 Member, Search Committee, Tenure Track Investigator, NHLBI  
 2003 Member, NIH Ethics Committee, review panel  
 2003-2015 Member, NIDCD, Title 42 Standing Committee  
 2004 Member, Search Committee, Tenure Track Investigator, NIA  
 2004 Ad-Hoc Member, NIAID, Tenure Review Panel  
 2004 Member, Search Committee, Tenure Track Investigator, NIA  
 2005 Ad-Hoc Member, NCI CCR Tenure Review Panel, NCI  
 2005 Ad-Hoc member, NIH Central Tenure Committee  
 2005 Member, Search Committee, Tenure Track Investigator, NIDDK  
 2005 Member, Search Committee, Laboratory Chief, DBS Frederick, NCI  
 2005 Member, Search Committee, Program Director, DBS Frederick, NCI  
 2006 Ad-Hoc Member, NCI CCR Tenure Review Panel, NCI, 2 reviews  
 2006 Ad-Hoc member, NIH Central Tenure Committee, 2 Tenure Track Reviews  
 2006 Member, Search Committee, Tenure Track Investigator, NIMH  
 2006 Member, Search Committee, Director, CCR, NCI  
 2006 Member, Search Committee, Tenure and Tenure Track investigator, NEI  
 2006 Co-chair, Group 1, Trans-NIH Intramural Research Initiatives  
 2007 Ad-Hoc Member, NIH Central Tenure Committee  
 2007 Ad-Hoc Member, NHGRI, Tenure Review Panel  
 2007 Member, Member, Search Committee, Scientific Director of the Center for Cancer Research, NCI  
 2007 Member, Search Committee, Tenure Track Investigator, Laboratory of Cellular and Molecular Biology, NCI  
 2007 Ad-Hoc member, NIH Central Tenure Committee, Tenure Track review  
 2008-2009 Member, Search Committee, Tenure Track investigator, NHGRI  
 2008 Member, Search Committee, Tenure Track investigator, NICHD  
 2009 Member, Search Committee, Tenure Track investigator, NCI  
 2009 Member, Search Committee, NIH Stadtman Investigator  
 2010 Member, Search Committee, 2 Tenure Track investigators, NCI  
 2010 Member, Search Committee, NIH Stadtman Investigator  
 2010 Member, Reviewing Committee, Intramural NIH Induced Pluripotent Stem Cell Center (NiPSCC) Award Program  
 2011 Chair, Cancer Biology Search Committee, NIH Stadtman Investigator  
 2012 Member, Search Committee, NIH Stadtman Investigator  
 2013 Member, Search Committee, NIH Stadtman Investigator  
 2013 Representative, Office of the NIH Director, Tenure Committee, 3 Tenure Track reviews, NCI  
 2014 Member, NIDCR NIH Intramural Research Program (IRP) Review Group, a Vision for the IRP 2014  
 2014 Representative, Office of the NIH Director, Tenure Committee, 3 Tenure Track reviews, NCI

## Activities within NIDCR DIR

1995	Member, Search Committee for Chief, Gene Targeting Facility, NIDR
1995	Member, Search Committee for Tenure Track Scientist, Smell and Taste Unit, NIDR
1995-1997	Member, Gene Targeting Facility Oversight Committee, NIDR
1995-1996	Member, Sequencing Core Facility Oversight Committee, NIDR
1996	Member, Search Committee for Laboratory Chief, NAB, NIDR
1997	Member, Search Committee for Dental Officer, NIDR
1997-2006	Member, NIDCR Administrative Oversight Committee
1997-2006	Member, NIDCR Tenure and Promotion Committee
2002-2003	Member, Search Committee, Tenure Track Investigator, NIDCR
2005	Member, Search Committee, Tenure Track Investigator, NIDCR
2006	Member, two Search Committees, Tenure Track Investigator, NIDCR
2006-2015	Co-chair, Craniofacial Tissue Remodeling Initiative, NIDCR
2007	Member, Search Committee, Deputy Director, IRP, NIDCR
2007	Member, Search Committee, Associate Director for Management, NIDCR
2008-2009	Member, Search Committee, Clinical Director, NIDCR
2011	Organizing Committee, Workshop on salivary Gland Tumor Research: Current Status and Future Directions, Bethesda
2012	Member, Search Committee, Science Core, NIDCR NIDCR Representative, Steering Committee for NIH Intramural Center for Tobacco Regulatory Sciences
2013	Member, Search Committee, Clinical Tenure Track Candidate Search, MBT, NIDCR
2014	Member, Search Committee, Clinical Director, NIDCR
2014	Member, NIDCR NIH Intramural Research Program (IRP) Review Group, a Vision for the IRP 2014

## Invited Presentations (past 10 years and planned)

2019-	Keynote, German PharmTox Summit, Stuttgart, Germany Universidad Autonoma de San Luis Potosi, Mexico Purdue University, West Lafayette, IN Experimental Biology Symposium, "G protein and $\beta$ -arrestin interplay: From Molecular Regulation to Therapeutic Implications", Orlando, FL, Sub-specialty Chair, AHNS 2019 Annual Meeting, Austin, TX AACR Special Conference on "The Hippo Pathway, Signaling, Cancer, And Beyond", San Diego, CA
2018-	Keystone Meeting on GPCRs. Santa Fe, NM Pathology Research Seminar Series at the Weill Cornell Medical College, NYC AACR Annual Meeting, Chicago, IL Experimental Biology Meeting, San Diego, CA Sidney Kimmel Cancer Center at Thomas Jefferson University, Philadelphia, PA Gordon Research Conference on "Phosphorylation and G-Protein Mediated Signaling Networks", University of New England, Biddeford, ME



3<sup>rd</sup> New Horizons in Immunotherapy and Head and Neck Cancer, Pittsburgh, PA  
 NIH Head & Neck/Thyroid SPORE Workshop, Rockville, MD  
 AACR-LACOG Translational Cancer Medicine Conference, Sao Paulo, Brazil  
 Fourth South American Spring Symposium in Signal Transduction and Molecular  
 Medicine, SISTAM 2018, Bariloche, Argentina  
 9<sup>th</sup> Xiamen Winter Symposium on the Hippo Signaling in Development &  
 Disease, Xiamen, China  
 British Pharmacological Society-Molecular Pharmacology of GPCRs meeting,  
 Monash University, Parkville, Victoria, Australia  
 2017- Keynote Speaker, 9<sup>th</sup> ÖGMBT Annual Meeting & 8<sup>th</sup> Life Science Meeting,  
 Innsbruck, Austria  
 Stanley S. Scott Cancer Center Invited Speaker Series, New Orleans, LA  
 Loma Linda University, Loma Linda, CA  
 IADR, International Association of Dental Research Annual Meeting, San  
 Francisco, CA  
 Symposium: "12 years SFB-TR23: From Vascular Differentiation and  
 Remodeling to Organotypic Vasculature", Heidelberg, Germany  
 AACR-Head and Neck Cancer Meeting, San Diego, CA  
 G Protein Coupled Receptor Meeting, Boon, Germany  
 VanTol symposium at the 18<sup>th</sup> annual joint meeting of the Great Lakes GPCR  
 Retreat, Ottawa, Canada  
 2016- UCSF Helen Diller Comprehensive Cancer Center Director's Seminar Series, San  
 Francisco, CA  
 Cancer Prevention Summit, American Association of Cancer Research (AACR),  
 Leesburg, VA  
 The Salk Post-Translational Regulation of Cell Signaling Meeting, La Jolla, CA  
 Gordon Research Conference, Phosphorylation & G-Protein Mediated Signaling  
 Networks, Biddeford, Maine  
 MedImmune, Gaithersburg, MD  
 3<sup>rd</sup> Annual Meeting of the International Ovarian in conjunction with International  
 Symposium on Tumor Microenvironment & Therapy Resistance, Oklahoma City,  
 OK  
 International Symposium ROOTS Program, Winning The War Against Cancer,  
 Buenos Aires, Argentina  
 AAAS Annual Meeting. Session on Oral Cancer Epidemiology, Mechanism, and  
 Early detection. Washington DC  
 Global Cancer Forum, New York City, NY  
 Experimental Biology, ASPET Symposium on GPCR signaling through Rho  
 GTPases, San Diego, CA  
 Society of Clinical Investigation & Society of Pharmacology, joint Annual  
 Meeting. Mar Del Plata, Argentina.  
 Bioquant and University of Heidelberg, Heidelberg, Germany  
 2015- American Association of Cancer Research (AACR), Philadelphia, PA  
 American Society of Clinical Oncology (ASCO), Chicago, IL  
 Cancer Prevention Think Tank, National Cancer Institute, Bethesda, MD

- Keynote Lecture, ASPET Upstate New York Pharmacology Society 4th Annual Meeting, Rochester, NY
- UNC Lineberger Comprehensive Cancer Center's Seminar Series, University of North Carolina (UNC), Chapel Hill, NC
- The Second South American Spring Symposium in Signal Transduction and Molecular Medicine, SISTAM 2015, Argentina
- The Dean's Biomedical Research Seminar, Virginia Commonwealth University, Richmond, VA
- University of Virginia, Charlottesville, VA
- University of California Los Angeles (UCLA), Vascular Biology Lecture, LA, CA
- UCSD Moores Cancer Center, San Diego, CA
- Gordon Research Conference, "Molecular Pharmacology", Ventura, CA
- 2014- Great Lakes GPCR Retreat, Bromont, Canada, upcoming.
- Keynote Lecture, 2014 American Head and Neck Society (AHNS) Annual Meeting and 5th World Congress-IFHNOS
- Clinical Grand Rounds, Division of Cancer Medicine, MD Anderson Cancer Center, Houston, TX
- UCSD Moores Cancer Center, San Diego, CA
- Keynote Speaker, Dental Research in Review, University of North Carolina, Chapel Hill, NC
- Distinguished Lecture Series at Massachusetts Eye and Ear Infirmary/Schepens Eye Research Institute, Harvard University, MA
- Mini-Symposium, Cancer Biology, Medical School, University of Chile, Chile
- Summer Course, Cancer Biology: From Basic to Clinic, University of Concepcion, Chile
- IVMB, The 18<sup>th</sup> International Vascular Biology Meeting, Kyoto, Japan
- West China School of Stomatology, Sichuan University, Chengdu, China
- Leuven University, Leuven, Belgium
- Maastricht University, Netherlands
- 2013- University of Pittsburgh Cancer Institute, Hillman Cancer Center, Pittsburgh, PA
- The Weizmann Institute of Science, Israel
- PABMB (Pan-American Association for Biochemistry and Molecular Biology) Plenary Lecture, Madrid, Spain
- Annual Meeting, American Society for Biochemistry and Molecular Biology, ASBMB, Boston, MA
- West China School of Stomatology, Sichuan University, Chengdu, China
- GPCR Workshop, Maui, Hawaii
- UC Berkeley, San Francisco, CA
- Ocular Melanoma Workshop, Melanoma Society, Philadelphia, PA
- 2012- Keystone Meeting, G Protein-Coupled Receptors: Molecular Mechanisms and Novel Functional Insights, Alberta, Canada
- NIH 2012 Demystifying Medicine Course, NIH, Bethesda, MD
- Gordon Research Conference, Phosphorylation & G-Protein Mediated Signaling Networks, Biddeford, Maine
- First Symposium on Head and Neck Cancer Stem Cells, Ann Arbor, MI

8th International Conference on Head & Neck Cancer, Toronto  
 NIH Clinical Center Grand Rounds  
 The Second South American Spring Symposium in Signal Transduction and  
 Molecular Medicine, SISTAM 2012, Argentina  
 University of Sydney, Sydney, Australia  
 Australian Health & Medical Research Congress, Adelaide, Australia  
 2011- IMCB Institute of Molecular and Cellular Biology, Singapore  
 Institute for Cancer Research and Treatment, University of Torino, Torino, Italy  
 University of Illinois College of Medicine, Chicago, IL  
 AACR 102 Annual Meeting, Orlando, FL  
 MinnCResT Symposium: Head & Neck Cancer, University of Minnesota,  
 Minneapolis, MN  
 Boston University, Department of Molecular and cellular Biology, Boston, MA  
 Yale University, Department of Pharmacology, New Haven, CT  
 Third Meeting, International Association of Oral Oncology (IAOO), Singapore  
 IADR Annual Meeting, Stem Cells, Reprogramming, Immunomodulation and  
 Cancer session, San Diego, CA  
 IADR Annual Meeting, Stem Cells, New Targets for the Prevention and  
 Treatment of Oral and Head and Neck Cancer session, San Diego, March 2011  
 Keynote Speaker, (IADR, Chile) Asociación Internacional de Investigación  
 Dental – División Chile, Chile  
 Cell Signaling Networks, Merida, Yucatan, Mexico  
 Vascular Differentiation and Remodeling Meeting, Schloss Mannheim, Germany  
 Keynote Speaker, NCI Frederick Spring Research Festival, Frederick, MD  
 Visiting Professor, Georgetown University, Washington DC  
 2010- Moores UCSD Cancer Center, Director's Seminar Series, UCSD, CA  
 University of Buenos Aires, Buenos Aires, Argentina  
 Keynote Speaker, The First South American Spring Symposium in Signal  
 Transduction and Molecular Medicine, SISTAM 2010, Cordoba, Argentina  
 IBYME, Buenos Aires, Argentina  
 Basic Science Speaker, 92<sup>nd</sup> Annual Meeting, American Association of Oral and  
 Maxillofacial Surgeons (AAOMS), Chicago, IL  
 Visiting Professor and Clinical Ground Round Speaker, Memorial Sloan  
 Kettering Cancer Center, New York, NY  
 University of Cincinnati, Cincinnati, OH  
 AACR 101st Annual Meeting, Washington, DC  
 Fudan University, Shanghai, China  
 2009- Keynote Speaker, U. Michigan School of Dentistry Research Day, Ann Arbor, MI  
 Symposium on “The Origin of Cancer”, Van Andel Institute, Grand Rapids, MI  
 Keynote Lecture, Symposium on Molecular Medicine, Virginia Commonwealth  
 University, Richmond, VA  
 Keynote Speaker, Annual Meeting of the Argentinean Society for Biochemistry, n  
 Tucuman, Argentina  
 Keystone Symposia: Angiogenesis and Lymphangiogenesis in Cancer, Big Sky,  
 MT  
 FASEB Symposium on Lipid Signaling, Session Chair and Lecture, Carefree, AZ

Van Andel Institute, Origins of Cancer Symposium, Grand Rapids, MI  
 University of Maryland, Baltimore, MD  
 University of North Carolina, Chapel Hill, NC  
 University of Pittsburgh, Pittsburgh, PA  
 University of Chicago Cancer Research Center, Chicago, IL  
 Louisiana State University, Head and Neck Surgical Oncology Feist-Weiller  
 Cancer Center, Shreveport, LA  
 ASPET's Experimental Biology 2009 Symposia on Virally-encoded G-Protein  
 Coupled Receptors as New Drug Targets, New Orleans, LA  
 Gordon Research Conference, "Molecular Pharmacology", Il Ciocco, Italy  
 Unidad de Biología Celular Centro Nacional de Microbiología, Instituto de Salud  
 Carlos III, Madrid, Spain  
 Centro de Investigación del Cáncer IBMSS, Salamanca, Spain  
 2008- Clinical Ground Round, MD Anderson, Houston, TX  
 New York Academy of Science, New York, NY  
 North America Vascular Biology Organization (NAVBO), Biology of Signaling  
 in the Cardiovascular System Workshop, Hyannis, MA  
 Vascular Differentiation and Remodeling, Frankfurt, Germany  
 International Conference on Frontiers of Dental and Craniofacial Research,  
 Beijing, China.  
 Hyman Niznik Memorial Lectureship, 9th Annual Joint Meeting of the Great  
 Lakes: G Protein-Coupled Receptor Retreat, Bromont, Canada  
 Merk Frosst Lecture, Institut de Recherches Cliniques de Montreal (IRCM),  
 Montreal, Canada

### **Symposia Organized:**

1995 Workshop on Signaling through G proteins, NIH  
 1996 Workshop on Signal Transduction from the Membrane to the Nucleus, NIH  
 1996 Third Annual Signal Transduction Therapy Conference, San Diego, California  
 1996 Symposium on Regulation of Protein Kinases Involved in Cell Division, Congress  
 of the Pan American Association of Biochemistry and Molecular Biology, Pucon,  
 Chile  
 1998 Workshop on G proteins, 10th International Conference on Second Messengers &  
 Phosphoproteins, Jerusalem, Israel  
 1999 Workshop on "Head and Neck Cancer Priority Setting", organizing committee,  
 NIH  
 1999 Keystone Winter Symposia, "Oncogene Networks" and Session on "Cell Surface  
 Receptors"  
 2002 Workshop on Exchange factors, Juan March Foundation, Madrid, Spain  
 2002 Symposium, Frontiers in Molecular Mechanisms in Cancer, Strategies and  
 Application, Santander, Spain  
 2002 NCI, NIDCD, NIDCR, Trans-NIH Squamous Carcinogenesis Retreat  
 2002 International Oral Cancer Tissue Array Initiative, Organizing Meeting, NIDCR  
 2004 Tva-Animal Models Meeting, Bethesda, MD

- 2005 Advisory Organizing Committee, 10<sup>th</sup> International Congress on Oral Cancer (ICOOC), Crete, Greece
- 2006 “Oral Cancer”, Naresuan University, Phitsanulok, Thailand
- 2006 Organizing Committee, “Workshop on Biology and Treatment of Malignant Salivary Gland Cancers”, NIH, Bethesda, MD
- 2006 Elected, Co-chair, Gordon Research Conference, “Phosphorylation & G-Protein Mediated Signaling Networks”, 2008
- 2007 Advisory Committee, International Association of Oral Oncology, 1st World Congress, Amsterdam
- 2008 Co-chair, Gordon Research Conference, “Phosphorylation & G-Protein Mediated Signaling Networks”, Biddeford, Maine
- 2008 Organizing Committee, International Conference on Frontiers of Dental and Craniofacial Research, Beijing, China.
- 2008 Program Committee, 7<sup>th</sup> International Conference on Head and Neck Cancer, San Francisco, CA.
- 2008 Program Committee, Workshop on Salivary Gland Tumor Research: Current Status and Future Directions. Bethesda, MD.
- 2009 Scientific Advisory Committee, International Oral Oncology Meeting, Toronto, Canada.
- 2010 Co-Organizer, The First South American Spring Symposium in Signal Transduction and Molecular Medicine, SISTAM 2010, Cordoba, Argentina
- 2011 Scientific Advisory Committee, Cell Signaling Networks 2011, Merida, Yucatan, Mexico
- 2012 Program Organizing Committee, Workshop on salivary Gland Tumor Research: Current Status and Future Directions, Bethesda
- 2012 Co-Organizer, The Second South American Spring Symposium in Signal Transduction and Molecular Medicine, SISTAM 2012, Argentina
- 2015 Co-Organizer, The Third South American Spring Symposium in Signal Transduction and Molecular Medicine, SISTAM 2015, Argentina
- 2016 Co-Organizer, Global Cancer Forum, New York City, NY, 2016
- 2016 Co-organizer, Symposium on Cancer Stem Cells as Pharmacological Targets, ASPET/EB Annual Meeting, San Diego, 2016
- 2017 Co-Organizer, AACR-AHNS Conference on Head and Neck Cancer, San Diego, CA
- 2017 Organizer, Moores Cancer Center Science Retreat, La Jolla, CA
- 2018 Co-Organizer, Fourth South American Spring Symposium in Signal Transduction and Molecular Medicine, SISTAM 2018, Bariloche, Argentina
- 2018 Co-organizer, Symposium on G Proteins and GPCRs in Cancer, ASPET/EB Annual Meeting, San Diego, CA
- 2018 Organizer, Moores Cancer Center Science Retreat, La Jolla, CA

## Funding and Support

### Current research Support:

- R01DE026644 (MPI Gutkind/Lippman) 01/01/2017-12/31/2021  
NIH/NIDCR  
Targeting Signaling Vulnerabilities for Oral Cancer Prevention  
The major goals of this project are to discover novel genomic markers of response and resistance to metformin in oral premalignancy, to test the influence of bioenergetic pathways involving LKB1/AMPK, and mTOR and YAP inhibition in the activity of metformin, and to apply genetic screens to identify novel molecular mechanisms determining response or resistance to metformin.  
Role: PI
- R01DE026870 (PI Gutkind) 09/01/2017-08/31/2022  
NIH/NIDCR  
Targeting the EGFR-PI3K/mTOR Signaling Circuitry: A Network-Based Approach for Oral Cancer Precision Therapy  
The goals of this project are to identify novel systems vulnerabilities cetuximab and PI3K/mTORi sensitization and the impact of targeting this pathway on the tumor and immune microenvironment.  
Role: PI
- R33CA225291 (MPI Gutkind/Ruppin) 09/30/2017-08/31/2020  
NIH/NCI  
Area C: Genome-wide identification and targeting of resistance to cancer therapy  
This project aims to establish a new genome wide approach for identifying and targeting resistance pathways in cancer and experimentally test and study its applications in specific cancer types, including breast cancer, colon cancer, head and neck and melanoma.  
Role: PI
- U54CA209891 (MPI Krogan/Ideker) 05/11/2017-04/30/2022  
NIH/NCI  
The Cancer Cell Map Initiative, a National Research Center for Cancer Systems Biology  
The aim of the Cancer Cell Map Initiative is to apply systematic approaches to comprehensively map the molecular networks that underlie cancer and to use these maps as a key resource for precision medicine.  
Role: Co-I
- U01CA217885 (MPI Tamayo/Cohen/Mesirov) 09/12/2017-07/31/2022  
NIH/NCI  
A Rational Systematic Approach to Find Combinations of Pharmacologic and Immune Therapies that Target Identifiable Oncogenic States  
The major goal of this computational biology approaches to cancer therapy discoveries.  
Role: Co-I
- R01CA221289 (Tesmer) 04/01/2018-03/31/2023

NIH/NCI

GPCR-Linked RhoGEFs in Tumor Growth and Metastasis

This projects aims to study experimentally the structural determinants of the activation of G protein-linked RhoGEFs in cells in vivo, and the contribution of G protein-regulated RhoGEFs in cancer in terms of signaling circuitries alterations, tumorigenic activity, and metastatic potential.

Role: Co-I

R01CA222826 (PI Mali)

12/15/2017-01/01/2022

NIH/NCI

Systematic mapping of genetic vulnerabilities in head and neck cancer.

The goal of this project is to use large-scale synthetic lethality Cas9/CRISPR screens, including in PDX models for improving determination of novel combination therapies for cancer.

Role: Co-I

Pending:

R01GM126398 (PI Gutkind)

10/01/2018-10/31/2023

NIH/NIGMS

Non-Canonical Signaling by Gq/GNAQ through Tyrosine Phosphorylation Networks: New Precision Therapies for GNAQ-driven malignancies.

Efforts of this project are aimed at elucidating the GNAQ-oncogenic signaling circuitry will reveal novel targeted (precision) therapies for ocular melanoma and many other human diseases involving aberrant GNAQ expression and function.

Role: PI

R25CA221779 (PI Gutkind)

10/1/2018-09/30/2023

NIH/NCI

Multidisciplinary Educational Approach to Reducing Cancer Disparities

This Youth Enjoy Science Research Education (YES) Program is a very robust science enrichment program. San Diego's three NCI-designated cancer centers (UCSD Moores Cancer Center, Salk Institute for Biological Studies, and Sanford Burnham Prebys Medical Discovery Institute) will work together to provide laboratorybased science education enrichment opportunities designed to address the national goal of increasing the number of women and minorities who are pursuing graduate training in STEM programs and, subsequently, careers in cancer control research.

Role: PI

Recently Completed Grant Support:

*The laboratory was funded from 1996-2015 by the NIDCR Intramural Research Program, NIH.*

- Project Z01DE00551, Molecular Mechanisms of Growth Control and Carcinogenesis
- Project Z01DE00558, Oral Carcinogenesis

2016 PEDAL15 Research Grant Award, Pedal the Cause. The GNAS-PKA Onco-Signaling Network in Colorectal Malignancies

2015 Million Dollar Bike Ride Pilot Grant, University of Pennsylvania Orphan Disease Center.  
Development of next-gen animal models for fibrous dysplasia (FD)/McCune-Albright syndrome (MAS)

2004-2015 Intramural AIDS Targeted Antiviral Program (IATAP)  
Study of AIDS-associated malignancies, with emphasis on Kaposi's Sarcoma and HPV+ cancers

American Asthma Foundation (GPCR-trafficking and tachyphylaxis)  
Human Science Frontier Program (Clonogenic cooperation in cancer)

### **Clinical Protocols**

- NCT02581137, Metformin for Oral Cancer Prevention (M4OC-Prevent). UCSD Moores Cancer Center.  
PI: Scott Lippman; Gutkind J.S., Co-Lead, Open
- NCT01195922, A Pilot Trial Targeting mTOR as a Novel Mechanism-Based Neoadjuvant Therapy for Head and Neck Cancer. NIDCR/NCI/NIDCD/MUSC.  
PI: Gutkind J.S. 2011. Completed, 2015.
- 14CN018. Pilot Study to Evaluate the Natural History of Head and Neck Cancer Precursors in Taiwan. NCI/NIDCR, 2014.  
PI: Anil Chaturvedi. Open.
- T-D-0024, The Molecular Anatomy of Oral Wound Healing. NIDCR.  
PI: Gutkind J.S. 2010. Completed, 2014.

### **Invention Reports and Patents:**

- U.S. Patent 5,384,243, issued January 24, 1995. J. Silvio Gutkind and Keith C. Robbins: Method for screening an agent for its ability to prevent cell transformation.
- NIH Ref No. E-302-2008, Chemoprevention of Head And Neck Squamous Cell Carcinomas. US Patent Application No. 13/059,335 filed August 20, 2009. Canadian Patent Application No. 2734828 filed August 20, 2009. European Patent Application No. 09791732.2 filed August 20, 2009
- NIH Ref No. E-282-2009, Sustained Release Delivery Systems for the Prevention and Treatment of Head and Neck Cancers. International Patent Application No. PCT/IL2010/000694 filed August 25, 2010
- U.S. Patent 9,151,762, issued October 6, 2015. J. Silvio Gutkind, Vyomesh Patel, Alfredo Molinolo, Timothy D. Veenstra. Identification of DSG3 as a Biomarker for the Detection of Metastasis in Lymph Nodes.
- U.S. Patent 9,278,090, issued March 8, 2016. J. Silvio Gutkind J. Silvio Gutkind, Ramiro Iglesias-Bartolome, Vyomesh Patel, Ana p. Cotrim, Alfredo Molinolo, and James B. Mitchell. Methods of preventing the development of mucositis and related disorders



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**Bibliography** [Author=(Gutkind J\* OR Gutkind S\*)]. [Pubmed](#)

**Total 483 publications: 405 peer-reviewed studies, 45 review articles, 33 book chapters, with 52,806 citations and an H index of 101 [ISI] and 119 [Google Scholar]**

**Selected publications, signal transduction research:**

1. Crespo P., Xu N., Simonds W.F., and Gutkind J.S. Ras-dependent activation of MAP kinase pathway mediated by G-protein  $\beta\gamma$  subunits. *Nature*, **369**:418-420, 1994.
2. Coso O., Chiariello M., Yu J.-C., Crespo P., Teramoto, H., Xu N., Miki T., and Gutkind J.S. The small GTP-binding proteins Rac1 and Cdc42 regulate the activity of the JNK (SAPK) signaling pathway. *Cell*, **81**:1137-1148, 1995.
3. Lopez-Illasaca M., Crespo P., Pellici P.G., Gutkind J.S. \*, and Wetzker R. Linkage of G protein-coupled receptors to the MAPK signaling pathway through PI 3-kinase  $\gamma$ . *Science*, **275**:394-397, 1997.
4. Crespo P., Schuebel K.E., Ostrom A.A., Gutkind J.S., and Bustelo X.R. Phosphotyrosine-dependent activation of Rac-1 GDP/GTP exchange by the *vav* proto-oncogene product. *Nature*, **385**:169-172, 1997.
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12. Feng K., Degese M.S., Iglesias-Bartolome R., Vaque J.P., Molinolo A.A., Rodrigues M., Zaidi M.R., Ksander B.R., Merlino M., Sodhi A., Chen Q., and Gutkind J.S. Hippo-independent activation of YAP by the GNAQ uveal melanoma oncogene through a Trio-regulated Rho GTPase signaling circuitry. *Cancer Cell*, **25**:831-845, 2014.
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### **Selected publications, oral cancer research:**

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