

CURRICULUM VITAE

May 15, 2021

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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 (*Pharmacology*), University of Buenos Aires, Argentina

Employment History:

2020-Present Chair, Department of Pharmacology, School of Medicine, University of California San Diego (UCSD), USA
2019-Present Distinguished Professor, Department of Pharmacology, School of Medicine, University of California San Diego (UCSD), USA
2015-Present Associate Director of Basic Science, UCSD Moore's Cancer Center, and Co-Director, Head and Neck Cancer Center
2015-2019 Professor, Department of Pharmacology, School of Medicine, University of California San Diego (UCSD), USA
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:

- 2021 UC San Diego Moores Cancer Center Faculty Award for Excellence in Translational Research
- 2020 Certificate of recognition, United States Senate, for outstanding contributions to the advancement of medical sciences, health care, and public health
Chair, Division of Molecular Pharmacology, American Society for Pharmacology and Experimental Therapeutics (ASPET)
Elected, National Academy of Pharmacy and Biochemistry, Argentina
- 2019 Elected, National Academy of Medicine (NAM), USA, for outstanding contributions in the understanding of cancer signaling networks, and pioneering the study of the *PIK3CA*-mTOR signaling circuitry in head and neck cancer progression, metastasis, and in therapy resistance
Elected Chair, Division of Molecular Pharmacology, American Society for Pharmacology and Experimental Therapeutics (ASPET)
Elected Co-Chair, Gordon Conference in Molecular Pharmacology, Ventura CA
- 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
Keynote Speaker, The First South American Spring Symposium in Signal Transduction and Molecular Medicine, SISTAM 2010, Cordoba, Argentina
- 2009 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
 2000-2016 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
 2002-2017 Member, Faculty 1000, Reviewing Editor
 2003-2005 Member, Editorial Board, Drug Discovery Today: Disease Mechanisms
 2005-2019 Member, Editorial Board, Molecular Biology of the Cell
 2008-present Member, Editorial Board, Cancer Prevention Research
 2009-2019 Member, Editorial Board, Molecular and Cellular Biology
 2009-2015 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 Communications; 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, and Elected Chair, Division of Molecular Pharmacology, 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 and Professional Organizations

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, Mechanisms of Cancer Therapeutics (MCT1)
 2020 Chair, AACR Ocular Melanoma research Grants Scientific Review Committee
 2020 Co-Chair, NCI CTEP program on AKT inhibitors for Cancer Treatment

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
 2008-2017 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

2010-2017 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

Selected NIH Intramural Activities

1995-1997 Member, Gene Targeting Facility Oversight Committee, NIDR
 1995-1996 Member, Sequencing Core Facility Oversight Committee, NIDR
 1997-2006 Member, NIDCR Administrative Oversight Committee
 1997-2006 Member, NIDCR Tenure and Promotion Committee
 1998-2000 Chair, Head and Neck Cancer Consortium, NIH
 1998-2001 Member, NIH Central Tenure Committee
 2001-2004 Member, Steering Committee, NIH-NCI Upper Aerodigestive Track Cancer Intramural Faculty
 2003-2015 Member, NIDCD, Title 42 Standing Committee
 2006-2015 Co-chair, Craniofacial Tissue Remodeling Initiative, NIDCR
 2007 Member, Member, Search Committee, Scientific Director of the Center for Cancer Research, NCI
 2011 Chair, Cancer Biology Search Committee, NIH Stadtman Investigator
 2011 Organizing Committee, Workshop on salivary Gland Tumor Research: Current Status and Future Directions, Bethesda
 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
 2019 Board of Scientific Counselors (BSC) for the Division of Intramural Research (DIR) in the National Institute of Allergy and Infectious Diseases (NIAID), NIH, Bethesda, MD

Invited Presentations (past 12 years and planned)

2021- AHNS 10th International Conference on Head and Neck Cancer, Chicago, IL, upcoming
 8th International Conference on Hippo Signalling in Development, Disease and New Therapies, National University of Singapore, upcoming
 Domain Therapeutics GPCR Symposium, upcoming (virtual)
 2021 CRC1366 Vascular control of Organ function International Meeting, Heidelberg, Germany
 2020- Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine, Miami, FL

The 11th Weinman Symposium, University of Hawaii Cancer Center, Honolulu, Hawaii
 Feist-Weiller Cancer Center Spring Seminar Series, Shreveport, LA
 Seminar series Universidad de San Martin, Buenos Aires, Argentina (virtual)
 Cedars-Sinai Grand Rounds Lecture Series, Los Angeles, CA (virtual)
 Tisch Cancer Center Institute, Mount Sinai School of Medicine, New York City, NY (virtual)
 Huntsman Cancer Institute, University of Utah, Salt Lake City, UT (virtual)
 PCB Seminar Series, UCSF, San Francisco, CA (virtual)
 2019- Keynote, German PharmTox Summit, Stuttgart, Germany
 Purdue University NCI Cancer Center, West Lafayette, IN
 Experimental Biology Symposium, Orlando, FL
 AACR Special Conference on "The Hippo Pathway, Signaling, Cancer, and Beyond", San Diego, CA
 IADR Presidential Symposium, Vancouver, Canada
 AACR Think Tank on Combination Therapies, Washington DC
 Molecular Therapeutics of Cancer Center Conference, Tahoe resort, CA
 International Symposium on Pharmacology of 7TM-receptors and downstream signaling, UCSD
 Signaling Pathways, University of Bonn, Germany
 UT Health School of Dentistry, Houston, TX
 Baylor College of Medicine, Houston, TX
 Boston University, Boston, MA
 NYU Langone Health, Perlmutter NCI-Designated Comprehensive Cancer Center, New York, NY
 2018- Tohoku University Cancer Symposium, Sendai, Japan
 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
 3rd 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
 9th 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, 9th ÖGMBT Annual Meeting & 8th 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 18th 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
 3rd 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.
- 2015- Bioquant and University of Heidelberg, Heidelberg, Germany
 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
- 2014- Gordon Research Conference, "Molecular Pharmacology", Ventura, CA
 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 18th 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
 2012- Ocular Melanoma Workshop, Melanoma Society, Philadelphia, PA
 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
 2011- Australian Health & Medical Research Congress, Adelaide, Australia
 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, 92nd 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

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, 10th 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, 7th 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
- 2019 Elected Co-Chair, Gordon Conference in Molecular Pharmacology, Ventura CA
- 2019 Organizer, Moores Cancer Center Science Retreat, La Jolla, CA
- 2020 Organizer, Moores Cancer Center Science Retreat, La Jolla, CA

Funding and Support

Current Research Support

R01DE026644
NIH/NIDCR

(MPI Gutkind/Lippman)

01/01/2017-12/31/2021

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: MPI

R01DE026870 (PI Gutkind)

08/01/2018-07/31/2023

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

R01CA247551 (Gutkind/Cohen)

12/01/2019-11/30/2024

NIH/NCI

Co-targeting the HER3 oncogenic signaling circuitry and PD-1 as a novel multimodal precision immunotherapy for HNSCC

The goals of this project are to elucidate the contribution of genomic alterations in the PI3K-mTOR signaling network to anti-HER3 sensitivity and resistance, and to establish the impact of targeting and co-targeting the HER3-PI3K/mTOR signaling network on the tumor immune microenvironment and response to PD-1 blockade, aiming at achieving a single cell level understanding of the anti-cancer immune response. These studies will inform the molecular stratification for patient selection in future multimodal precision immune oncology trials.

Role: MPI

R01CA257505 (Gutkind/Aplin)

04/01/2021-03/31/2026

NIH/NCI

Targeting Systems Vulnerabilities in the Gαq/GNAQ Oncogenic Signaling Circuitry: New Precision Therapies for Uveal Melanoma

The goals of this project are to exploit GNAQ-synthetic lethal and gene interaction networks to expose systems vulnerabilities resulting in UM cell death as a precision therapeutic approach to treat mUM. We aim at revealing novel oncogenic mechanism controlled by Gαq and how the interplay between classical and non-canonical Gαq signaling contributes to aberrant cell growth, to help identify novel multimodal precision therapies for mUM.

Role: MPI

R01DE030497 (Zhang/Gutkind)

04/01/2021-03/31/2026

NIH/NIDCR

Signal Transduction by PI3K/mTOR

The overall goal is to uncover the molecular and cellular mechanisms by which mTOR signaling is spatially regulated and to elucidate the contribution of subcellular mTOR Complex 1 (mTORC1) signaling to tumorigenesis.

Role: MPI

U01DE028227 (Schoenberger/Gutkind/Rao)

09/01/2018-08/31/2023

NIH/NCI-NIDCR Cancer Moonshot Program

Stimulating Neo-Antigen Specific T Cell Responses in Head and Neck Cancers.

The goals of this project is to study experimentally the tumor-T cell ecosystem in head and neck squamous cell carcinoma (HNSCC), and will exploit the emerging information to develop novel approaches to enhance the anti-tumor immune response, resulting in tumor regression (cure).
Role: MPI

R25CA221779 (Gutkind/Sadler) 09/01/2019-08/31/2024

NIH/NCI

Multidisciplinary Educational Approach to Reducing Cancer Disparities

San Diego's three NCI-designated Cancer Centers are collaborating in this Youth Enjoy Science Research Education (YES) Program. The Program is an intensive, long term, laboratory and community-based learning opportunity for UCSD students who are from communities that are underrepresented in cancer-related health and science careers. To gain mastery of their knowledge and skills in cancer disparities research, the student participants will be matched with a faculty mentor who will give them hands-on experiences in cancer-related research. Students will also engage in a community-based cancer education campaign about cancer control, cancer disparities, and clinical trials.

Role: MPI

R01CA221289 (PI Tesmer) 04/01/18 - 03/31/2023

NIH/NCI

Experimental study of 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-Investigator

U54CA209891 (MPI Krogan/Ideker) 05/11/2017-4/30/2022

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-Investigator

Recently Completed Grant Support:

R33CA225291 (PI Gutkind) 06/05/2018-08/31/2020

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

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. Completed, 2019.
- 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, 2018.
- 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, Ramiro Iglesias-Bartolome, Vyomesh Patel, Ana p. Cotrim, Alfredo Molinolo, and James B. Mitchell. Methods of preventing the development of mucositis and related disorders.
- U.S. Application serial No. 62/832,425, filed on April 11, 2019. J. Silvio Gutkind, David Schlaepfer. New Anticancer Treatment for Uveal Melanoma.
- US San Diego Office of Innovation and Commercialization, Case No. SD2020-164, filed on October 21, 2019. J. Silvio Gutkind, Zhiyong Wang. New Multimodality Precision Immunotherapy for Head and Neck Cancer.
- U.S. Application serial No. 62/929,061, filed on October 31, 2019. J. Silvio Gutkind, Zhiyong Wang. Novel Syngeneic Animal Model of Tobacco-Associated Oral Cancer Reveals the Activity of in Sity Anti-CTLA-4.

Ph.D. Thesis Directed:

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X. Wu, Ph.D., West China School of Stomatology, Sichuan University, Chengdu, China, 2017
X. Zhao, D.D.S., Ph.D., West China School of Stomatology, Sichuan University, Chengdu,
China, 2018
X. Zhang, D.D.S., Ph.D., West China School of Stomatology, Sichuan University, Chengdu,
China, 2019

Bibliography [Author=(Gutkind J* OR Gutkind S*)]. [PubMed](#)
Total 536 publications: 453 peer-reviewed studies, 49 review articles, 34 book chapters, with 64,410 citations and an H index of 129 [\[Google Scholar\]](#)

Selected publications, signal transduction research:

1. Crespo P, Xu N, Simonds WF, and Gutkind JS. 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 JS. 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 PG, Gutkind JS*, and Wetzker R. Linkage of G protein-coupled receptors to the MAPK signaling pathway through PI 3-kinase γ . *Science*, **275**:394-397, 1997.
4. Crespo P, Schuebel KE, Ostrom AA, Gutkind JS, and Bustelo XR. Phosphotyrosine-dependent activation of Rac-1 GDP/GTP exchange by the *vav* proto-oncogene product. *Nature*, **385**:169-172, 1997.
5. Chiariello M, Marinissen MJ, and Gutkind JS. Regulation of *c-myc* expression by PDGF through Rho GTPases. *Nature Cell Biol.*, **3**:580-586, 2001.
6. Montaner S, Sodhi A, Molinolo AA, Bugge TH, Sawai ET, He Y, Li Y, Ray PE, and Gutkind JS. Endothelial infection with KSHV genes in vivo reveals that vGPCR initiates Kaposi's sarcomagenesis and can promote the tumorigenic potential of viral latent genes. *Cancer Cell*, **3**:23-36, 2003.
7. Castellone MD, Teramoto H, Williams BO, Druey KM, and Gutkind JS. Prostaglandin E2 promotes colon cancer cell growth through a novel Gs-axin- β -catenin signaling axis. *Science*, **310**:1504-1510, 2005.
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10. Vaqué JP, Dorsam RT, Feng X, Iglesias-Bartolome R, Forsthoefel DJ, Chen Q, Debant A, Seeger MA, Ksander BR, Teramoto H, Gutkind JS. A genome-wide RNAi screen reveals a Trio-regulated Rho GTPase circuitry transducing GPCR-initiated mitogenic signals. *Molecular Cell*, **49**:94-108, 2013.
11. O'Hayre M, Vázquez-Prado J, Kufareva I, Stawiski EW, Handel T, Seshagiri S, and Gutkind JS. The emerging mutational landscape of G-proteins and G-protein-coupled receptors in cancer. (Analysis) *Nature Reviews Cancer* **13**(6):412-424, 2013.
12. Feng K, Degese MS, Iglesias-Bartolome R, Vaque JP, Molinolo AA, Rodrigues M, Zaidi MR, Ksander BR, Merlino M, Sodhi A, Chen Q, and Gutkind JS. 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.
13. Mikelis CM, Simaan M, Ando K, Fukuhara S, Sakurai A, Amornphimoltham P, Masedunskas A, Weigert R, Chavakis T, Adams R, Offermanns S, Mochizuki N, Zheng Y, and Gutkind JS. RhoA and ROCK mediate histamine-induced vascular leakage and anaphylactic shock. *Nature Commun.*, **6**:6725, 2015.
14. Iglesias-Bartolome R, Torres D, Marone R, Feng X, Martin D, Simaan M, Chen M, Weinstein LS, Taylor SS, Molinolo AA, and Gutkind JS., Inactivation of a Gas-PKA tumor suppressor pathway in skin stem cells initiates basal-cell carcinogenesis. *Nature Cell Biol.*,

- 17:793-803, 2015.
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 17. Martin D, Degese MS, Vitale-Cross L, Iglesias-Bartolome R, Callejas Valera JL, Wang Z, Feng X, Yeerna H, Vadmal V, Moroishi T, Thorne R, Zaida M, Siegele B, Cheong SC, Molinolo AA, Samuels Y, Tamayo P, Guan KL, Lippman SM, Lyons JG, Gutkind JS. Assembly and Activation of the Hippo Signalome by the FAT1 Tumor Suppressor. *Nature Comm.*, **9**:2372, 2018.
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Selected publications, oral cancer research:

1. Amornphimoltham P, Patel V, Sodhi A, Nikitakis NG, Sauk JJ, Sausville EA, Molinolo AA, and Gutkind JS. mTOR, a molecular target in squamous cell carcinomas of the head and neck. *Cancer Research*, **65**:9953-9961, 2005.
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4. Czerninski R, Amornphimoltham P, Patel V, Molinolo AA, and Gutkind JS. Targeting mTOR by rapamycin prevents tumor progression in an oral-specific chemical carcinogenesis model. *Cancer Prevention Research*, **2**:27-36, 2009.
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6. Patel V, Marsh CA, Dorsam RT, Masedunskas A, Amornphimoltham P, Nathan CO, Singh B, Weigert R, Molinolo AA, and Gutkind JS. Decreased lymphangiogenesis and lymph node metastasis by mTOR inhibition in head and neck cancer. *Cancer Research*, **71**:7103-7112, 2011.

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11. Wang Z, Martin D, Molinolo AA, Patel V, Iglesias-Bartolome R, Degese MS, Vitale-Cross L, Chen Q, and Gutkind JS. mTOR inhibition overcomes cetuximab resistance in head and neck cancers harboring *PIK3CA* and *RAS* mutations. *J. Natl. Cancer Inst.*, **106**(9) 1-11, 2014.
12. Madera D, Vitale-Cross L, Martin D, Schneider A, Molinolo AA, Gangane N, Carey TE, McHugh JB, Komarck CM, Walline HM, William WN Jr, Seethala RR, Ferris R, and Gutkind JS. Prevention of tumor growth driven by *PIK3CA* and HPV oncogenes by targeting mTOR signaling with metformin in oral squamous carcinomas expressing OCT3. *Cancer Prevention Res. (AACR)*, **8**:197-207, 2015.
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16. Iglesias-Bartolome R, Uchiyama A, Molinolo AA, Abusleme L, Brooks SR, Callejas-Valera JL, Edwards D, Doci C, Asselin-Labat M-L, Onaitis MW, Moutsopoulos NM, Gutkind* JS, Morraso* MI (*Co-corresponding authors). Transcriptional signature primes human oral mucosa for rapid wound healing. *Sci. Transl. Med.*, 2018, 10, eaap8798
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- tobacco-associated oral cancer reveal the activity of in situ anti-CTLA-4. *Nature Commun*, **10**(1):5546, 2019.
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Peer Reviewed Research Articles

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2. Gutkind JS and Enero MA. Treatment with clorgyline and pargyline differentially decreases clonidine-induced hypotension and bradycardia. *Naunyn Schmiedeberg's Arch. Pharmacol.*, **327**:189-192, 1984.
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