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Education:

University of California, Davis, 1967-1970, B.Sc., Biochemistry.
Cornell University, 1971-1975, Ph.D. (with Gottfried Schatz), Biochemistry.

Academic Positions:

Professor, Department of Pharmacology, University of Texas Southwestern Medical Center, 1986-present.
Greer Garson and E.E. Fogelson Distinguished Chair in Medical Research, 1996-present
Associate Dean for Basic Research, 2021-present
Research Integrity Officer, 2016-present
Member, Simmons Comprehensive Cancer Center, 2010-present; Associate Director for Shared Resources 2019-present
Member, Graduate Programs in Cellular and Molecular Biology (formerly Cell Regulation), 1991-present; Molecular Biophysics, 1991-1993 and 1995-present; Biochemistry and Molecular Biology, 1993-2001; Pharmacology; 1981-1991; Cell and Molecular Biology, 1981-1991; Computational and Systems Biology (2014-2020).
Professor, Green Center for Systems Biology, 2005-2021; Interim Director 2019-2021
Assistant Dean of Scientific Integrity, 2016-2021
John P. Perkins Distinguished Professorship in Biomedical Science, 2003-2006.
Chair, Graduate Program in Pharmacology, Southwestern Graduate School of Biomedical Sciences, 1982-1989.
Associate Professor, Department of Pharmacology, University of Texas Southwestern Medical Center, 1981-1986.
Assistant Professor, Departments of Biochemistry and Pharmacology, University of Virginia, 1978-1981.
Visiting Assistant Professor, Department of Pharmacology, University of Virginia School of Medicine, 1977-1978.
NIH (NCI) Postdoctoral Fellow, Department of Pharmacology, University of Virginia School of Medicine, 1975-1977.
Instructor, Section of Biochemistry, Molecular and Cell Biology, Cornell University, 1974.

Publications

1. Ross, E.M., and Walsh, D. (1972) Regulation of Rat Placental Phosphorylase. *Biochim. Biophys. Acta*, 264:490-496.
2. Ross, E.M., and Schatz, G. (1973) Assay of Protein in the Presence of High Concentrations of Sulfhydryl Compounds. *Anal. Biochem.*, 54:304-306.
3. Ross, E.M., Ebner, E., Poyton, R.O., Mason, T.L., Ono, B., and Schatz, G. (1974) The Biosynthesis of Mitochondrial Cytochromes. In: *The Biogenesis of Mitochondria*, C. Saccone and A.M. Kroon, eds., Academic Press, pp. 477-489.
4. Ross, E.M. (1975) The Biosynthesis of Cytochrome c_1 in Baker's Yeast *Saccharomyces cerevisiae*, Ph.D. Thesis, Cornell University.
5. Ross, E.M. and Schatz, G. (1976) Cytochrome c_1 of Baker's Yeast. I. Isolation and Properties. *J. Biol. Chem.*, 251:1991-1996.
6. Ross, E.M. and Schatz, G. (1976) Cytochrome c_1 of Baker's Yeast. II. Synthesis on Cytoplasmic Ribosomes and Influence of Oxygen and Heme on Accumulation of the Apoprotein. *J. Biol. Chem.*, 251:1997-2004.
7. Ross, E.M., Dockter, M., and Schatz, G. (1976) Synthesis and Degradation of Mitochondrial Cytochromes. In: *The Biogenesis and Turnover of Membrane Macromolecules*, J.S. Cook, ed., Raven Press, pp. 37-48.
8. Haga, T., Ross, E.M., Anderson, H.J., and Gilman, A.G. (1977) Uncoupling of Hormone Binding and Adenylate Cyclase Activation in a Variant Lymphoma Cell Line. *Proc. Natl. Acad. Sci. U.S.A.*, 74:2017-2020.
9. Ross, E.M., Maguire, M.E., Sturgill, T.W., Biltonen, R.L., and Gilman, A.G. (1977) The Relationship Between the β -Adrenergic Receptor and Adenylate Cyclase. Studies of Ligand Binding and Enzyme Activation in Purified Membranes of S49 Lymphoma Cells. *J. Biol. Chem.*, 252:5761-5775.
10. Ross, E.M. and Gilman, A.G. (1977) Reconstitution of Catecholamine-Sensitive Adenylate Cyclase Activity: Interaction of Solubilized Components with Receptor-Replete Membranes. *Proc. Natl. Acad. Sci. U.S.A.*, 74:3715-3719.
11. Maguire, M.E., Ross, E.M., and Gilman, A.G. (1977) The β -Adrenergic Receptor: Ligand Binding and the Interaction with Adenylyl Cyclase. In: *Advances in Cyclic Nucleotide Research*, Vol. 8, P. Greengard and G.A. Robison, eds., Raven Press, pp. 1-83.
12. Ross, E.M. and Gilman, A.G. (1977) Resolution of Some Components of Adenylate Cyclase Necessary for Catalytic Activity. *J. Biol. Chem.*, 252:6966-6969.
13. Ross, E. and Schatz, G. (1978) Purification and Subunit Structure of Yeast Cytochrome c_1 , *Meth. Enzymol.*, Vol. 53, Biomembranes Part C, S. Fleischer and L. Packer, eds., Academic Press, pp. 222-229.
14. Ross, E.M., Haga, T., Howlett, A.C., Schwarzmeier, J., Schleifer, L.S., and Gilman, A.G. (1978) Hormone-Sensitive Adenylate Cyclase: Resolution and Reconstitution of Some Components Necessary for Regulation of the Enzyme. In: *Advances in Cyclic Nucleotide Research*, Vol. 9, W.J. George and L.J. Ignarro, eds., pp. 53-68.
15. Ross, E.M., Howlett, A.C., Ferguson, K.M., and Gilman, A.G. (1978) Reconstitution of Hormone-Sensitive Adenylate Cyclase with Resolved Components of the Enzyme. *J. Biol. Chem.*, 253:6401-6413.

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19. Ross, E.M., Howlett, A.C., Sternweis, P.C., and Gilman, A.G. (1979) Genetic and Biochemical Resolution of Some Components of Hormone-Sensitive Adenylate Cyclase. In: *Neurogenetics*, X.O. Breakefield, ed., Elsevier, pp. 165-185.
20. Sternweis, P.C., Howlett, A.C., Ross, E.M., and Gilman, A.G. (1979) Resolution, Partial Characterization, and Reconstitution of Some Components of Catecholamine-Sensitive Adenylate Cyclase, *Third European Colloquium on Hormones and Cell Regulation*, pp. 29-46.
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25. Fleming, J.W. and Ross, E.M. (1980) Reconstitution of β -Adrenergic Receptor into Phospholipid Vesicles: Restoration of [¹²⁵I]Iodoxybenzylpindolol Binding to Digitonin-Solubilized Receptors. *J. Cyclic Nucleotide Res.*, 6:407-419.
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27. Ross, E.M. (1981) Mechanism of Action of Biogenic Amines: Biochemical Basis of the Regulation of Catecholamine-Stimulated Adenylate Cyclase. In: *The Biochemical Basis of Hypertension*, R.L. Soffer, ed., John Wiley, pp. 301-318.
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35. Asano, T., Katada, T., Gilman, A.G., and Ross, E.M. (1984) Activation of the Inhibitory GTP-Binding Protein of Adenylate Cyclase, G_i , by β -Adrenergic Receptors in Reconstituted Phospholipid Vesicles. *J. Biol. Chem.*, 259:9351-9354.
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129. Tang, W., Tu, Y., Nayak, S.K., Woodson, J., Jehl, M. and Ross, E.M. (2006) $G\beta\gamma$ Inhibits $G\alpha$ GTPase-activating Proteins (GAPs) by Inhibition of $G\alpha$ -GTP Binding during Stimulation by Receptor. *J. Biol Chem.* 281:4746-4753.
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- isoform that is sensitive to both G $\beta\gamma$ and G α_q . J. Biol. Chem. 286: 942-951.
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 141. Kadamur, G., and Ross, E.M. (2012) Mammalian Phospholipase C. Annu. Rev. Physiol. 75:15.1-15.28.
 142. Ross, E.M. (2014) G Protein-Coupled Receptors: Multi-Turnover GDP/GTP Exchange Catalysis on Heterotrimeric G Proteins. Cell. Logistics, 4, e29391.
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Patents:

Higashijima, T., and Ross, E.M. Methods and Compositions for Modulating G Protein Action
Patent 5,589,568 (1996)

Supplementary Information

Honors:

John P. Perkins Distinguished Professorship in Biomedical Science, UT-Southwestern, 2003-2006.
Goodman and Gilman Award for Drug-Receptor Pharmacology, American Society for
Pharmacology and Experimental Therapeutics, 1996
NIGMS MERIT Award, 1992-2002
Chairman, Gordon Research Conference on Molecular Pharmacology, 1991
Scientific Director, NATO/FEBS Advanced Study Inst. on Biological Signal Transduction, 1990
Established Investigator, American Heart Association, 1980-85
NIH Postdoctoral Fellowship, 1975-77
NSF Graduate Fellowship, 1972-75
Ezra Cornell Graduate Fellowship, 1971
Phi Beta Kappa, 1970

Reviewing and other national/international service:

Editorial Boards: Molecular Pharmacology, 2000-2012; Cell, 1992-2001; Neuron, 1988-1991
Journal of Biological Chemistry, 1984-1989; FASEB Journal, 1996-1999
Journal of Second Messengers and Phosphoproteins, 1980-1994
Canada Foundation for Innovation, Multidisciplinary Assessment Committee, 2015
NIH BBM Study Section, 2012-2016
Texas Advanced Computing Center, University of Texas at Austin, Computational Biology
Planning Committee, 2005-2006
NIH Pre-NPEBC (BISTI) Study Section, 2000-2003
Ad hoc member, NIGMS National Advisory Council, 1986, 1997; NINDS Board of Scientific
Counselors, 2001; NHLBI Board of Scientific Counselors, 1991
Ad hoc member, Physiological Chemistry Study Section, 1982-1984, 1992; Biochemistry-1, 1988;
Molecular and Cellular Biophysics, 1999; Cell Development-4, 2002; Biochemistry-2, 1987;
Pharmacology, 2003; MIST 2008-10; miscellaneous others, site visits, *etc.*
NIGMS Pharmacological Sciences Review Panel, 1988-1992
Human Frontiers Science Program Review Panel, 1995-2003
H.H.M.I. Postdoctoral Fellowship Review Panel, 1992-1994; International Scholars Research
Program Review Committee, 2000-2002
Alliance for Cell Signaling; Chair of Committee on Technology Development and Interfaces 2000-
2002; Steering Committee, 2002-2008
American Heart Association Fellowship Review Committee, 1989-1993; Career Development
Award Review Committee, 2019
Scientific Review Panel, Texas Affiliate of American Heart Association, 1982-1984
American Society for Pharmacology and Experimental Therapeutics: Goodman and Gilman Award
Selection Committee, 1993, 1999-2002; J.J. Abel Award Selection Committee, 1987; Otto
Kramer Award Selection Committee, 1994.
External reviews: Core Facilities Review, Mayo Clinic; Biomedical Sciences Graduate Program, UC
San Diego; Dept. of Pharmacology and Physiology, Univ. of Chicago; NHLBI SCOR Grant,
Duke Univ.
Miscellaneous reviewing: NSF Regulatory Biology and Cellular Physiology Programs; Israel-U.S.
Binational Science Foundation; Veterans Administration Merit Program; Swiss National
Science Foundation, Wellcome Trust; multiple journals

Teaching Activities:

Chair, Pharmacology Graduate Program, University of Texas Southwestern Graduate School of Biomedical Sciences, 1982-1989

Founder and Director, Summer Undergraduate Research Fellowship (SURF) Program, 1984-1995

Chair, Committee to Develop First Year Core Graduate Curriculum, 1989-91

Co-Chair, Committee to Reorganize Core Graduate Curriculum, 2003

Core Curriculum Committee, 1994-1999

Graduate course director or major participant: Molecular Pharmacology, 1978-1981; Signal Transduction, 1981-1990; Biological Membranes, 1979-1998; Advanced Cell and Molecular Biology, 1987-89; First Year Core Curriculum, Proteins Thread Head, 1995-1999; Proteins Thread Discussion organizer, 2004-2009; Mechanisms of Drug Action, 2000-2004; Introduction to Systems Biology (orig. Modeling Biological Signaling Pathways), 2002-2015; Using Light in Biology (orig. Optical Spectroscopy), 2009-2019.

Participation in graduate courses: Cell Regulation Journal Club, every 3 years; several annual RCR lectures; Advanced Pharmacology/ Mechanisms of Drug Action, 1988-1999; Biochemical Endocrinology, 1983-86; Molecular Neurobiology, 1988-90; Biophysical Chemistry, 1983-92; Core First Year Course, 1991-2018 (several lectures in Membranes, Proteins, and Cells and Organelles Threads, discussion section leader, ethics discussion leader, *etc.*); Advanced Cell and Molecular Biology, 1983-1992; Macromolecular Separations and Analysis, 1994-1998; Enzyme Mechanisms, 1996, 1999-2013; Using Light in Biology (orig. Optical Spectroscopy, 1999-2019; Signal Transduction, 2009-2010, 2018-present.; Synapses and Channels, 2016-present.

Participation in Medical Pharmacology, 1978-81, 1983, 2002-2015; Medical Biochemistry, 1978-81; Integrated Medical Curriculum 2015-2018

NATO/FEBS Advanced Study Institute on Biological Signal Transduction, 1988,1990 (Scientific Director),1992

Affiliations:

American Society for Biochemistry and Molecular Biology

American Society for Pharmacology and Experimental Therapeutics (Section on Molecular Pharmacology)

Biophysical Society

AAAS

Association of Research Integrity Officers

Local Committees and Service, UT-Southwestern:

Interim Director, Green Center for Systems Biology, 2019-2021
UTSW Research Integrity Officer and SWMS Assistant Dean of Scientific Integrity, 2016-present
UTSW Post-Tenure Review Committee, 2013-present; Chair, 2016-present
CMB Graduate Program Events Committee, 2015-2018; Chair, 2015-2016
Southwestern Medical School Committee on Core Research Facilities, Chair, 1999-present
Core Laboratory Governance Committee, 2018-present
Director, Rapid Biochemical Kinetics Core Facility, 1996-2017
Southwestern Medical School Promotion and Tenure Committee, 1986-1997, 1998-2000
Member, Simmons Comprehensive Cancer Center, 2010-present; Associate Director for
Shared Resources, 2019-present
Graduate School Awards Committee, 2008-2017
Pharmacological Sciences Training Grant Steering Committee, 1982-2017
IIMT Advisory Committee, ~2000-2021
Founder and Director, UTSW Summer Undergraduate Research Fellowship Program, 1984-1995
Pharmacology Faculty Search Committee, chair, 2012-present and multiple prior cycles
UT-Southwestern Six Year Plan committees on Basic Science Education (1993, 1999, 2001);
Academic Support Services (2005, 2007, 2009); Research (2011, 2013, 2015, 2017)
Scientific misconduct tribunal panel, ~1990-2016 (1 action 2011, 2 actions 2012, 2 actions 2016;
several prior actions)
Dean's Advisory Committee on Promotion and Tenure Policy; 2005-2006
Molecular Biophysics Graduate Program Curriculum Committee, 1991-1993; Chair, 2000-2005;
Organizing Committee for University of Texas Institute for Quantitative Biology, 2006
Campus Search Committees: Cell Biology and Neuroscience Department chair, 1994-1996;
Neuroscience Center Head (search committee chair), 1994-1995; Green Center for Systems
Biology Director, 2018
Molecular Biophysics Graduate Program Steering Committee, 1999-2005
Southwestern Graduate School, Integrated First Year Curriculum Review Committee, 1993-1999
University Lecture Series, 1997- 2013; Chair, 1997-1998
Cell and Molecular Biology Graduate Program Admissions Committee, 1985-1991
(Chair 1986-1989)
Pharmacology Graduate Program Core Committee, Chair, 1982-1989
Intellectual Property Advisory Committee, 1983-1987
Southwestern Graduate School of Biomedical Sciences Graduate Executive Council, 1982-1989
Southwestern Graduate School Committee on Program Review and Curriculum, 1986-1990
Pharmacological Sciences Training Grant Steering Committee, 1982-1989
Southwestern Graduate School Publicity and Recruiting Committee 1984-1992
Medical Education Self-Study Committee for LCME Accreditation, 1995-1996
Chair, Basic Science Education Self-Study Committee for LCME Accreditation, 2001-2002