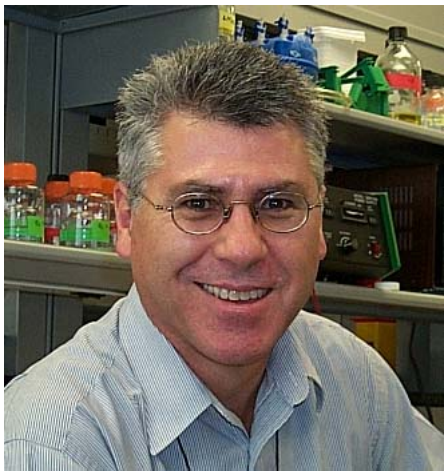
CURRICULUM VITAE

NAME: **WILLIAM P. SCHILLING** **DATE:** May, 2013

PRESENT POSITION AND ADDRESS:



Professor
Department of Physiology and Biophysics
Case Western Reserve University
School of Medicine
Cleveland, OH

Mailing Address: Rammelkamp Center for Research
Room R322
MetroHealth Medical Center
2500 MetroHealth Drive
Cleveland OH 44109-1998

Voice: (216) 778-8965
e-mail: wschilling@metrohealth.org
web site: http://physiology.cwru.edu/faculty.php?id=50

EDUCATION:

1970 - 1974	Chemistry	B.S.	Chapman College, Orange, California
1974 - 1976	Biochemistry		California State University at Fullerton, and Orange County Medical Center
1976 - 1981	Pharmacology	Ph.D.	Medical University of South Carolina, Charleston, South Carolina

PROFESSIONAL AND TEACHING EXPERIENCE:

A. POSITIONS:

2003 - Present	**Professor (Tenured)**, Department of Physiology & Biophysics, Case Western Reserve University School of Medicine, Cleveland, Ohio
1996 - Present	**Bioscientific Staff**, Department of Medicine, Rammelkamp Center for Education and Research, MetroHealth Medical Center, Cleveland, Ohio
1996 - Present	**Adjunct Staff**, Department of Cellular and Molecular Medicine, Cleveland Clinic Foundation, Cleveland, Ohio

1995 - 2003 **Associate Professor (Tenured)**, Department of Physiology & Biophysics, Case Western Reserve University School of Medicine, Cleveland, Ohio

1992 - 1995 **Director, Graduate Studies**, Department of Molecular Physiology & Biophysics, Baylor College of Medicine, Houston, Texas

1991 - 1995 **Associate Professor (Tenured)**, Department of Molecular Physiology & Biophysics, Baylor College of Medicine, Houston, Texas

1985 - 1990 **Assistant Professor**, Department of Molecular Physiology & Biophysics, Baylor College of Medicine, Houston, Texas

1984 - 1985 **Assistant Professor**, Department of Physiology & Biophysics, University of Texas Medical Branch, Galveston, Texas

1983 - 1984 **Research Instructor**, Department of Physiology & Biophysics, University of Texas Medical Branch, Galveston, Texas

1981 - 1983 **Research Associate**, Department of Pharmacology, Medical University of South Carolina, Charleston, South Carolina

B. TEACHING:

2006 - present **First Year Medical Curriculum**; Interactive Session, ~15 students/session; 8 contact hr; 5 sessions: *Signal Transduction: Classes of Hormone Receptors and Intracellular Signaling Pathways; Cardiac Contractility; Cardiac Action Potential; Cardiac Conduction; Action Potential Lab*

1997 - present **Phol 466**, Cell Signaling, Lecture: *Calcium signaling in non-excitable cells* (6 contact hr.), Case Western Reserve University School of Medicine

2004 - present **Phol 468**, Membrane Physiology, 6 lectures: *Introduction to Membrane Physiology; Na^+,K^+-ATPase; Ca^{2+}-ATPase; Na^+,Ca^{2+}-Exchanger; Excitation-Contraction Coupling; TRP Channels* (~9 contact hrs), Case Western Reserve University School of Medicine

1999 - 2006 **Core Medical Physiology**; Combined Basic Science/Clinical Small Group Conferences on *Calcium Homeostasis*; 20 students; (2 contact hr) Organized the basic science component. Case Western Reserve University School of Medicine

2001 - 2003 **Core Medical Physiology**; Small Group Conference on *Cardiac Electrophysiology*; 20 students; (1 contact hr), Case Western Reserve University School of Medicine

2002 - 2004	**Phol 468**, Membrane Physiology, Course Director, 3 lectures: *Introduction Membrane Physiology, Na/Ca Exchanger, Ion channels in non-excitable cells* (~8 contact hrs), Case Western Reserve University School of Medicine
2001 - 2002	**Phol 514,** Introduction to Cardiopulmonary Physiology, Lecture: *Excitation/Contraction Coupling* (1.5 contact hr.), Case Western Reserve University School of Medicine
1997 - 2002	**Phol 518**, Integrative approaches to cardiovascular research, Lectures: *Endothelium and vascular function* (3 contact hr.), Case Western Reserve University School of Medicine.
1996 - 1997	**Horizons in Biomedical Science**, Undergraduate Minority Summer Program, Lecture: *Receptor-operated Ca^{2+} Channels* (1 contact hr), Case Western Reserve University School of Medicine
1989 - 1991	**Core Medical Physiology**, Lectures: *Membrane Physiology I thru V*; *The Vascular Endothelium*. Pathophysiological Correlation: *Heart Failure*, (6 contact hr.), Baylor College of Medicine
1987 - 1992	**Cell Regulation, Signal transduction, and Ion Channels** (Graduate Elective), Lectures: *Intracellular Signaling Mechanisms, Carrier Kinetics, Na,K-ATPase pump, Na,Ca-Exchanger*, (7.5 contact hr.), Baylor College of Medicine
1986 - 1989	**Core Medical Physiology**, Lectures: *Regulation of Food Intake*; *Salivation, Chewing and Swallowing*; *The Stomach*; *The Pancreas*, (4 contact hr.), Baylor College of Medicine
1980 - 1983	**Core Medical Pharmacology 601**, Laboratory exercise on isolated rabbit heart preparation, (3 contact hr.), Medical University of South Carolina, Charleston, South Carolina
1982 - 1983	**Core Medical Pharmacology 601**, Small Group Conference on Cardiac Drugs, (1 contact hr) Medical University of South Carolina, Charleston, South Carolina
1983	**Core Dental Pharmacology 621**, Lecture: *Drugs of Abuse*, (1 contact hr), Medical University of South Carolina, Charleston, South Carolina
1979 - 1982	**Core Dental Pharmacology 621**, Lecture: *Antiarrhythmic Agents*, (1 contact hr) Medical University of South Carolina, Charleston, South Carolina
1980	**Core Dental Pharmacology 621**, Lecture: *Local Anesthetics*, (1 contact hr) Medical University of South Carolina, Charleston, South Carolina
1983	**Cardiovascular Pharmacology** (Graduate Elective; ~40 contact hr), Medical University of South Carolina, Charleston, South Carolina

1979 - 1983 **Introduction of Principles and Practices of Pharmacology** (Undergraduate) Lecture: *Physiology and Pharmacology of the Heart*, (2 contact hr) Medical University of South Carolina, Charleston, South Carolina

C. STUDENT TRAINEES:

John Drewe, Ph.D., Graduate Student, lab rotation, 1984.
Gretchen Hanson, Ph.D., Graduate Student, **Dissertation research**, 1987-1989.
Eva Strobl-Jager, M.D., Postdoctoral Associate, 1988.
Stephen J. Elliott, M.D., Research Fellow, 1987-1992
Rita Alevriadou, MS, Ph.D., Graduate Student, **Thesis research**, 1988
Ching-Fong Liao, Ph.D., Graduate Student, **Dissertation research** (in part), 1989
Bill Ho, Graduate Student, lab rotation, 1988
David Rickman, Graduate Student, lab rotation,1990
Olga A. Cabello, Ph.D., Graduate Student, **Dissertation research**, 1990-1993
Makoto Mo, M.D., Research Fellow, 1990
Kerry Stewart, M.D., Research Fellow, 1991
Yanfang Hu, Ph.D., Graduate Student, **Dissertation research**, 1992-1994
Xilin Chen, Ph.D., Postdoctoral Associate, 1992-1994
Ying Wu, Ph.D., Postdoctoral Associate, 1993-1994
Yanjie Dong, Ph.D., Postdoctoral Associate, 1994-1995.
Reynaldo Garcia, Ph.D., Postdoctoral Associate, 1996-1997
William Sinkin, Ph.D., Postdoctoral Associate, 1993-1997
Sun-Ah You, Ph.D., Postdoctoral Associate, 2000-2001
Brian Wisnosky, Graduate Student. **Dissertation Research**, 1999-2004
Monu Goel, Ph.D., Postdoctoral Associate, 1999-2003
Michelle Innocenti, Graduate Student, lab rotation, 2002
Steven Woltering, Undergraduate Student, Senior Project, 2003-2004
Yuka Maeno-Hikichi, Ph.D., Postdoctoral Associate, 2004-2005
Jeff Lock, Graduate Student, lab rotation, 2007
Krekwit Shinlapawittayatorn, Graduate Student, lab rotation, 2007
Jeff Lock, Graduate Student, **Dissertation Research**, 2008-2012
Matt Cohen, Graduate Student, lab rotation, 2009-2010
Sarah Zilka, Graduate Student, **Dissertation Research (**In part**),** 2009-2011
Brian King, Masters in Medical Physiology Student, Lab rotation, Spring, 2012.
Matt Cohen, Graduate Student, **Dissertation Research** (in part), 2012

D. FACULTY MENTORING

Yuehan Zhou,M.D., Instructor, Mentoring Committee, 2010-2012
Vera Moiseenkova-Bell, Ph.D., Assistant Professor, Mentoring Committee, 2011-present

HONORS AND AWARDS:

1974	B.S., *Magna cum Laude* with Honors in Chemistry
1976 - 1981	NIH Pre-Doctoral Fellowships
1983 - 1984	Drug Science Foundation Scholar
1989 - 1994	American Heart Association Established Investigatorship
1994	Excellence in Graduate Education Award, Baylor College of Medicine

SOCIETY MEMBERSHIPS:

1993 - Present	American Physiological Society
1984 - 2011	Biophysical Society
1991 - 2007	American Association for the Advancement of Science
1994 - 2008	Society of General Physiologists

RESEARCH

A. AREAS OF RESEARCH INTERESTS:

1. Structure, Function, and Regulation of Mammalian TRPC Channels
2. Role of Ca^{2+} Channels in Oxidant Stress-induce Cell Death

B. ONGOING RESEARCH SUPPORT:

As Principal Investigator:

CWRU School of Medicine (Bridge Support) 07/01/12 – 06/30/13

Role of TRPC3 channels in renal Ca^{2+} reabsorption and kidney stone formation

During periods of dehydration,TRPC3 channels traffic to the apical membrane of principal cells of the collecting duct. This occurs in response the antidiuretic hormone, arginine-vasopressin. This project will evaluate the impact of TRPC3 channel activity on Ca^{2+} reabsorption during periods of dehydration and on kidney stone formation.

C. PRIOR RESEARCH SUPPORT (as Principal Investigator):

Guion Pool Keating Endowment for Research in Cardiology (BSRG); Dihydropyridine binding in isolated cardiac sarcolemma; Total Direct: $10,000, Date: 1984.

AHA-Texas Affiliate Grant 85G-657, Dihydropyridine binding in isolated cardiac sarcolemma; Total Direct: $50,000, Date: 1985-1987.

NIH P01 HL37044, Project 4, Dihydropyridine binding in isolated cardiac sarcolemma preparations; Total Direct: $244,204, Date: 1985-1989.

NIH R29 HL44119, Calcium signaling in vascular endothelial cells; Total Direct: $358,748, Date: 1989-1995.

AHA-Established Investigatorship; Signal transduction in vascular endothelial cells; Total Direct: $210,000, Date: 1989-1994.

NIH R01 HL47876; Transduction of hemodynamic signals into vascular cells; Total Direct: $440,920, Date: 1991-1995.

AHA-Postdoctoral Fellowship to William Sinkins, "Structure and function of store-operated channels" W.P. Schilling, Sponsor; Total Direct: $53,200, Date: 1996-1998.

CWRU/HHMI-Pilot Project Grant, “Ion Channels and Necrotic Cell Death"; Total Direct: $80,000, Date: 1998-2000.

AHA-Grant-in-Aid 9950014N, “Ion channels and Necrotic Cell Death”, Total Direct: $100,000; Date: 07/01/99-12/31/01.

AHA-Postdoctoral Fellowship to Monu Goel, "Role of immunophilins and InaD in regulation of Trp channel activity"; Sponsor, W. P. Schilling; Total Direct: $70,000, Date: 07/01/00-06/30/02.

Novartis Pharmaceuticals Horsham, U.K., Research Contract, “Electrophysiological Characterization of Human TRPC6 and TRPC7 Channels”, Total Direct: $319,150, Date: 2000-2005.

Novartis Institutes for BioMedical Research, Research Contract, “Determination of biophysical properties of TRPC3 and TRPC6 heteromultimers”, Total Direct: $160,000, Date: 2007-2009.

NIH T32-HL007887, “Heart-Lung Physiology: Molecular-systemic integration”, Total Direct: $484,163, Date: 2007-2009

NIH R01-GM52019, "Ca^{2+} Channels in Non-Excitable Cells"; Total Direct: $2,578,846; Dates: 08/01/95-07/30/07.

NIH R01 HL65323, “Role of Ion Channels in Cell death”; Total Direct: $800,000; Dates: 01/01/02-12/31/06.

R01-HL097355, “Regulation of PMCA pump-channel by oxidant stress”; Total Direct: $500,000; Dates: 09/01/09 – 08/30/11.

INVITED SEMINARS:

A. NATIONAL

Universities/Medical Schools

Duke University, Department of Physiology, 1983
University of Texas Medical Branch, Galveston, Department of Physiology, 1983
University of California at Los Angeles, Department of Biology, 1983
University of California at San Diego, Division of Pharmacology, 1983
University of Colorado, Denver, Department of Physiology, 1983
Case Western Reserve, Department of Physiology, 1988
Rice University, Department of Chemical Engineering, 1989
Baylor College of Medicine, Department of Medicine, Cardiovascular Sciences, 1989
Rice University, Department of Chemical Engineering, 1990
Medical University of South Carolina, Department of Pharmacology, 1990
University of Houston School of Pharmacy, Department of Pharmacology, 1990
University of Texas Medical Branch, Department of Physiology, 1990
Cleveland Clinic, Department of Vascular Cell Biology, 1991
Texas A&M University, Department of Medical Physiology, 1992
Texas A&M University, Department of Pharmacology, 1993
Zeneca Pharmaceuticals, Wilmington, DE, 1993
Univ. of Texas Health Science Center, Houston, TX, Department of Physiology, 1994

Univ. of Texas Health Science Center, San Antonio, TX, Department of Physiology, 1994
Indiana University, Department of Physiology, 1994
University of Vermont, Department of Pharmacology, 1994
Medical College of Pennsylvania, Department of Physiology, 1994
Rice University, Department of Chemical Engineering, 1994
Baylor College of Medicine, Department of Pathology, 1994
Case Western Reserve University, Department of Physiology & Biophysics, 1994
Cleveland Clinic, Department of Molecular Cardiology, 1995
Loyola University of Chicago, Department of Physiology, 1995
University of California at Irvine, Department of Physiology, 1997
University of Rochester, Department of Pharmacology, 1997
Cleveland Clinic, Division of Anesthesiology, 1999
University of Chicago, Department of Cell Physiology, 1999
University of Texas, Southwestern, Department of Physiology, 2000
Bowling Green State University, Department of Biology, 2000.
University of Oklahoma Helath Sciences Center, Department of Cell Biology, 2000
Northeast Ohio Universities College of Medicine, Department of Physiology, 2001
Ohio State University School of Medicine, Biochemistry Graduate Program, 2002
Baylor College of Medicine, Department of Molecular Physiology and Biophysics, 2002
Cleveland State University, Department of Chemistry, 2003
Case Western Reserve University, Department of Pharmacology, 2004
University of California, Davis, Department of Pharmacology, 2004
Texas Tech University Health Science Center, Department of Physiology, 2004
University of Chicago, Department of Neurobiology, Pharmacology, and Physiology, 2005
NIH/NIEHS, Research Triangle Park, NC, Laboratiory of Cell Signaling, 2005
UMDNJ New Jersey Medical School, Department of Pharmacology and Physiology, 2006
Genzyme Corporation, Drug Discovery and Development, Waltham, MA, 2006
Northeast Ohio Universities College of Medicine, 2006
Genzyme Corporation, Drug Discovery and Development, Waltham, MA, May, 2007
Genzyme Corporation, Drug Discovery and Development, Waltham, MA, November, 2007
Loyola University of Chicago, Department of Physiology, 2008
University of Toledo College of Medicine, Department of Physiol. and Pharmacol, 2008
National Institute of General Medical Sciences, 2012
Case Western Reserve University, Pediatrics, 2013

Conferences

FASEB, *Endothelial Cell Biology*, (Session Chair) 1991
Gorden Research Conference, *Atherosclerosis*, 1991
FASEB Summer Research Conference, *Microvascular Biology*; Copper Mountain, CO, 1992
University of California at Los Angeles, *Vascular Biology Series*, 1993
Gordon Conference, *Calcium Signalling*, 1995
FASEB Summer Research Conference, *Biology and Chemistry of Vision*, 1995
University of Utah, Bristol-Myers Squibb Symposium on *Ion Channels*, 1998
Gordon Conference, *Calcium Signalling*, 1999
Gordon Conference, *Mycotoxins and Phycotoxins*, 2001
American Society of Nephrology, TRP Channel Mini-symposium, 2006

FASEB, *Ion Channel Trafficking in the Kidney*, 2011

B. INTERNATIONAL

Mexican Cardiology Society, Veracruz, Mexico, 1993
Physiological Society, King's College, London, 1993
IUPHAR, *Vascular Neuroeffector Mechanisms*, Kananaskis, Alberta, Canada, 1994
University of Bath, *International Symposium on Calcium Signalling*, (Session Chair) 1995
Novartis Pharmaceuticals, Horsham, UK, 1999
Novartis Pharmaceuticals, Horsham UK, 2003
Novartis Foundation Symposium (Closed Session), *TRP Channels as Molecular Targets*, London, UK, 2003 (Organized this Symposium with Foundation Staff)
Novartis Foundation Symposium (Open Session), *TRP Channels as Molecular Targets*, London, UK, 2003 (Organized this Symposium with Foundation Staff)
Novartis Pharmaceuticals, Horsham, UK, 2005
University of Oxford, Oxford, U.K., 2005
Novartis Pharmaceuticals, Horsham UK, 2008
University of Oxford, Oxford, U.K., 2008

PROFESSIONAL SERVICE:

A. INTERNAL

Case Western Reserve University/Rammelkamp Center for Research

Chairman, Ad hoc committee to review the Research Committee (School of Medicine, 2013)
Member, Faculty Council Steering Committee, (School of Medicine, CWRU), 2012-2013
Member, Faculty Council (School of Medicine, CWRU), 2010-2013
Member, Committee on Appointments, Promotion & Tenure (Physiology,CWRU) 2010-present
Member, Graduate Education Committee (Physiology, CWRU) 2007-present
Member, Graduate Student Advisory Committees (Physiology, CWRU), 1995-present
Member, Research Committee (School of Medicine, CWRU), 2002-2012
Member, Board of Directors, (MetroHealth Research Institute), 2005-2011
Chairman, Shared Resources Committee (Rammelkamp Center), 1995-2011
Member, Computer Committee (Rammelkamp Center), 2000-2012
Member, Executive Faculty Committee (Rammelkamp Center), 2000-2003
Chairman, Faculty Recruitment Committee (Rammelkamp Center), 2004-2005
Member, Faculty Recruitment Committee (Rammelkamp Center), 2000-2001
Member, Seminar Committee (Physiology, CWRU), 1997-2003
Member, Graduate Student Admissions Committee (Physiology, CWRU), 1996-2000
Member, Promotions and Tenure Committee (Physiology, CWRU), 1997-1999

Baylor College of Medicine

Member, Student Promotions and Acad. Achievement Committee (Medical School), 1990-1992.
Member, Faculty Research & Fellowship Support Committee (Medical School), 1991-1993.
Member, Executive Council (Graduate School), 1992-1995.
Member, Curriculum and Policy Committee (Graduate School), 1985-1995.
Member, SMART Program Committee (Graduate School), 1989-1992.

Member, Graduate Advisory Committees (Graduate School), 1985-1995
Member, Graduate Education Committee (Physiology), 1985-1995.
Member, Shared Equipment Committee (Physiology), 1985-1995.
Environmental Safety Supervisor (Physiology), 1985-1995.

B. NATIONAL

Member, *Ad hoc*, NIH-NHLIB Program Project Grant Review Study Section, 2010
Member, Research Committee, Am. Heart Assoc.-Ohio Valley Affiliate, 2006-2009
Vice Chair, Research Committee, Am. Heart Assoc.-Ohio Valley Affiliate, 2004-2006
Member, Editorial Board, *Am. J. Physiol:Heart and Circulatory Physiology*, 2000 - 2005
Member, Editorial Board, *Am. J. Physiol:Cell Physiology*, 1996 - 2002
Member, American Heart Association, Molecular Signaling I Study Committee, 1996 - 1999
Member, American Heart Association, Mid-America Consortium Study Group, 1998-1999
Member, American Heart Association-Ohio Affiliate, Research Study Group, 1997
Member, *Ad hoc*, NIH Study Section, CBY-2, 1997
Member, Editorial Board, *Am. J. Physiol:Heart and Circulatory Physiology*, 1990 - 1996
Member, American Heart Association, Vascular Wall Biology Study Committee, 1991 - 1995
Member, Am. Heart Association, TX-Affiliate, Central Research Review Committee, 1990-1993
Member, NHLBI Program Project Grant Site Visit Committee, 1986

C. INTERNATIONAL

Ad Hoc Grant Reviews for:

The Wellcome Trust, UK.
Binational Science Foundation, Israel
University of Melbourne, Australia, Thesis Examination
The Israel Science Foundation
Australian Research Council
Flinders University of South Australia, Thesis Examination
Medical Research Council, London, UK
FWF der Wissenschaftsfonds, Austria
National Science Foundation

D. EXTERNAL CONSULTING

Paid Consultant for:

Novartis Pharmaceuticals, Horsham, UK, 2000-2009
Genzyme Corporation, Drug Discovery and Development, Waltham, MA, 2006-2008

BIBLIOGRAPHY:

1. Van Alstyne, E., Bartschat, D.K., Wellsmith, N.V., Poe, S.L., **Schilling, W.P.**, and Lindenmayer, G.E. Isolation of a highly enriched sarcolemma membrane fraction from canine heart. *Biochem. Biophys. Acta* **553**:338-395, 1979.

2. Hungerford, R.T., Lindenmayer, G.E., **Schilling, W.P.**, and Van Alstyne, E. The effects of membrane potential on sodium-dependent calcium transport in cardiac sarcolemma vesicles. In Electrogenic transport: Fundamental principles and physiological implications. (M.P. Blaustein and M.L. Lieberman, Eds.) Raven Press, New York, 1984.

3. **Schilling, W.P.** and Lindenmayer, G.E. Voltage-sensitive calcium flux promoted by vesicles in an isolated cardiac sarcolemma preparation. *J. Memb. Biol.* **79**:163-173, 1984.

4. **Schilling, W.P.**, Schuil, D.W., Bagwell, E.D., and Lindenmayer, G.E. Sodium and potassium permeability of membrane vesicles in a sarcolemma enriched preparation from canine ventricle. *J. Memb. Biol.* **77**:101-114, 1984.

5. **Schilling, W.P.** and Drewe, J.A. Voltage-sensitive nitrendipine binding in an isolated cardiac sarcolemma preparation. *J. Biol. Chem.* **261**:2750-2758, 1986.

6. Colden-Stanfield, M., **Schilling, W.P.**, Ritchie, A.K., Eskin, S.G., Navarro, L.T., and Kunze, D.L. Bradykinin-induced increases in cytosolic calcium and ionic currents in cultured bovine aortic endothelial cells. *Circ. Res.* **61**:632-640, 1987.

7. **Schilling, W.P.**, Ritchie, A.K., Navarro, L.T., and Eskin, S.G. Bradykinin-stimulated calcium influx and cytosolic calcium changes in bovine aortic endothelial cells. *Am. J. Physiol.* **255**:H219-H227, 1988.

8. **Schilling, W.P.** Effect of divalent cation chelation on dihydropyridine binding in isolated cardiac sarcolemma vesicles. *Biochem. Biophys. Acta* **943**:220-230, 1988.

9. Rampe, D., Poder, T., Zhao, Z.-Y., and **Schilling, W.P.** Calcium channel agonist and antagonist binding in a highly enriched sarcolemma preparation obtained from canine ventricle. *J. Cardiovas. Pharmacol.* **13**:547-556, 1989.

10. **Schilling, W.P.** Effect of membrane potential on bradykinin-stimulated changes in cytosolic calcium in bovine aortic endothelial cells. *Am. J. Physiol.* **257**:H778-H784, 1989.

11. Elliott, S.J., Eskin, S.G., and **Schilling, W.P.** Effect of t-butyl-hydroperoxide on bradykinin-stimulated changes in cytosolic Ca^{2+} in vascular endothelial cells. *J. Biol. Chem.* **264**:3806-3810, 1989.

12. **Schilling, W.P.**, Rajan, L., and Strobl-Jager, E. Characterization of the bradykinin-stimulated calcium influx pathway of cultured vascular endothelial cells: Saturability, selectivity and kinetics. *J. Biol. Chem.* **264**:12838-12848, 1989.

13. Rani, C.S.S., **Schilling, W.P.**, and Fields, J.B. Stimulation of intracellular calcium mobilization by thyrotropin in dog thyroid cells: Comparison with the effects of carbachol and ATP. *Endocrinology* **125**:1889-1897, 1989.

14. Hamilton, S.L., Alvarez, R.M., Fill, M., Hawkes, M.J., Brush, K.L., **Schilling, W.P.**, and Stefani, E. [^{3}H]PN200-110 and [^{3}H]ryanodine binding and reconstitution of ion channel activity with skeletal muscle membranes. *Anal. Biochem.* **183**:31-41, 1989.

15. Elliott, S.J. and **Schilling, W.P.** Carmustine augments the effects of tert-butyl-hydroperoxide on calcium signaling in cultured pulmonary artery endothelial cells. *J. Biol. Chem.* **265**:103-107, 1990.

16. **Schilling, W.P.**, Zaher, M., and Rampe, D. Effect of inorganic calcium channel blockers on dihydropyridine binding in isolated cardiac sarcolemma vesicles. *Mol. Pharmacol.* **37**: 80-89, 1990.

17. Colden-Stanfield, M., **Schilling, W.P.**, Possani, L.D., and Kunze, D.L. Bradykinin-induced potassium current in cultured bovine aortic endothelial cells. *J. Memb. Biol.* **116**:227-238, 1990.

18. Liao, C.F., **Schilling, W.P.**, Birnbaumer, M., and Birnbaumer, L. Cellular responses to stimulation of the type-5 muscarinic acetylcholine receptor as seen through stable expression in murine L Cells. *J. Biol. Chem.* **265**:11273-11284, 1990.

19. Elliott, S.J. and **Schilling, W.P.** Oxidative stress inhibits bradykinin stimulated $^{45}Ca^{2+}$ flux in pulmonary vascular endothelial cells. *Am. J. Physiol.* **260**:H549-H556, 1991.

20. Mo, M., Eskin, S.G, and **Schilling, W.P.** Flow-induced changes in calcium signalling of vascular endothelial cells: Effect of shear stress and ATP. *Am. J. Physiol.* **260**:H1698-H1707, 1991.

21. Elliott, S.J. and **Schilling, W.P.** The vascular endothelium in oxidant-induced lung injury. In Free radical mechanisms of tissue injury. Eds. M.T. Moslen and C.V. Smith, CRC Press, Boca Raton, 1992.

22. **Schilling, W.P.**, Mo, M., and Eskin, S.G. Effect of shear stress on cytosolic Ca^{2+} of calf pulmonary artery endothelial cells. *Exp. Cell Res.* **198**:31-35, 1992.

23. Elliott, S.J. and **Schilling, W.P.** Oxidant-stress alters Na^+ pump and Na^+-K^+-Cl^- cotransporter activities in vascular endothelial cells. *Am. J. Physiol.* **263**:H96-H102, 1992.

24. **Schilling, W.P.** and Elliott, S.J. Ca^{2+} signaling mechanisms of vascular endothelial cells and their role in oxidant-induced endothelial cell dysfunction. (Invited Review) *Am. J. Physiol.* **262**:H1617-H1630, 1992.

25. **Schilling, W.P.**, Cabello, O. and Rajan, L. Depletion of the inositol-1,4,5-trisphosphate-sensitive intracellular Ca^{2+} store in vascular endothelial cells activates the agonist-sensitive Ca^{2+} influx pathway. *Biochem. J.* **284**:521-530, 1992.

26. Vaca, L., **Schilling, W.P.** and Kunze, D.L. G-protein-mediated regulation of a Ca^{2+}-dependent K^+ channel in cultured vascular endothelial cells. *Pflügers Arch.* **422**:66-74, 1992.

27. Elliott, S.J., Meszaros, J.G. and **Schilling, W.P.** Effect of oxidant-stress on calcium signaling in vascular endothelial cells. (Invited Review) *Free Rad. Biol. Med.* **13**:635-650, 1992.

28. Hanson, G.L., **Schilling, W.P.,** and Michael, L.H. Developmental changes in canine cardiac sarcolemmal activities of Na^+, K^+-ATPase and Na^+, Ca^{2+} exchange. *Am. J. Physiol.* **264**:H320-H326, 1993.

29. Alevriadou, B.R., Eskin, S.G., McIntire, L.V., and **Schilling, W.P.** Effect of shear stress on $^{86}Rb^+$ efflux from calf pulmonary artery endothelial cells. *Ann. Biomedical Eng.* **21**:1-7, 1993.

30. Elliott, S.J., Doan, T.N. and **Schilling, W.P.** Role of lipid peroxidation in tert-butylhydroperoxide-induced inhibition of endothelial cell calcium signaling. *J. Pharmacol. Exp. Therap.* **264**:1063-1070, 1993.

31. Cabello, O.A. and **Schilling, W.P.** Vectorial Ca^{2+} flux from the extracellular space to the endoplasmic reticulum via a restricted cytoplasmic compartment regulates inositol 1,4,5-trisphosphate-stimulated Ca^{2+} release from internal stores in non-excitable cells. *Biochem. J.* **295**:357-366, 1993.

32. Cabello, O.A. and **Schilling, W.P.** Calcium signaling processes in endothelial cells. In Functionality of endothelium in Health and Disease: A comprehensive review. (G. Pastelin, R. Rubio, G. Ceballos, J.Suarez, Eds.) Sociedad Mexicana de Cardiologia, Veracruz, 1994.

33. Tian, P., Hu, Y., **Schilling, W.P.**, Lindsay,D.A., Eiden, J. and Estes, M.K. The nonstructural glycoprotein of rotavirus affects intracellular calcium levels. *J. Virology* **68**:251-257, 1994.

34. Hu, Y., Rajan, L. and **Schilling, W.P.** Ca^{2+} signaling in Sf9 insect cells and the functional expression of a rat brain M_5 muscarinic receptor. *Am. J. Physiol. (Cell Physiol.)* **266**:C1736-C1743, 1994.

35. Hu, Y., Vaca, L., Zhu, X., Birnbaumer, L., Kunze, D.L. and **Schilling, W.P.** Appearance of a novel Ca^{2+} influx pathway in Sf9 insect cells following expression of the transient receptor potential-like (trpl) protein of *Drosophila*. *Biochem. Biophys. Res. Comm.* **201**:1050-1056, 1994.

36. Vaca, L., Sinkins, W.G., Hu, Y., Kunze, D.L. and **Schilling, W.P.** Activation of recombinant *Trp* by thapsigargin in Sf9 insect cells. *Am. J. Physiol. (Cell Physiol.)* **267**:C1501-C1505, 1994.

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