

CURRICULUM VITAE 2011

Cynthia Joanne (Pipho) Meininger

ADDRESS:

Professional:

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EDUCATION:

- 1990* Hormone Action and Molecular Endocrinology, a molecular biology course presented by the Department of Cell Biology, Baylor College of Medicine, Houston, Texas (February 1990).
- Postdoctoral Training* Texas A&M University, College Station, TX 77843. Field of Study: Angiogenesis and Vascular Cell Biology. Preceptor: Dr. Harris J. Granger. (May 1987-April 1989).
- Ph.D.* Texas A&M University, College Station, TX 77843. Major Field: Cell Biology. Preceptors: Drs. Helmut Sauer and Harris Granger. Dissertation Title: Adenosine Stimulates the Rate of Proliferation of Aortic and Microvascular Endothelial Cells." (May 1987).
- 1984* International Course on Tissue Culture in the Study of the Cardiovascular System, Department of Anatomy, College of Medicine, University of Saskatchewan, Saskatoon, Saskatchewan. (May 1984).
- 1981-1982* University of Missouri-Columbia, Columbia, MO 65211. Graduate courses in Mammalian Physiology, Pharmacology, Virology and Analytical Cytology.
- B.A.* University of South Florida, Tampa, FL 33620. Major field: Cell Biology. (June 1980).
- 1978* Emergency Medical Technician I certification (State of Florida), Hillsborough Community College, Tampa, FL 33612.
- High School* Duncan U. Fletcher Senior High School, Neptune Beach, FL 32233. (June 1976)

PROFESSIONAL POSITIONS:

Director of Graduate Studies: Temple Campus, Texas A&M Health Science Center, College Station, TX 77843 (July 2010-present).

Associate Director MD/PhD Program: Temple Campus, Texas A&M Health Science Center, College Station, TX 77843 (July 2010-present).

Professor: Department of Systems Biology and Translational Medicine, College of Medicine, Texas A&M Health Science Center, College Station, TX 77843 (September 2006-present).

Associate Professor: Department of Systems Biology and Translational Medicine, College of Medicine, The Texas A&M University System Health Science Center, College Station, TX 77843 (January 2006-August 2006).

Associate Professor: Department of Medical Physiology, College of Medicine, The Texas A&M University System Health Science Center, College Station, TX 77843 (September 1997-December 2005).

Assistant Professor: Department of Medical Physiology, College of Medicine, Texas A&M University, College Station, TX 77843. (September 1991-August 1997).

Visiting Assistant Professor: Department of Surgery, Harvard Medical School, Boston, MA 02115. (September 1990-August 1991).

Assistant Research Scientist: Department of Medical Physiology, College of Medicine, Texas A&M University, College Station, TX 77843. (April 1989-August 1991).

Postdoctoral Fellow: Department of Medical Physiology, College of Medicine, Texas A&M University, College Station, TX 77843. (April 1988-March 1989).

Postdoctoral Research Associate: Department of Medical Physiology, College of Medicine, Texas A&M University, College Station, TX 77843. (May 1987-April 1988).

Research Assistant: Department of Medical Physiology, College of Medicine, Texas A&M University, College Station, TX 77843. (June 1984-April 1987).

Teaching Assistant: Department of Biology, Texas A&M University, College Station, TX 77843. (January 1982-May 1984).

Senior Medical Research Laboratory Technologist: Cancer Research Center, Columbia, MO 65201. (June 1980-December 1981).

Arterial Blood Gas Technician: Veterans Administration Hospital, Tampa, FL 33612. (November 1979-June 1980).

Biological Aide: National Institutes of Health, National Institute of Neurological Communicative Disorders and Stroke, Laboratory of Central Nervous System Studies, Bethesda, MD 20034. (October 1978-March 1979 and August 1979-September 1979).

Undergraduate Research Assistant: University of South Florida, Tampa, FL 33620. (September 1979-December 1979).

HONORS AND AWARDS:

Adjunct Professor, International Microvascular Biology Research Center, Institute for Microcirculation, Chinese Academy of Medical Sciences and Peking Union Medical Center, Beijing, China (2009 – present).

Outstanding Graduate Mentor Award, Texas A&M Health Science Center, School of Graduate Studies, 2011.

National Research Service Award; National Heart, Lung and Blood Institute; National Institutes of Health, 1988-1991.

XXXI IUPS Travel Award: U.S. National Committee for the International Union of Physiological Sciences, National Research Council, Commission of Life Sciences, Travel Grant to attend the XXXI IUPS Congress in Helsinki, Finland, July 9-14, 1989.

National Institutes of Health: Selected as participant in the Cooperative Education Program. Served as Biological Aide under Dr. David Asher, Laboratory of Central Nervous Systems Studies, National Institute of Neurological Communicative Disorders and Stroke (NINCDS), Bethesda, MD (1978-1979).

University of South Florida Alumni Academic Scholarship Recipient: University of South Florida, Tampa, FL (1976-1977).

Valedictorian: Duncan U. Fletcher Senior High School, Neptune Beach, FL (1976).

PROFESSIONAL SOCIETIES:

American Society for Cell Biology
American Physiological Society
Juvenile Diabetes Research Foundation
Microcirculatory Society
North American Vascular Biology Organization

PROFESSIONAL ACTIVITIES:

Member, Type 1 Diabetes Impact Award (DP3) Panel, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, 2011.

Member, American Heart Association, Vascular Biology and Blood Pressure/Basic Science Review Panel, 2011-2014.

Reviewer, American Heart Association Summer Undergraduate Research Fellowships, 2011.

Reviewer, American Heart Association, Medical Student Research Fellowships, 2011.

Ad Hoc Reviewer, National Medical Research Council of Singapore, Research Grant Program, 2011.

Reviewer, Wellcome Trust, Molecules, Genes and Cells Grant Review, 2010.

Reviewer, Pennsylvania Commonwealth Universal Research Enhancement (CURE) Program, 2010.

Member, Awards Committee, American Physiological Society, Cardiovascular Section, 2009-2012.

Ad hoc Member, Vascular Cell and Molecular Biology Study Section, National Heart, Lung and Blood Institute, National Institutes of Health, 2010.

Member, Program Project Review Panel, National Heart, Lung and Blood Institute, National Institutes of Health, 2010.

Member, International Scientific Committee, 9th World Congress for Microcirculation, Paris, France 2009-2010.

Member, Academic Committee, International Microvascular Biology Research Center, Institute of Microcirculation, Chinese Academy of Medical Sciences and Peking Union Medical College, 2009-2010.

Member, External Advisory Committee, Mississippi Functional Genomics Network, 2009-2010.

Reviewer, Austrian Science Fund, Hertha Firnberg Program, Federal Ministry of Science and Research, 2009.

Ad hoc Member, Vascular Cell and Molecular Biology Study Section, National Heart, Lung and Blood Institute, National Institutes of Health, 2009.

Faculty Instructor, American Physiological Society Professional Skills and Training Course, Writing and Reviewing for Scientific Journals, Orlando, FL 2009.

National Aeronautics and Space Administration, Fundamental Space Biology Animal Cell Panel, Grant Application Reviewer, Washington, D.C., 2009.

Ad Hoc Reviewer, NIEHS Center for Environmental Genomics and Integrative Biology, University of Louisville, 2009.

American Heart Association, Abstract Grader, Scientific Sessions, 2008, 2009.

Ad Hoc Reviewer, National Medical Research Council of Singapore, Research Grant Program, 2007-2009.

Member, American Heart Association, Vascular Biology and Blood Pressure/Regulation Review Panel, 2006-2009.

Member, Tetrahydrobiopterin Cardiovascular Advisory Board, BioMarin Pharmaceuticals, Inc., 2005-2009.

President, Microcirculatory Society, 2007-2008; President-Elect, 2006-2007.

Member, Council for International Exchange of Scholars (Fulbright Scholar Program), Life Sciences C – Biochemical Committee, 2005-2008.

Member, Type I Diabetes Pathfinder Grant Review Panel, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, 2008.

Member, Scientific Advisory Board, International Conference on Tetrahydrobiopterin, PKU, and NOS, St. Moritz – Champfer, Switzerland, 2007-2008.

Member, American Heart Association, Texas Affiliate, Research Allocations and Advisory Committee, 2005-2008.

Member, Vascular Biology Special Emphasis Panel of the Cardiovascular Sciences, National Institutes of Health, October 2007.

Member, Special Emphasis Panel for Review of Diabetes Endocrinology Research Centers (DERCs) and Diabetes Research and Training Centers (DRTC), NIDDK, National Institutes of Health, July 2007.

Ad hoc Member, Vascular Cell and Molecular Biology Study Section, National Institute of Heart, Lung and Blood, National Institutes of Health, February 2007.

Member, Scientific Advisory Board, ICIEM Satellite Meeting, Tetrahydrobiopterin and Alternative Treatments in Phenylketonuria, Cardiovascular Disease and Diabetes, Sendai, Japan, 2005-2006.

American Heart Association, Western Review Consortium, Lipid Metabolism, Thrombosis and Vascular Wall Biology Committee, Grant in Aid Reviewer 2000-2005 (Co-Chair, 2001-2003; Chair, 2003-2005).

Member, American Heart Association, Western Review Consortium Steering Committee, 2002-2005.

Editorial Board Member, Microcirculation, 1999-2004.

National Institutes of Health, Program Project Cluster Review Study Section (Tumor Microenvironment I), National Cancer Institute, 2004.

National Institutes of Health, Member, RFA Study Section (Progression of Cardiovascular Disease in Type I Diabetes), National Heart, Lung and Blood Institute, 2004.

American Institute of Biological Sciences, Scientific Peer Advisory & Review Services Division, Ad Hoc Reviewer, 2004.

National Institutes of Health, Clinical Studies Subcommittee D, Program Project Initial Review Group, National Cancer Institute, 2003-2004.

National Aeronautics and Space Administration, Cell and Molecular Biology Panel, Washington, D.C., Grant Application Reviewer, 2003-2004.

Ad Hoc Reviewer, National Medical Research Council of Singapore, Research Grant Program, 2003-2005.

Secretary, Microcirculatory Society, 2001-2005.

Member, Microcirculatory Society Liaison Committee, 2001-2005.

Member, Microcirculatory Society Executive Council, 1996-2006.

Member, Microcirculatory Society Awards Committee, 1995-1998.

Member, Microcirculatory Society Membership Committee 1991-94 (Chair 1992-1994)

National Aeronautics and Space Administration, Integrative Physiology Panel, Washington, D.C., Grant Application Reviewer, 2002.

National Aeronautics and Space Administration, Cellular Biotechnology and Tissue Engineering Panel, Washington, D.C., Biotechnology Grant Application Reviewer, 1994-2001.

U.S. Civilian Research and Development Foundation for the Independent States of the Former Soviet Union, Cooperative Grants Program, Ad Hoc Reviewer, 2000.

Veterans Administration Merit Awards, Respiratory Subcommittee, Ad Hoc Reviewer, 1999.

American Heart Association, Lung, Resuscitation, and Respiration Review Committee, 1997-1998.

American Heart Association, Lung & Development Review Committee, 1994-1997.

Jewish Hospital Foundation Medical Research Grant Program, Ad Hoc Reviewer 1996-1999.

Manuscript Review:

American Journal of Physiology, 1988-present

(includes: Heart and Circulatory Physiology

Cell Physiology

Gastrointestinal and Liver Physiology

Regulatory, Integrative and Comparative Physiology)

Reviewer for Microcirculation, 1993-present

Reviewer for Journal of Applied Physiology, 1996-present

Reviewer for Microvascular Research, 1996-present

Reviewer for In Vitro Cellular and Developmental Biology, 1993-present

Reviewer for Circulation Research, 1998-present

Reviewer for Journal of Vascular Research, 1999-present

Reviewer for Journal of Clinical Investigation, 1999-present

Reviewer for Journal of Cellular Physiology, 1999-present

Reviewer for Circulation, 2003-present

Reviewer for Arteriosclerosis, Thrombosis and Vascular Biology, 2002-present

Reviewer for Diabetes, 2008

Reviewer for Free Radical Biology and Medicine, 2005-present

Reviewer for Hypertension, 1996-present

Reviewer for Journal of Nutrition, 2004-present

Reviewer for Cells Tissues Organs – 2001, 2008, 2011

Reviewer for American Journal of Cardiology, 1999

Reviewer for Comparative Biochemistry and Physiology, 1997

Reviewer for Infection and Immunity, 1995

Reviewer for Journal of Cellular Biochemistry, 1994

Reviewer for Blood Vessels, 1989

Reviewer for the Journal of the American Aging Association, 1989

PROFESSIONAL RESPONSIBILITIES:

Director of Graduate Studies – Temple Campus, Texas A&M Health Science Center, School of Graduate Studies, 2010-present.

Associate Director, MD/PhD Program, Texas A&M Health Science Center, College of Medicine, 2010-present.

Track Advisor, Systems and Translational Biology Track, Texas A&M Health Science Center, School of Graduate Studies, 2010-present.

Director, Vascular Biology Division, Department of Systems Biology and Translational Medicine, Texas A&M Health Science Center, 2009-present.

Director, Graduate Program Admissions, Department of Systems Biology and Translational Medicine, Texas A&M Health Science Center, Graduate School of Biomedical Sciences, 2006-2010.

Bioscience Initiative Advisory Council, Temple College and the Department of Labor Biotechnology Education-to-Work Project, Temple, TX, 2005-present.

Advisory Council, Temple College Associate in Applied Science Biotechnology Degree Program, Temple College, 2005-present (Chair 2008-present).

Track Advisor, Systems and Translational Biology Track, Interdisciplinary Graduate program, Graduate School of Biomedical Sciences, Texas A&M Health Science Center, 2008-2010.

Co-Director, Phase IV Medical Curriculum, Texas A&M Health Science Center College of Medicine, 2008-present.

Director, Vascular Biology Division, Cardiovascular Research Institute, Texas A&M Health Science Center, 2006-2009.

Co-Director, Phase III/IV Medical Curriculum, Texas A&M Health Science Center College of Medicine, 2006-2008.

Cardiovascular/Integrative Track Advisor, Interdisciplinary Graduate Program, Graduate School of Biomedical Sciences, The Texas A&M University System Health Science Center, 2004-2008.

Director, Graduate Program Admissions, Department of Medical Physiology, The Texas A&M University System Health Science Center, 1998-2005.

Co-Coordinator, B.A.S.S. (Becoming a Successful Scientist) Program, Department of Medical Physiology, The Texas A&M University System Health Science Center, 1999-2002.

Director, Tissue Culture Core Facility, Department of Medical Physiology, Texas A&M University Health Science Center, 1989-2000.

Coordinator, Cardiovascular Forum seminar series, Department of Medical Physiology, Texas A&M University, 1991-1993.

PROFESSIONAL COMMITTEES:

Graduate Committee, School of Graduate Studies, Texas A&M Health Science Center, 2011-present.

MD/PhD Admissions and Steering Committee, Texas A&M Health Science Center, 2010-present.

Graduate Program Council, Texas A&M Health Science Center, 2010-present.

Academic Council, Texas A&M Health Science Center, 2010-2011.

Appointments, Promotion and Tenure Committee, Texas A&M Health Science Center College of Medicine, 2009-2012 (Chair 2010-2011; Vice-Chair 2011-2012).

Student Promotions Committee, Texas A&M Health Science Center College of Medicine, 2011-present.

Search Committee, Associate Dean for Faculty Affairs and Curriculum Management, Texas A&M Health Science Center College of Medicine, 2011.

Phase II Curriculum Reduction Task Force, Texas A&M Health Science Center College of Medicine, 2011.

Promotions and Dismissals Appeal Committee Chair, Texas A&M Health Science Center College of Medicine, 2010.

Promotions and Dismissals Appeal Committee Chair, Texas A&M Health Science Center College of Medicine, 2009.

Phase IV Curriculum Subcommittee Co-Chair, Texas A&M Health Science Center College of Medicine, 2008-present.

MRB Radiation Safety Committee, Texas A&M Health Science Center College of Medicine (Temple Campus), 2002-present (Chair 2007 – present).

Phase III/IV Curriculum Subcommittee Co-Chair, Texas A&M Health Science Center College of Medicine, 2006-2008.

Facilities and Space Committee, Texas A&M Health Science Center College of Medicine, 2007-2011.

Graduate Instruction Committee, The Texas A&M University System College of Medicine, 2004-2011.

M.D./Ph.D. Program Steering Committee, College of Medicine, Texas A&M Health Science Center, 2006-present.

Interdisciplinary Graduate Program Committee, The Texas A&M University System Health Science Center, 2004-present.

Faculty Senate, Basic Science Caucus, The Texas A&M University System Health Science Center, 2002-2008.

Dual Campus Implementation Group, College of Medicine, Texas A&M Health Science Center [implementation of dual curriculum], 2006-2007.

Caucus Leader, Faculty Senate, Basic Science Caucus, Texas A&M Health Science Center, 2006-2007.

Space Review Task Force, The Texas A&M University System College of Medicine, 2005.

Task Force on Cross-Component Graduate Education, The Texas A&M University System Health Science Center, 2004-2006.

Chair, Education and Training Committee, Cardiovascular Research Institute, The Texas A&M University System Health Science Center, 2004-2005.

Strategic Planning Education Work Group, The Texas A&M University System College of Medicine, 2003-2004.

Research and Education Strategic Planning Committee, Scott and White Hospital, 2002-2004.

Promotions and Dismissals Appeal Committee, The Texas A&M University System College of Medicine, 2002.

Search Committee for the Director of Hematology/Oncology and Head of the Scott & White Cancer Center, Scott & White Hospital, The Texas A&M University System Health Science Center, 2001-2002.

Search Committee for the Head of the Department of Anesthesiology, Scott & White Hospital, The Texas A&M University System Health Science Center, 2000-2001.

Committee on Educational Programs, The Texas A&M University System Health Science Center, College of Medicine, Southern Association of College and Schools Accreditation Process, 2000-2001.

Scholarly and Creative Activities Enhancement Funds Committee, Texas A&M University 1998-2000.

Curriculum Objectives Subcommittee, The Texas A&M University System Health Science Center, 1999.

Electronic Research Administration Advisory Committee, Texas A&M University, 1998-1999.

University Laboratory Animal Care Committee, Texas A&M University, 1995-1998.

Women's Faculty Network Steering Committee, Texas A&M University, 1995-1998.

Search Committee for the Vice President for Health Affairs and Dean of Medicine, Texas A&M University, 1995-1996.

Interdisciplinary Research Initiatives Grant Review Committee, Texas A&M University, 1995.

Biomedical Communications Review Committee, Texas A&M University Health Science Center, 1994-1995.

Capital Campaign Committee, Texas A&M University Health Science Center, 1994.

Graduate Scholarship Committee, Texas A&M University Health Science Center, 1992-present.

Graduate Program Committee, Department of Medical Physiology/Systems Biology and Translational Medicine, Texas A&M University Health Science Center, 1992-present.

Core Facilities Committee, Department of Medical Physiology/System Biology and Translational Medicine, Texas A&M University Health Science Center, 1989-present.

RESEARCH INTERESTS:

- I. Vascular Complications of Diabetes
- II. Endothelial Cell Dysfunction and Nitric Oxide Bioavailability
- III. Vascular Therapy via Targeted Nanoparticles
- IV. Lymphatic Endothelial Cells
- V. Role of Mast Cells in Angiogenesis/Disease

GRANT SUPPORT:

American Heart Association, Grant in Aid entitled: "Lymphatic Delivery of Tetrahydrobiopterin-Loaded Nanoparticles for Vascular Dysfunction in Diabetes" (2011-2012). Principal Investigator. Total of Award: \$70,000.

Scott and White Research Grant Program, "Lymphatic Delivery of Tetrahydrobiopterin-Loaded Nanoparticles for Vascular Dysfunction in Diabetes" (2011-2013). Principal Investigator. Total of Award: \$49,952. [Returned to accept American Heart Association Grant in Aid]

American Heart Association, South Central Affiliate Grant in Aid entitled "Leucine and Vascular Insulin Resistance in Diet-induced Obese Rats" (2010-2012). Co-Investigator. Total of Award: \$140,000.

National Institutes of Health, Research Grant entitled: "Treating Endothelial Cell Dysfunction with Targeted Nanoparticle-based BH4 Delivery" (2009-2012). Principal Investigator. Total of Award: \$422,950.

National Institutes of Health, Research Grant entitled: "Regulation of the Endothelial Citrulline-Nitric Oxide Cycle" (2009-2011). Co-Investigator [PI: Duane Eichler]. Total of Subcontract: \$90,250.

James and Esther King Biomedical Research Program Grant entitled "Regulation of the Endothelial Citrulline-Nitric Oxide Cycle" (2008-2009). Co-Investigator [PI: Duane Eichler]. Total of Award: \$199,800.

The Texas A&M University System Health Science Center Research Enhancement and Development Grant entitled "Obesity and Intrauterine Growth Retardation" (2008-2009). Principal Investigator. Total of Award: \$15,000.

American Heart Association, Texas Affiliate, Grant-in-Aid entitled "Endogenous Antioxidants and Endothelial Cell Dysfunction in Diabetes" (2006-2008). Principal Investigator. Total of Award: \$130,000.

National Institutes of Health, Research Grant entitled "Regulation of Bile Duct Growth in Bile Duct Ligated Rats" (2005-2010). Co-Investigator [PI: Gianfranco Alpini]. Total of Award: \$832,260.

National Institutes of Health, Research Grant entitled "Oxidative Stress and Pteridine Metabolism in Diabetes" (2004-2007). Principal Investigator. Total of Award: \$363,750.

Juvenile Diabetes Research Foundation, Innovative Research Grant entitled "Development of an Endothelium-Targeting DNA-Nanoparticle to Reverse Diabetic Vascular Complications" (2004-2005). Principal Investigator. Total of Award: \$55,000.

The Texas A&M University System Health Science Center Research Enhancement and Development Grant entitled "Development of an Endothelium-Targeting DNA-Nanoparticle to Reverse Diabetic Vascular Complications" (2004-2006). Principal Investigator. Total of Award: \$15,000.

Juvenile Diabetes Research Foundation, Research Grant entitled "Tetrahydrobiopterin Deficiency and Vascular Dysfunction in Type I Diabetes" (2002-2005). Principal Investigator. Total of Award: \$405,000.

American Heart Association, Western States Affiliate, Research Grant entitled "The Arginine Paradox for Endothelial Cell Nitric Oxide Production" (2002-2004). Co-Investigator [PI: Guoyao Wu]. Total of Award, \$124,000.

Juvenile Diabetes Foundation International, Research Grant entitled "Endothelial Cell Dysfunction in Type I Diabetes" (2000-2002). Principal Investigator. Total of Award \$252,900.

National Institutes of Health, RO1 Grant entitled "Proton ATPases in Microvascular Endothelial Cells and Diabetes" (2000-2004). Co-Investigator [PI: Raul Martinez-Zaguilan]. Total of Award \$1,272,520.

National Institutes of Health, R21 Grant entitled "Aging and Endothelial Function in Muscle Arterioles" (2001-2003). Co-Investigator [PI: Judy Muller Delp]. Total of Award \$300,000.

American Heart Association, Texas Affiliate, Grant in Aid entitled "Function of TGF β in Coronary Endothelial Cell Growth and Angiogenesis" (2000-2002). Co-Investigator. Total of Award \$124,000.

Scott and White Hospital, Grant in Aid entitled "Blocking Mast Cell Receptors to Slow Cancer Progression" (2001-2003). Co-Investigator. Total of Award: \$51,350.

American Heart Association, Texas Affiliate, Grant in Aid entitled "Impaired Proliferation of Endothelial Cells in Diabetes" (1998-2000). Principal Investigator. Total of Award \$113,000.

American Heart Association Established Investigator Grant entitled "Regulation of the Arginine-Nitric Oxide Pathway by Glutamine in Endothelial Cells" (1998-2002). Co-Investigator. Total of Award \$300,000.

American Heart Association, Texas Affiliate, Grant in Aid entitled "Role of TGF β in Coronary Endothelial Growth and Differentiation" (1998-2000). Co-Investigator. Total of Award \$86,000.

National Institutes of Health, National Heart, Lung and Blood Institute, RO1 Grant entitled "Regulation of Coronary Angiogenesis" (1998-2003). Co-Investigator (1998-1999). Total of Award \$1,854,423.

Texas A&M University Interdisciplinary Research Initiative Grant entitled "Modulation of Tumor Progression by Steel Factor" (1997-1998). Co-Principal Investigator. Total of Award \$37,500.

Texas A&M University Interdisciplinary Research Initiative Grant entitled "Impaired Proliferation of Endothelial Cells of the Diabetic BB Rat" (1996-1997). Co-Principal Investigator. Total of Award: \$37,500.

Grant in Aid entitled "Mechanisms of Coronary Angiogenesis" from the American Heart Association, National Center (1995-1998). Principal Investigator. Total of Award: \$132,000.

Grant in Aid entitled "Nitric Oxide Synthesis in Endothelial Cells of BB Rats" From the American Heart Association, National Center (1995-1998). Co-Investigator. Total of Award: \$131,120.

Texas A & M University Interdisciplinary Research Initiative Grant entitled "Role of Fibroblast Growth Factor in MoMuSV-induced Angiosarcomas: An Animal Model for Human Kaposi's Sarcoma" (1994-1995). Co-Principal Investigator. Total of award: \$44,000.

Texas Advanced Technology and Research Program grant entitled "Coronary Angiogenesis and its Control" (1994-1996). Co-Principal Investigator. Total of award: \$167,000.

National Institutes of Health, R01 Grant entitled "Sex Hormone-Induced Modulation of Coronary Smooth Muscle" (1993-1997, moved to Med. College of Wisconsin). Co-Investigator. Total of award: \$542,656.

Texas A & M University Interdisciplinary Research Initiative Grant entitled "Nitric Oxide Synthesis in Endothelial Cells of the Diabetic BB Rat" (1993-1994). Co-Principal Investigator. Total of award: \$41,300.

American Heart Association, Texas Affiliate, Grant-in-Aid entitled "Mechanisms of Coronary Angiogenesis" (1991-1993). Principal Investigator. Total of award: \$66,000.

American Heart Association, Texas Affiliate, Grant-in-Aid entitled "Mechanisms of Coronary Angiogenesis" (1989-1991). Principal Investigator. Total of award: \$55,000.

National Research Service Award entitled "Mechanisms of the Angiogenic Response to Adenosine" from the National Institutes of Health (1988-1991). Total of award: \$77,254.

Biomedical Research Support Grant entitled "Use of a Cardiac Tissue Culture Model to Directly Investigate Coronary Angiogenesis" from the National Institutes of Health (1990-1991). Total of award: \$5,000.

Biomedical Research Support Grant entitled "Isolation of Cardiac Myocytes to Directly Investigate Coronary Angiogenesis" from the National Institutes of Health (1989-1990). Total of award: \$5,000.

INVITED PRESENTATIONS:

August 2011: "Tetrahydrobiopterin: Enzymatic Co-Factor, Endogenous Antioxidant and Endothelial Growth Factor," Symposium on Recent Advances in Amino Acid Biochemistry and Nutrition, Chinese Agricultural University, Beijing, China.

August 2011: "The Endothelial Arginine-Nitric Oxide Pathway in Diabetes and Obesity," Presented at the 12th International Congress on Amino Acids, Peptides and Proteins, Beijing, China.

July 2011: "Fighting Vascular Complications in Diabetes by Modulating Tetrahydrobiopterin Levels in Endothelial Cells," Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China.

March 2011: "Fighting Vascular Complications of Diabetes: Bench to Bedside?" Presented at the Texas Bioscience Institute, Temple, TX.

July 2010: "Fighting Vascular Complications of Diabetes," presented to the Diabetes Support Group, Scott and White Hospital, Temple, TX.

May 2010: "Fighting Vascular Complications of Diabetes by Modulating Tetrahydrobiopterin Levels in Endothelial Cells," presented to the Faculty of the Department of Pharmacology and Physiology, New Jersey Medical School, Newark, NJ.

March 2010: "The Arginine-Nitric Oxide Pathway in Diabetes and Obesity," Presented to the Endocrinology Division, Department of Internal Medicine, Scott & White Hospital, Temple, TX.

February 2010: "Fighting Vascular Complications of Diabetes: Bench to Bedside?" Presented at the Texas Bioscience Institute, Temple, TX.

August 2008: "Fighting Vascular Complications of Diabetes," Presented to the Faculty of the Institute for Regenerative Medicine, Texas A&M Health Science Center, Temple, TX.

May 2008: "Tetrahydrobiopterin: Enzymatic Cofactor and Endogenous Antioxidant," Presented to the Faculty of the Department of Physiology and Pharmacology, West Virginia School of Medicine, Morgantown, WV.

March 2008: "Fidarestat, an Aldose Reductase Inhibitor, Increases Tetrahydrobiopterin Levels in Diabetic Rat Endothelial Cells," presented at the International Conference on Tetrahydrobiopterin, PKU, and NOS, St. Moritz – Champfer, Switzerland.

November 2007: "Fighting Vascular Complications of Diabetes," Instruction for students at the Bioscience Institute, Temple College, Temple, TX.

August 2007: "Twenty Five Years as a Cell Biologist in a World of Physiologists," Texas A&M Health Science Center Faculty Research Colloquium, Temple/College Station, TX.

November 2006: "Fighting Vascular Complications of Diabetes," Presented to the Bioscience Institute, Temple College, Temple, TX.

October 2006: "Tetrahydrobiopterin: Endogenous Antioxidant and Enzymatic Cofactor," presented at the Buck Institute's 2006 Conference: Radicals in Heart and Mind. Hosted by BioMarin Pharmaceuticals and the Buck Institute, Novato, CA.

October 2006: "Combating Vascular Complications of Diabetes," presented at the Cardiovascular Research Institute Retreat, Texas A&M Health Science Center, College Station, TX.

September 2006: "Modulating Tetrahydrobiopterin Levels to Reverse Endothelial Cell Dysfunction in Diabetes," Presented at the ICIEM Satellite Meeting Tetrahydrobiopterin and Alternative Treatments in Phenylketonuria, Cardiovascular Disease and Diabetes, Sendai, Japan.

July 2006: "Modulating Tetrahydrobiopterin Levels to Reverse Endothelial Cell Dysfunction in Diabetes," Presented to the faculty of the Department of Molecular Medicine, University of South Florida, Tampa, FL.

June 2006: "Fighting Vascular Complications of Diabetes," Presented at the Annual Meeting of the Juvenile Diabetes Research Foundation, Austin Chapter, Austin, TX.

November 2005: "Diabetes, Oxidative Stress, and Endothelial Cell Dysfunction," Presented to the Department of Nephrology, Scott and White Hospital, Temple, TX.

June 2005: "GTPCH Gene Transfer Ameliorates Vascular Dysfunction in Diabetes," Presented at the 8th International Conference on Vascular Endothelium: Translating Discoveries into Public Health Practice, Symposium on Health Promotion and Chronic Disease Prevention, Crete, Greece.

June 2005: "Tetrahydrobiopterin Deficiency and Vascular Dysfunction in Diabetes," Presented to the Faculty of the Department of Molecular Biology, University of Siena, Siena, Italy.

December 2004: "GTP Cyclohydrolase I Gene Transfer Increases Nitric Oxide Synthesis in Endothelial Cells and Isolated Vessels from Type I and Type II Diabetic Rats," Presented at the International Symposium entitled "The BB Rat Turns Thirty: Lessons and Future Directions," Ottawa, Canada.

November 2003: "Ameliorating Vascular Complications of Diabetes: Bench to Bedside?" – Presented as part of the Pediatric Lipid Clinic seminar program, Department of Pediatrics, The Texas A&M University System College of Medicine, Scott & White Hospital, Temple, TX.

June 2003: "A Gene Therapy Approach to the Vascular Complications of Diabetes" – Invited by the Juvenile Diabetes Research Foundation to give a presentation to the parents and health care providers of diabetic children attending Camp Bluebonnet, Youngsport TX.

April 2003: “Tetrahydrobiopterin Deficiency Occurs in Both Type I and Type II Diabetes Mellitus: Role of Insulin and GTP-CH” – Presented at the 13th International Conference on Pterins, Folates, and Related Biogenic Amines, Maui, HI.

April 2003: “GTP Cyclohydrolase I Gene Transfer Reverses Tetrahydrobiopterin Deficiency and Increases Nitric Oxide Synthesis in Endothelial Cells and Isolated Vessels from Diabetic BB Rats” – Presented at the 13th International Conference on Pterins, Folates, and Related Biogenic Amines, Maui, HI.

March 2003: “Tetrahydrobiopterin Deficiency and Vascular Complications of Diabetes” – Presented to the Faculty of the Department of Integrative Physiology, University of North Texas Health Science Center, Fort Worth, TX.

January 2003: “Tetrahydrobiopterin Deficiency and Vascular Complications Associated with Type I Diabetes” – Presented to the Faculty of Nutrition, Department of Animal Science, Texas A&M University, College Station, TX.

November 2002: “Tetrahydrobiopterin Deficiency and Vascular Complications Associated with Type I Diabetes” – Symposium Presentation: Diabetes in the Health Science Center – Varied Interests, Common Goals, The Scott & White Hospital, Temple, TX.

November 2002: “Tetrahydrobiopterin Deficiency and Vascular Complications Associated with Type I Diabetes” – Presented to the Faculty of the Department of Health and Kinesiology, Texas A&M University, College Station, TX.

March 2002: “Physiological Control of Angiogenesis” – Presented to the Biomedical Sciences Program, Texas A&M University College of Veterinary Medicine, College Station, TX.

October 2001: “Mast Cell Modulation of Tumor Angiogenesis: Role of Stem Cell Factor” – Presented at the 6th World Congress on Advances in Oncology and the 4th International Symposium on Molecular Medicine, Hersonissos, Crete, Greece.

September 2001: “Tetrahydrobiopterin Deficiency and Endothelial Cell Dysfunction in Diabetes” – Presented at the Diabetic Complications: Mechanisms Underlying Neuronal and Vascular Changes Satellite Meeting (in conjunction with the 34th IUPS Meeting), Melbourne, Australia.

August 2001: “Enhanced Activity of Glutamine:Fructose-6-Phosphate Transaminase in Insulin-Sensitive Tissues of Diabetic Rats” – Presented at the 7th World Congress for Microcirculation, Symposium on Insulin Action in Skeletal Muscle and Skin Microcirculation, Sydney, Australia.

June 2001: “Tetrahydrobiopterin Deficiency in Endothelial Cells of Diabetic Rats”- Presented at the 12th International Symposium on the Chemistry and Biology of Pteridines and Folates, Session on Tetrahydrobiopterin and Endothelial Function, National Institutes of Health, Bethesda, MD.

June 2000: “Tetrahydrobiopterin Regulates Endothelial Cell Proliferation” – Presented in the Plenary Session entitled “Reversal of Endothelial Dysfunction” at the First International Conference on the Biology, Chemistry and Therapeutic Applications of Nitric Oxide, San Francisco, CA.

October 1999: “Nitric Oxide: A Homeostatic Regulator of Endothelial Cell Proliferation?” – Third Young Vascular Investigators Meeting, San Antonio, TX.

September 1999: “Tetrahydrobiopterin Deficiency and Endothelial Cell Dysfunction in Diabetes” – Seminar to the Faculty of the University of Western Ontario, Department of Physiology, London, Ontario.

September 1999: “Nitric Oxide: A Homeostatic Regulator of Endothelial Cell Growth?” – Seminar to the Vascular Biology Group, University of Western Ontario, London, Ontario.

February 1999: “Angiogenesis and Health” – Weekly segment of the Doctor’s Housecall Radio Show, WTAW, 1150 AM, College Station, TX.

January 1999: “Coronary Angiogenesis” – Seminar for the Mended Hearts Organization, Bryan, TX.

November 1997: "Impaired Nitric Oxide Production in Experimental Diabetes is Due to Tetrahydrobiopterin Deficiency" - Second Young Vascular Investigators Meeting, San Antonio, TX.

November 1997: "Endothelial Cell Dysfunction in Experimental Diabetes" - Seminar to the Faculty of Texas Tech University, Lubbock, TX.

November 1996: "Mast Cell-Endothelial Cell Interactions in Angiogenesis" - Seminar to the Faculty of the University of Louisville, Louisville, KY.

July 1996: "Mast Cells and Angiogenesis" - FASEB Summer Research Conference on the Physiology and Pathophysiology of the Splanchnic Circulation, Copper Mountain, CO.

June 1996: "Intercellular Control of Angiogenesis" - Seminar to the Faculty of the University of Calgary, Calgary, Alberta, Canada.

September 1995: "Intercellular Control of Angiogenesis" - Seminar to the Faculty of the University of Kentucky, Tobacco & Health Research Institute, Lexington, KY.

August 1995: "The Angiogenic Response to Injury" - FASEB Summer Research Conference on the Cellular and Molecular Basis of Gastrointestinal Mucosal Defense, Saxton's River, VT.

June 1995: "Intercellular Mechanisms of Angiogenesis" - Young Vascular Investigators' Meeting, San Antonio, TX.

September 1994: "Molecular Controls of Angiogenesis" - Seminar to the Faculty of the Department of Pharmacology, University of Florence, Florence, Italy.

June 1994: "Molecular Controls of Angiogenesis" - Seminar to the Research Staff of Procter and Gamble Pharmaceuticals, Norwich, NY.

February 1994: "Molecular Controls of Angiogenesis" - Seminar to the Faculty of the Department of Pharmacology, University of Texas Health Science Center at San Antonio, San Antonio, TX.

December 1993: "Intercellular Mechanisms of Angiogenesis" - Seminar to the Research Staff at Texas Biotechnology, Houston, TX.

January 1993: "Molecular Controls of Angiogenesis" - Seminar to the Faculty of the Department of Anatomy, University of Iowa College of Medicine, Iowa City, IA.

January 1993: "Molecular Controls of Angiogenesis" - Seminar to the Faculty of the Department of Biology, University of Rochester, Rochester, MI.

November 1992: "Adenosine, Mast Cells and Coronary Angiogenesis" - Symposium entitled "Angiogenesis: Basic Mechanisms and Clinical Consequences" - Sixty-fifth scientific session of the American Heart Association.

October 1992: "Molecular Control of Angiogenesis" - Seminar to the Graduate Faculty of Nutrition, Texas A&M University, College Station, TX.

July 1992: "Molecular Controls of Angiogenesis" - Third FASEB Summer Research Conference, Physiology and Pathophysiology of the Splanchnic Circulation, Copper Mountain, CO.

October 1991: "Role of Mast Cells in the Regulation of Angiogenesis" - Symposium on the Regulation of Angiogenesis, American Physiological Society Conference on Interactions of the Endocrine and Cardiovascular Systems in Health and Disease, San Antonio, TX.

September 1991: "The Role of Mast Cells in Angiogenesis" - Seminar to the Faculty of Toxicology, Texas A&M University, College Station, TX.

May 1991: "A Role for Adenosine in Angiogenesis?" - Seminar to the Department of Physiology, University of Massachusetts Medical Center, Worcester, MA.

March 1991: "Mast Cells, Angiogenesis and Metastasis" - International Symposium on Angiogenesis, St. Gallen, Switzerland.

February 1990: "The Role of Adenosine in Coronary Angiogenesis" - Meeting of the American Heart Association Board of Directors, Brazos Valley Chapter, Bryan, TX.

March 1989: "Coronary Angiogenesis" - Plenary Lecture for the 36th Annual Conference of the Microcirculatory Society, New Orleans, LA.

January 1989: "Adenosine as an Angiogenic Agent" - Seminar to the Department of Physiology, Louisiana State University Medical Center, Shreveport, LA.

September 1988: "Is Adenosine an Angiogenic Agent?" - Seminar to the Department of Physiology and Biophysics, University of Louisville, Louisville, KY.

OTHER RESEARCH EXPERIENCE:

Cancer Research Center: Senior Medical Research Technologist in charge of the Fluorescence Activated Cell Sorter (FACS) - involved in various studies including clinical studies of patients at Ellis Fischel Cancer Hospital; immunological studies involving monoclonal antibodies to human lung cancer antigens; studies utilizing the FACS for quantitating lymphocytes in bronchial alveolar lavage samples of patients with various pathologies; quantitating estrogen receptors in patients with breast cancer; quantitating nematode eggs; and quantitating corn pollen mutations caused by air pollution; and other studies.

National Institutes of Health, Bethesda, MD: Student technician involved in ongoing studies of the slow viruses causing presenile dementia as well as studies to develop tissue culture assays for togaviruses.

Undergraduate Research Assistant, University of South Florida, Tampa, FL: Student technician involved in ongoing studies of the sister chromatid exchanges occurring in Fetal Alcohol Syndrome.

TEACHING EXPERIENCE:

2011: Faculty Instructor (and Block Co-Leader) in Endocrine/Reproductive Physiology/Human Sexuality, a medical student curricular block (Texas A&M Health Science Center). Lecture Topics: Endocrinology Overview, Hypothalamus/Pituitary Gland, Adrenal Glands, Thyroid Gland, Endocrine Pancreas, Physiology of the Female Reproductive System, Physiology of the Male Reproductive System, Bone Remodeling and Regulation of Calcium and Phosphate, and Disorders of Calcium Metabolism.

2010: Faculty Instructor in: Pathobiology and Therapeutics (SBTM 615), a graduate student course (Texas A&M Health Science Center). Lecture topic: Effects of disease on the endocrine system.

2009: Faculty Instructor in: Human Organ Systems II (SBTM 614), a graduate student course (Texas A&M Health Science Center). Lecture Topics: General Endocrinology and Metabolic Hormones.

2008-2010: Coordinator for Experimental Techniques in Molecular, Cell, and Systems Biology I (SBTM 601), a graduate student course (Texas A&M Health Science Center). Lecture topics: cell culture/aseptic technique, isolation of cells from tissues, protein biochemistry.

2009, 2010: Faculty Instructor in: Experimental Techniques in Molecular, Cell and Systems Biology II (SBTM 612), a graduate student course (Texas A&M Health Science Center). Lecture topic: Animal models of diabetes.

2005, 2006, 2008, 2009, 2010, 2011: (Co-Coordinator 2008) Faculty Instructor for Current Topics in Cell Signaling (MSCI 612), a graduate student course (Texas A&M Health Science Center). Lecture Topic: insulin receptor and PI-3 kinase signaling.

2005-2009: Faculty Instructor in: Structure and Function of Human Organ Systems, a medical student course (Texas A&M Health Science Center). Lecture topics: Calcium, Phosphate and Bone Metabolism; General Endocrinology; Sexual Differentiation and Reproductive Endocrinology.

2007, 2008: Faculty Instructor in Laboratory Animal/Medical Terminology, a technical training course within the Bioscience Institute Apprenticeship Program, Temple College, Temple, TX: Lecture topic: The Endocrine System.

2003, 2005, 2006, 2007: Coordinator for the Endocrine/Reproductive Physiology Block of the first year integrated medical curriculum.

2006, 2007: Faculty Instructor in: Principles of Basic Medical Sciences II (MSCI 602), a graduate course (Texas A&M Health Science Center) Lecture Topics: metabolic and cardiovascular hormones.

2002-2005, 2008: Faculty Instructor in: Principles of Basic Medical Sciences II (MSCI 602), a graduate course (Texas A&M Health Science Center) Lecture Topics: Basic endocrinology; hypothalamic and pituitary hormones; adrenal and thyroid hormones; calcium, phosphate, and bone metabolism, metabolic and cardiovascular hormones.

2000-2006: Course Coordinator for Methods in Cell Physiology (MPHY 601), a graduate student course (Texas A&M Health Science Center). Lecture topics: tissue culture, biochemistry and molecular biology of cardiovascular cells.

2003-2006: Course Coordinator for Theory of Cell Physiology (MPHY 689), a graduate student course (Texas A&M Health Science Center). Lecture topics: tissue culture, biochemistry and molecular biology of cardiovascular cells.

1997-2000: Course Co-Coordinator in: Methods in Cell Physiology, a graduate student course (Texas A&M Health Science Center). Lecture topics: Tissue culture, biochemistry and molecular biology of cardiovascular cells.

1995-1996: Course Co-Coordinator in: Basic Laboratory Techniques for Cell Physiology, a graduate student course (Texas A&M Health Science Center). Lecture topics: Tissue culture, biochemistry and molecular biology of cardiovascular cells.

1992-2005: Faculty Instructor in: Medical Physiology, a medical student course (Texas A&M Health Science Center). Lecture topic: Endocrinology.

1994: Faculty Instructor in: Principles of Basic Medical Sciences, a graduate course (Texas A&M University Health Science Center). Lecture topics: Cell Cycle Control, Cell Division, Mitosis and Cytokinesis.

1992, 1993: Faculty Instructor in: Principles of Basic Medical Sciences, a graduate course (Texas A&M University Health Science Center). Lecture topics: Actin filaments and actin binding proteins, intermediate filaments, microtubules, cytoskeleton.

1991-1993: Faculty Instructor in: Vascular Physiology, a graduate course (Texas A&M University College of Medicine). Lecture topics: Endothelial Cell Biology.

1988, 1989: Faculty Instructor in: Principles of Basic Medical Sciences, a graduate course (Texas A&M University College of Medicine). Lecture topics: Cell Cycle Control, Oncogenes, Events in S Phase, Cell Growth and Division.

1984: January-May, Teaching Assistant in Medical Microbiology and Immunology, an undergraduate course, laboratory responsibility (Texas A&M University).

1983-1984: Teaching Assistant in: Immunology, a graduate course, laboratory responsibility; Medical Microbiology and Immunology, an undergraduate course, laboratory responsibility (Texas A&M University).

1982-1983: Teaching Assistant in: Introductory Microbiology, an undergraduate course, laboratory responsibility (Texas A&M University).

STUDENT SUPERVISION:

Graduate Student Training & Supervision:

Arran Huckstep, Ph.D. student, Department of Surgery, Texas A&M Health Science Center, (Committee Member)

Richard Tobin, Ph.D. student, Department of Surgery, Texas A&M Health Science Center (Committee Member)

Yuyan Han, Ph.D. student, Department of Internal Medicine, Texas A&M Health Science Center (Committee Member).

Matthew Quinn, Ph.D. student, Department of Internal Medicine, Texas A&M Health Science Center (Committee Co-Chair)

Vaidehi Agrawal, Ph.D. student, Department of Internal Medicine, Texas A&M Health Science Center (Committee Co-Chair)

Paola Rosas Delgado, Ph.D. student, Department of Pathology, Texas A&M Health Science Center (Committee Member)

Victor Chatterjee, Ph.D. student, Department of Systems Biology and Translational Medicine, Texas A&M Health Science Center (Committee Member)

Daniel Kota, Ph.D. student, Department of Internal Medicine, Texas A&M Health Science Center (Committee Member)

Gavin Roddy, M.D./Ph.D. student, Department of Cell and Molecular Medicine, Texas A&M Health Science Center (Committee Member)

John Reneau, M.D./Ph.D. student, Department of Cell and Molecular Medicine, Texas A&M Health Science Center (Committee Member)

Lesley (Reeves) Gardiner, M.D./Ph.D. student, Department of Systems Biology and Translational Medicine, Texas A&M Health Science Center (Committee Member)

Ajay Kumar, Ph.D. student, Department of Pharmaceutical Sciences, College of Pharmacy, Texas A&M Health Science Center (Committee Co-Chair)

Venkata Yellepeddi, Ph.D. student, Department of Pharmaceutical Sciences, College of Pharmacy, Texas A&M Health Science Center (Committee Co-Chair)

Wei Xie, Ph.D. student, Department of Systems Biology and Translational Medicine, Texas A&M Health Science Center, Awarded August 2011 (Committee Member)

Heather Francis, Ph.D. student, Department of Internal Medicine, Texas A&M Health Science Center, Awarded December 2010 (Committee Co-Chair)

Honey Golden, Ph.D. student, Department of Internal Medicine, Texas A&M Health Science Center, Awarded December 2010 (Committee Member)

Rebecca (Rounds) Gant, Ph.D. student, Department of Biomedical Engineering, Texas A&M University, Awarded December 2009. (Committee Member)

Randall Alfano, Ph.D. student, Department of Internal Medicine, The Texas A&M Health Science Center, Awarded December 2009. (Committee Member)

Hope Thomas Beier, Ph.D. student, Department of Biomedical Engineering, Texas A&M University, Awarded August 2009. (Committee Member)

Yu Jen Lee, M.S. student, Department of Internal Medicine, The Texas A&M Health Science Center, Awarded August 2009. (Committee Member)

Ji Yeon Yang, M.S. student, Department of Veterinary Physiology and Pharmacology, Texas A&M University, Awarded August 2008. (Committee Member)

Laura (Wade) Hargrove, M.S. student, Department of Systems Biology and Translational Medicine, Texas A&M Health Science Center, Awarded May 2008. (Committee Chair)

Joana Dado, M.S. student, Department of Medicine, Texas A&M Health Science Center, Awarded May 2008. (Committee Member)

Wenjuan (Elaine) Shi Jobgen, Ph.D. student, Department of Animal Science, Texas A&M University, Ph.D. Awarded Aug 2007. (Committee Member)

Samantha (Bruce) Steelman, Ph.D. student, Department of Systems Biology and Translational Medicine, Texas A&M Health Science Center (Committee Co-Chair 2006-2007 [changed programs])

Shannon Glaser, Ph.D. student, Department of Systems Biology and Translational Medicine, The Texas A&M University System Health Science Center, Ph.D. Awarded December 2006. (Committee Member).

Brenda Flam, Ph.D. Student, Department of Molecular Medicine, University of South Florida, Ph.D. Awarded August 2006. (External Committee Chair)

Tony Haynes, M.S. student, Department of Animal Science, Texas A&M University, M.S. Awarded December 2005. (Committee Member)

Helen Hayes, M.S. student, Department of Medical Physiology, The Texas A&M University System Health Science Center, M.S. Awarded August 2005. (Committee Member)

Hyuk Jung Kwon, M.S. student, Department of Animal Science, Texas A&M University, M.S. awarded May 2004. (Committee Member)

Lisa Lisniewski, Ph.D. student, Department of Health and Kinesiology, Texas A&M University, Ph.D. awarded December 2003. (Committee Member)

Ripla Kohli, M.S. student, Department of Animal Science, Texas A&M University, M.S. Awarded August 2003. (Committee Member)

Craig Rainey, M.S. student, Department of Veterinary Pathobiology, Texas A&M University, M.S. Awarded August 2002. (Committee Member)

Zachlyn Farwig, Ph.D. student, Department of Chemistry, Texas A&M University, Ph.D. Awarded August 2002. (Committee Member).

Natalie Wilson, M.S. student, Department of Animal Science, Texas A&M University, M.S. Awarded May 2002. (Committee Member)

Hui Li, Ph.D. student, Department of Animal Science, Texas A&M University, Ph.D. awarded August 2001. (Committee Member)

Lorenz Schmiege, M.D./Ph.D. student, Department of Medical Physiology, The Texas A&M University System Health Science Center, M.D./Ph.D. awarded May 2001. (Committee Member)

Rebecca Somers Marinos, Ph.D. student, Department of Medical Physiology, The Texas A&M University System Health Science Center, Ph.D. awarded May 2000. (Committee Chair)

Wei Zhang, Ph.D. student, Department of Medical Physiology, The Texas A&M University System Health Science Center, Ph.D. awarded December 1999. (Committee Chair)

Chiung-I Chang, Ph.D. student, Department of Medical Physiology, The Texas A&M University System Health Science Center, Ph.D. awarded December 1999. (Committee Member)

John Hood, Ph.D. student, Department of Medical Physiology, Texas A&M University, Ph.D. awarded May 1998. (Committee Member)

Priya Ramamurthy, Ph.D. student, Department of Biochemistry, Texas A&M University, Institute of Biosciences and Technology, Ph.D. awarded August 1997. (Committee Member)

Behyar Zoghi, Ph.D. student, Department of Medical Pathology and Laboratory Medicine, Texas A&M University, Ph.D. awarded May 1997. (Committee Member)

Dana Dean, M.S. Student, Department of Veterinary Anatomy and Public Health, Texas A&M University, M.S. awarded May 1997. (Committee Member)

Sue Miller, Ph.D. student, Department of Veterinary Anatomy and Public Health, Texas A&M University, Ph.D. awarded December 1996. (Committee Member)

Katherine Kennon, M.S. student, Department of Veterinary Pathobiology, Texas A&M University, M.S. awarded August 1996. (Committee Member)

Jeffrey Gaboury, Ph.D. student, Department of Gastrointestinal Sciences, University of Calgary, Calgary, Alberta, Ph.D. awarded August 1996. (External Committee Member)

Sabina Myer, M.S. student, Department of Animal Science, Texas A&M University. M.S. awarded December 1995. (Committee Member)

Bruce Bebo, Ph.D. student, Department of Veterinary Anatomy and Public Health, Texas A&M University. Ph.D. awarded May 1995. (Committee Member)

Deanne Mitchell, Ph.D. student, Department of Veterinary Physiology and Pharmacology, Texas A&M University. Ph.D. awarded May 1994. (Committee Member)

Lise Bonin, Ph.D. student, Department of Pharmacology, The University of Texas Health Science Center at San Antonio. Ph.D. awarded May 1994. (External Committee Member)

Karyn E. Bird, D.V.M., Ph.D. student, Department of Veterinary Pathology, Texas A&M University. Ph.D. awarded May 1993. (Committee Member)

Michelle M. Aucoin, D.V.M., Ph.D. student, Department of Veterinary Anatomy, Texas A&M University. Ph.D. awarded August 1992. (Committee Member)

Jay Hoffman, D.V.M., Ph.D. student, Department of Veterinary Pathology, Texas A&M University. Ph.D. awarded August 1992. (Committee Member)

Medical Student Research Training and Supervision:

Emelia Bittenbinder (2010)

David Bittenbinder (2010)

Gautam Patankar (2007)

John Reneau (2006)

Brady Banta (1997)

Michael Allemand (1996)

Joe Cooley (1995)

Brent Davis (1994)

Fulvantiben Mistry (1993-1994)

Kelly L. Crews (1992-1993)

Undergraduate Student Research Sponsor:

Erika Figueroa (2008-2009)

David Bittenbinder (2008)

Lee Murphy (2008)

Emelia Bittenbinder (2007)

Varnita Baweja (2006)

Kristin Wilbanks (2006)

Raven Holland (2006)

Kathryn Smith (2000)

Suzan Parzhigar (1999)

Dacheng Zhao (1998)

Joan Hu (1997)

Bic Chau (1995)

Heather Heyl (1994)

Rudy Mendoza (1994)

Marsha Hodges (1993)

Alfred I. Lee (1992)

William T. Bohannon (1988-1989)

Bioscience Institute Internship Sponsor:

Kristin Hamilton (2010)

National Institutes of Health Minority High School Research Apprentice Program Sponsor:

Siri Sastri (1992)

Darrin J. Marquez (1989)

Paari Gopalakrishnan (1989)

Olivia G. Kelly (1988)

LIST OF PUBLICATIONS:

Book Chapters:

Flynn, N.E., Meininger, C.J., Haynes, T.E., Shi, W. and Wu, G. "Mechanisms for Dietary Regulation of Nitric Oxide Synthesis in Mammals," In: Nutrients and Cell Signaling (J. Zemleni and K. Dakshinamurti, Editors), New York: Marcel Dekker, 225-252, 2005.

Meininger, C.J., Kelly, K.A., Hatakeyama, K. and Wu, G. "Tetrahydrobiopterin Deficiency Occurs in Both Type I and Type II Diabetes Mellitus: Role of Insulin and GTP-CH," In: Pterins, Folates, and Biogenic Amines (N. Blau, B. Thony, Eds.) Heilbronn, Germany: SPS Publications, pp. 83-87, 2004.

Wu, G., Kelly, K.A., Hatakeyama, K. and Meininger, C.J. "Regulation of Endothelial Tetrahydrobiopterin Synthesis by L-Arginine," In: Pterins, Folates, and Biogenic Amines (N. Blau, B. Thony, Eds.) Heilbronn, Germany: SPS Publications, pp. 54-59, 2004.

Meininger, C.J., Hatakeyama, K., Haynes, T.E., Kelly, K.A., and Wu, G. "Tetrahydrobiopterin Deficiency in Diabetic Rats," In: Chemistry and Biology of Pteridines and Folates (S. Milstien, G. Kapatos, RA. Levine, and B. Shane, Eds.) Boston: Kluwer Academic Publishers, pp. 349-353, 2002.

Meininger, C.J. and Wu, G. "Regulation of Endothelial Cell Proliferation," In: Redox Cell Biology and Genetics, a volume of Methods in Enzymology, (C. Sen and L. Packer, Eds.) New York: Academic Press, Volume 352, pp. 280-295, 2002.

Granger, H.J., Meininger, C.J., Ziche, M. and Hood, J. "Roles of Adenosine in Angiogenesis," In: Cardiovascular Biology of Purines (G. Burnstock, J.G. Dobson, Jr., B.T. Liang and J. Linden, Eds.) Norwell: Kluwer Academic Publishers, pp. 49-63, 1998.

Meininger, C.J. Mast Cells and Tumor-Associated Angiogenesis," In: Human Basophils and Mast Cells in Health and Disease (B. Marone, Ed.), Basel: Karger, Chemical Immunology Vol. 62, pp. 239-257, 1995.

Granger, H.J., Ziche M., Hawker J.R., Jr., Meininger C.J., Czisny L.E. and Zawieja D.C. Molecular and Cellular Basis of Myocardial Angiogenesis. Cellular and Molecular Biology Research. Volume 40, No. 2, pp. 81-85, 1994.

Granger, H.J., Hawker J.R., Jr., Meininger, C.J., Zawieja D.C., Czisny, L.E. and Ziche, M. "Coronary Angiogenesis and Its Control," In: The Pathophysiology of the Microcirculation (N.A. Mortillaro and A. Taylor, Eds.), Boca Raton: CRC Press, pp. 19-34, 1994.

Meininger, C.J. and Granger, H.J.: "Role of Adenosine in Angiogenesis," In: Adenosine and Adenine Nucleotides as Regulators of Cellular Function (J.W. Phillis, Ed.) Boca Raton: CRC Press, Chapter 19, pp. 241-246, 1991.

Invited Reviews/Commentaries:

Meininger C.J. and Wu G. Tetrahydrobiopterin: Important Endothelial Mediator Independent of Endothelial Nitric Oxide Synthase. Hypertension 58: 145-147, 2011 [Epub 2011 Jun 27].

Francis, H. and Meininger C.J. A Review of Mast Cells and Liver Disease: What Have We Learned? Digestive and Liver Disease 42:529-536, 2010 ([doi:10.1016/j.dld.2010.02.016](https://doi.org/10.1016/j.dld.2010.02.016)).

McKnight, J.R., Satterfield, M.C., Jobgen W.S., Smith, S.B., Spencer, T.E., Meininger, C.J., McNeal, C.J. and Wu G. Beneficial Effects of L-arginine on Reducing Obesity: Potential Mechanisms and Important Implications for Human Health. Amino Acids 39: 349-357, 2010.

Wu, G. and Meininger C.J. Nitric Oxide and Vascular Insulin Resistance. BioFactors 35: 21-27, 2009.

Wu, G., Baser, F.W., Davis, T.A., Jaeger, L.A., Johnson, G.A., Kim, S.W., Knabe, D.A., Meininger, C.J., Spencer, T.E., Yin, Y-L. Important Roles for the Arginine Family of Amino Acids in Swine Nutrition and Production. Livestock Science 112: 8-22, 2007.

Engelgau, M.M., Vinicor, F., Simionescu, M., King, G.L., Meininger, C., and Mensah, G.A. Summary Statement IV: Obesity and Diabetes: Opportunities for Translation of Basic Research. Vascular Pharmacology 46: 324-326, 2007 [[doi:10.1016/j.vph.2006.10.015](https://doi.org/10.1016/j.vph.2006.10.015)].

Jobgen, W.S., Jobgen, S., Li, H., Meininger, C.J. and Wu, G. Analysis of Nitrite and Nitrate in Biological Samples using High-performance Liquid Chromatography. Journal of Chromatography B Analyt Technol Biomed Life Sci 851:71-82, 2007 [[doi:10.1016/j.chromb.2006.07.018](https://doi.org/10.1016/j.chromb.2006.07.018); Epub ahead of print, Aug 14, 2006].

Jobgen, W.S., Fried, S.K., Fu W.J., Meininger, C.J. and Wu, G. Regulatory Role for the Arginine-Nitric Oxide Pathway in Metabolism of Energy Substrates. Journal of Nutritional Biochemistry 17: 571-588, 2006.

Shi, W., Meininger, C.J., Haynes, T.E., Hatakeyama and Wu, G. Regulation of Tetrahydrobiopterin Synthesis and Bioavailability in Endothelial Cells. Cell Biochemistry and Biophysics 41: 415-431, 2004.

Wu, G., Cudd, T.A., Meininger, C.J. and Spencer T.E. Maternal Nutrition and Fetal Development. Journal of Nutrition 134: 2169-2172, 2004.

Flynn, N.E., Meininger, C.J., Haynes, T.E., and Wu, G. The Metabolic Basis of Arginine Nutrition and Pharmacotherapy. Biomedicine and Pharmacotherapy 56: 427-438, 2002.

Wu, G. and Meininger, C.J. Regulation of Nitric Oxide Synthesis by Dietary Factors. Annual Reviews in Nutrition 22: 61-86, 2002.

Wu, G. and Meininger, C.J. Arginine Nutrition and Cardiovascular Function, Journal of Nutrition 130: 2626-2629, 2000.

Wu, G., Meininger, C.J., Knabe, D.A., Baser, F.W. and Rhoads, J.M. Arginine Nutrition in Development, Health and Disease, Current Opinion in Clinical Nutrition and Metabolic Care 3:1-8, 2000.

Definitive Papers

Francis, H., DeMorrow, S., Venter, J., Onori, P., White, M., Gaudio, E., Francis, T., Greene, J.F., Tran, S., Meininger, C.J., Alpini, G. Inhibition of Histidine decarboxylase ablates the tumorigenic effects of histamine in human cholangiocarcinoma. *Gut* 2011, in press.

Bowers, M.C., Hargrove, L.A., Kelly, K.A., Wu, G. and Meininger C.J. Tetrahydrobiopterin attenuates superoxide-induced reduction in nitric oxide. *Frontiers in Bioscience* S3: 1263-1272, 2011.

Lei, X., Feng, C., Liu, C., Wu, G., Meininger, C.J., Wang, F., Li, D and Wang, J. Regulation of protein expression by L-arginine in endothelial cells. *Frontiers in Bioscience* S3: 655-661, 2011.

Zuidema, M.Y., Yang, Y., Wang, M., Kalogeris, T.J., Liu, Y., Meininger, C.J., Hill, M.A., Davis, M.J., Korthuis, R.J. Antecedent hydrogen sulfide elicits an anti-inflammatory phenotype in postischemic murine small intestine: Role of BK channels. *American Journal of Physiology: Heart and Circulatory Physiology* 299: H1554-H1564, 2010 [Epub 2010 Sept 10].

Gashev, A.A., Davis, M.J., Gasheva, O.Y., Nepiyushchikh, Z.V., Wang, W., Dougherty, P., Kelly, K.A., Cai, S., von der Weid, P-Y., Muthuchamy, M., Meininger, C.J., and Zawajja, D.C. Methods for lymphatic vessel culture and gene transfection. *Microcirculation* 16: 615-628 2009 [Epub 2009 Jul 22].

Sanchez, F.A., Rana, R., Kim, D, Iwahashi, T., Zheng, R., Lal, B., Gordon, D., Meininger, C.J., Duran, W.N. Internalization of eNOS and NO delivery to subcellular targets determine agonist-induced hyperpermeability. *Proceedings of the National Academy of Science USA* 106: 6849-6853, 2009 [Epub 2009 Apr 2].

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