

## CURRICULUM VITAE      November 2005

### Emily Wilson

Department of Medical Physiology  
College of Medicine  
Texas A&M University System Health Science Center  
College Station TX 77843-1114

**Phone:**      979-862-8673 (w)  
                    979-847-8635 (fax)

### Education:

Emory University (Atlanta, GA) Ph.D. , Biochemistry, 1987  
Dissertation: Studies on the Regulation of Neutrophil Activation  
Dissertation Director: J. David Lambeth, M.D., Ph.D.

Utah State University (Logan, UT) M.S., Chemistry and Biochemistry, 1984  
Thesis: Photoaffinity Labeling of the Antimycin Binding Site in *Rhodopseudomonas sphaeroides*.  
Thesis Director: Jon Y. Takemoto, Ph.D.

Utah State University (Logan, UT) B.S., Biology, 1980.

Oxford College of Emory University (Oxford, GA) A.A., 1978.

### Research and Professional Experience:

Associate Professor; Department of Medical Physiology, Texas A&M University System Health Science Center (College Station, TX) Sept 2005-present

Assistant Professor; Department of Medical Physiology, Texas A&M University System Health Science Center (College Station, TX) Jan. 1997-Aug 2005

Assistant Research Biochemist; Cardiovascular Research Institute and Division of Nephrology, University of California, San Francisco (San Francisco, CA) 1991-1996

Associate; Howard Hughes Medical Institute, Vanderbilt University (Nashville, TN) 1988-1991 with D. Martin Watterson, Ph.D.

Research Associate, Department of Pharmacology, Vanderbilt University School of medicine, (Nashville, TN) 1987-1991.

Postdoctoral trainee; National Cancer Institute Training Grant, "Chemical and Biochemical Basis of Cancer", Vanderbilt University School of Medicine, 1987-1988.

Graduate Research Assistant: Department of Biochemistry with J. David Lambeth, M.D., Ph.D., Emory University School of Medicine (Atlanta, GA) 1984-1987.

Laboratory Technician: Department of Chemistry and Biochemistry with J.F. Lancaster, Ph.D., Utah State University (Logan, UT) 1984.

Graduate Research Assistant; Department of Chemistry and Biochemistry with Jon Y. Takemoto, Ph.D., Utah State University, (Logan, UT) 1981-83.

Graduate Teaching Assistant; Department of Chemistry and Biochemistry, Utah State University (Logan, UT) 1981-83.

**Research Interests:**

Vasucular remodeling  
Mechanical Forces as regulators of vascular cell function  
Extracellular Matrix and Integrins  
Signal Transduction Mechanisms  
Calcium and calcium Binding Proteins  
Second Messenger Regulated Protein Kinases  
Regulation of Cell Growth and Differentiation  
Regulation of vascular cell growth and differentiation by oxidative stress

**Awards**

Mortar Board 1978  
Postdoctoral Trainee NCI training Grant  
Associate Howard Hughes Medical Institute  
REAC and Academic Senate Grant, UCSF 1995

**Journal Reviews:**

American Journal of Physiology: Cell Physiology  
American Journal of Physiology: Heart and Circulatory Physiology  
Biomechanics and Modeling in Mechanobiology  
Cardiovascular Research  
Journal of Cellular Biochemistry  
Circulation  
Circulation Research  
Experimental Biology and Medicine  
Hypertension  
Journal of Vascular Research  
Journal of Biological Chemistry  
Proceedings of the National Academy of Sciences

**Grant Reviews:**

American Heart Association (Western Affiliates): 4A Atherosclerosis, Thrombosis and Vascular Wall Biology 2000-Present

Arizona Disease Control Commission (Ad Hoc) 1999-Present

National Institutes of Health Program Project Review: Mechanical Forces in Cardiovascular Cells (1999 and 2000)

Scott and White Research Initiative (1999)

Texas A&M University Interdisciplinary Research Initiative (1998-1999)

NIEHS Program Project Review, Louisville KY, "Cardiovascular Toxicity of Environmental Aldehydes March 2002

Center For Environmental and Rural Health, Pilot Project Grant Review Committee, Texas A&M University (1999-Present)

Veterans Administration Merit Award (2001)

U.S. Environmental Protection Agency Grants-- Airborne Particulate Health Effects: Cardiovascular Mechanisms (2-G1) July 2002

NIEHS Program Project Review, Research Triangle Park NC, "Cardiovascular Toxicity of Environmental Aldehydes Feb 2003

**Teaching Experience:**

**Texas A&M University System Health Science Center**

Course	Class Type	Year	Contact Hours
Medical Sciences 601	graduate	1997	10
Medical Sciences 602	graduate	1999	10
Medical Sciences 602	graduate	2000	10
Medical Sciences 602	graduate	2001	10
Medical Physiology 601	graduate	1998	8
Medical Physiology 601	graduate	1999	8
Medical Physiology 601	graduate	2000	8
Medical Physiology 601	graduate	2001	8
Medical Physiology 601	graduate	2002	8
Medical Physiology 604	graduate	1999	8
Medical Physiology 604	graduate	2001	8
Medical Physiology 604	graduate	2002	8
Medical Physiology 606	graduate	2000	8
Medical Physiology 681 (Special Topics)	graduate	2000	20
Medical Physiology 681	graduate	2001	20
Medical Physiology 901	medical	1997	small group
Medical Physiology 901	medical	1998	smallgroup
Medical Physiology 901	medical	1999	4
Medical Physiology 901	medical	2000	small group 10
Medical Physiology 901	medical	2001	Small group 8
Medical Physiology 901	medical	2002	Small group 8
Foundations of Cell and Molecular Biology	medical	2003	8
Psychopharmacology	distance learning	2002	4

## **Supervision of Predoctoral Students**

### Major Advisor

Jia Sheng (Advisor Ph.D. student in Medical Physiology) 1999-2000

Sarah Jones (Co-Advisor Ph.D. Student in Vet. Physiology and Pharmacology) 2000-present

Jessemy Neiger (Advisor M.D., Ph.D. student in Medical Physiology) 2001-present

Sam Baber (Advisor Ph.D. student in Integrative/Cardiovascular Track) 2001-present

### Ph.D., M.S. Advisory Committees

Kelli Waitkus (Committee member, Ph.D. student in Medical Physiology) 1997-2001

Travis Holton (Committee member, Ph.D. student in Medical Physiology) 1997-2000

Rebecca Marinos (Committee member, Ph.D. student in Medical Physiology) 1998-2000)

Kangmee Woo (Committee member, Ph.D. student in Medical Physiology) 1999-present

Helen Hayes (Committee member, Ph.D. Student in Medical Physiology) 2001-present

Naris Thengchaisri (Committee member, Ph.D. student in Medical Physiology) 2001-present

Vandana Sarin (Committee member, Ph.D. student in Medical Physiology) 2001-present

Rudy Gleason (Committee member, Ph.D. student in Biomedical Engineering) 2001-present

Heather Barstch (Co-Advisor, M.S. student in Biomedical Engineering) 2001-present

E. Spencer Williams (Committee member, Ph.D. student in Toxicology Program) 2000-Present

Charles Partridge (Committee member, Ph.D. student in Toxicology Program) 2001-present.

Robert Shipley (committee member, Ph.D., Student in Health and Kinesiology) 2002-present

### Graduate Council Representative

Catherine Moak (GCR representative, Ph.D. student in Educational Psychology) 1998-2002

Inyoung Kim (GCR representative, Ph.D. student in Statistics) 1999-2002

### Undergraduate and Summer Research Program

Joey Weido (485 Student) 1998

Alan Lobo (Undergraduate Honors Program) 1998-1999

Tara. T. Cruitt (SURF program (Co-Sponsor M. J. Davis) 1999

Tara T. Cruitt (Undergraduate Research) 1999-2001

Heather Bartsch (485 and Student Worker) 2000

Negar Falahatpisheh (485 student) 2000

Jayme Williams (485 Student and Student Worker) 2000-2001

Rachel Jones (Student Worker) 2000

Renee Chapman (Student Worker) 2002

### Summer Medical Research Program

Kevin Volt (Medical Student) 2000

Manuj Kapur (Medical Student) 2000

Jessemy Neiger (M.D./Ph.D. Student) 2000

Ameer Amin (Medical Student) 2001

### Postdoctoral Fellows

Sarah Jones, D.V.M. , 2000-present  
Jun Tzu (Sherry) Chao 2001-present

### **Committee and Administrative Service:**

#### Department:

Graduate Program Committee 1997-present  
Director of Tissue Culture Core Facility, 2000-present  
Journal Club Organizer 1997-2000  
Co-Director of BASS Program 2000-present  
Text Book Subcommittee 2001-2002  
Integrative Physiology Sub Committee 1999-2001

#### College of Medicine/Health Science Center:

Steering Committee for Short-term training grant—Summer Research Opportunities,  
1999-present  
Captain for Health Science Center Teams for American HeartWalk 1999-present  
Interdisciplinary Graduate Committee 2000-present  
Chair 2001-present  
Alternate Senator 2002

#### Texas A&M University

Member Search Committee for Wiseman-Leure-Worth Chair in Cardiology, Tom and  
Joan Read Chair in Vet. Surgery. 2000-2001

#### Society

American Heart Association-Texas Affiliate, Research Allocation and Advisory  
Committee 2001-present.

#### **Consultant:**

Invited Participant: NIEHS workshop on the Role of Environmental Agents on  
Development of Cardiovascular Disease, August 6,7, 2002

### **Grants**

#### **Active:**

Mechanisms and function of the vascular myogenic response

Principal Investigator: Michael J. Davis, Ph.D.

Collaborating Investigator: Emily Wilson, Ph.D. (5% Effort)

Agency: National Heart, Lung and Blood Institute

Type R01 (HL46502-06) Period 05/01/98-04/30/03

Hypertension and arterial injury: A role for integrins

Principal Investigator: Gerald A. Meininger, Ph.D.

Collaborating Investigator: Emily Wilson Ph.D. (10% Effort)

Agency: NIH Heart Lung and Blood Institute

Period: 7/99-6/03

Type: HL 62863-01

Quantification of Flow-Induced Vascular Adaptation Via and Organ Culture System  
Humphrey, J.D.-P.I, Wilson E. -Co-I (8% Effort)  
Type: NSF  
Period:01/01/01-12/31/03

Circulatory Remodeling with Simulated Microgravity  
Delp, M.D. – PI; Wilson, E – Co-I (10% Effort) 15%  
NSBRI – Baylor College of Medicine  
10/01/00-09/30/03  
\$201,349 direct cost

Griffiths, W-PI, Wilson, E. Co-I, Samuels, J.-Co-I  
Texas A&M University Life Sciences Task Force Instrumentations Grant  
Applied Biosystems 7700 Sequence Detection System  
\$80,000

Regulation of arteriole tone and K channels by integrins  
Davis, M.J. –P.I. , Wilson, E.- Co-I.(5% Effort)  
Agency: NIH  
Type RO1  
Period: 04/01/03-3/31/07

Regulation of vascular tone and calcium channels by integrins  
Davis, M.J- PI, Wilson, E. Co-I (5 % Effort)  
Agency: NIH  
Type: RO1  
Period: 05/01/03-4/31/07

**Pending:**

Pressure-Induced Remodeling of Mouse Carotid Arteries  
Wilson, E.-P.I., Humphrey, J.D.-Co-I  
Agency: NIH  
Type RO1  
Submitted Oct. 2002—  
Resubmission July 1, 2003

Regulation of Transcriptional Activation of Vascular Smooth Muscle by Changes in Arterial  
Wall Stress  
P.I. Emily Wilson  
Co-PI: Jay Humphrey  
Agency: AHA-TX Affiliate  
Type: Grant-In-Aid  
Submitted: January 2003

Heterogeneity in Acute Mechanisms of Vascular Remodeling  
Principal Investigator: G.A. Meininger  
Co-PI E. Wilson (10% Effort)  
Agency NIH-RFA  
Submitted: Feb. 2003

A confocal multi-photon/atomic force microscopy system  
PI: G.A. Meininger  
Minor User: E. Wilson  
NIH Shared Instrumentation Grant  
Submitted March 2003

Estrogen's effects on the aging cerebral vasculature  
P.I. Farida Sohrabji, Co-PI Emily Wilson  
Texas A&M University Center for Environmental and Rural Health  
Pilot Project Grant Program  
Submitted March 2003

### **Completed**

American Heart Association TX Affiliate Grant-in-Aid (July 1997- June 30,1999)  
Integrins as Mechanosensors in Vascular Smooth Muscle Total Award \$88,000. E. Wilson, PI

Texas A&M University Faculty Mini-grant (1997) Integrin Expression in Endothelial Cells  
Total award: \$1500.

Texas A&M University ; Interdisciplinary Research Initiative (1998-1999) (E. Wilson, PI, Ken Ramos, Ph.D. Co Investigator) Mechanisms of Environmentally Induced Atherogenesis; Award-\$25,000 Plus \$12,500 matching funds from Medical School; Total Award-\$37,500.

Integrin Regulation of Vascular Tone: Changes with Aging  
Wilson, E. – PI; Meininger, G.A. – Co-I) 15%  
Agency: National Institutes of Health – NIA  
Period: 08/01/00-07/31/00 (No cost extension-7-31-02)  
\$50,000 (Direct costs yr. 1)

American Heart Association Grant-in-Aid (1999-2001) Integrin Expression during Angiogenesis; Total award \$165,000. (No extension—6-31-02)

Osteopontin and Oxidative Stress in Atherogenesis  
Ramos, K.S. – PI; Wilson, E. – Co-I 20% Effort) 20%  
Type: National Institutes of Health  
Period: 04/01/00-03/31/04

Mechanisms and function of the vascular myogenic response  
Principal Investigator: Michael J. Davis, Ph.D.  
Collaborating Investigator: Emily Wilson, Ph.D. (5% Effort)  
Agency: National Heart, Lung and Blood Institute  
Type R01 (HL46502-06) Period 05/01/98-04/30/03

### **Memberships:**

American Association for Advancement of Science  
American Society of Cell Biology  
American Society of Biochemistry and Molecular Biology  
American Heart Association-- High Blood Pressure Council  
American Heart Association-Atherosclerosis, Thrombosis and Vascular Biology Council

Microcirculation Society  
North American Vascular Biology Organization

**Invited Speaker:**

Cold Spring Harbor Laboratories (1986)

4<sup>th</sup> International Congress of Cell Biology (1988) Montreal, Quebec, Canada

University of Alabama, Birmingham (1989) Department of Pharmacology, Birmingham AL.

Oklahoma Medical Research Foundation (1990) Oklahoma City, OK.

Satellite Meeting: Mechanical Forces and Cellular Regulation , ASCB, New Orleans (1993)

Rush Medical School, Chicago IL Department of Pharmacology (1995)

University of South Alabama Medical School, Department of Pharmacology Mobile AL (1995)

University of Vermont Medical School, Department of Pharmacology, Burlington Vermont(1995)

Northwestern University Medical School Chicago IL (1996)

University of Alabama, Birmingham Medical School, Birmingham AL (1996)

University of California, San Francisco Dental School (1996) Department of Stomatology, San Francisco, CA.

International Society for Heart Research (May 1998) Rhodes Greece

Texas A&M University HSC, Department of Pharmacology (Sept. 1998) College Station, TX

University of Texas Health Science Center, Department of Pathology, (Oct. 1998) Houston TX

2<sup>nd</sup> Workshop on Vascular Biology and Mechanical Forces, (Jan. 1999) Paris, France

Institute for Pathophysiology Martin Luther University (July 1999) Halle ,Germany

Inserm: Hospital Labroissiere Paris, France (July, 1999)

Young Vascular Investigators, San Antonio TX (October (1999)

Texas A&M University, Dept. of Health and Kinesiology, College Station TX (Oct. 1999)

Texas A&M University, Division of Bioengineering (Oct. 2000) College Station TX

Texas A&M University System Health Science Center, Department of Medical Physiology (Nov. 2001) College Station TX

Texas A&M University, Program in Toxicology, (Nov. 2001) College Station TX

Texas A&M University System Health Science Center, Department of Medical Pharmacology (Nov. 2002) College Station TX

### **Research Publications:**

#### Refereed Papers:

1. **Wilson, E.**, Farley, T.M., and Takemoto, J.Y. (1985) Photoaffinity labeling of an antimycin-binding site in *Rhodopseudomonas sphaeroides*. *J. Biol. Chem.* 260 10288-10292.
2. Jones, D.P., Kennedy, F.G., Andersson, B.S., Aw, T.Y. and **Wilson, E.** (1985) When is a mammalian cell hypoxic? Insights from studies of cell versus mitochondria. *Mol. Physiol.* 8, 473-482.
3. Nisimoto, Y., **Wilson, E.**, Heyl, B.L., and Lambeth, J.D. (1986) NADH dehydrogenase from bovine neutrophils: Purification and characterization. *J. Biol. Chem.* 261, 285-290.
4. **Wilson, E.**, Olcott, M.C., Bell, R.M., Merrill, A.H. Jr., and Lambeth, J.D., (1986) Inhibition of the oxidative burst in human neutrophils by sphingoid long-chain bases. *J. Biol. Chem.* 261, 12616-12623.
5. Aw, T.Y., **Wilson, E.**, Hagen, T., and Jones, D.P. (1987) Determinants of mitochondrial O<sub>2</sub> dependence in kidney cells. *Am. J. Physiol.* 253 (Renal Fluid Electrolyte Physiol. 22): F440-F447.
6. **Wilson, E.**, Laster, S.M., Gooding, L.R., and Lambeth, J.D. (1987) Platelet derived growth factor stimulates phagocytosis and blocks agonists-induced activation of the neutrophil oxidative burst. *Proc. Natl. Acad. Sci. USA* 84, 2213-2217.
7. **Wilson, E.**, Rice, W.G., Kinkade, J.M, Merrill, A.H., JR., Arnold, R.R., and Lambeth, J.D. (1987) Protein kinase C inhibition by sphingoid long-chain bases: effects on secretion in human neutrophils. *Arch. Biochem. Biophys.* 259, 204-214.
8. Deli, E., Kiss, Z., **Wilson, E.**, Lambeth, J.D. and Kuo, J.F. (1987) Immunocytochemical localization of protein kinase C in resting and activated human neutrophils. *FEBS Lett.* 221, 365-369.
9. **Wilson, E.**, Wang, E., Mullins, R.E., Liotta, D.C., Lambeth, J.D., and Merrill, A.H., Jr. (1988) Modulation of the free sphingosine levels in human neutrophils by phorbol esters and other factors. *J. Biol. Chem.* 263, 9304-9309.
10. Weber, P.C., Lukas, T.J., Craig, T.A., **Wilson, E.**, King, M.M., Kwiatkowski, A.P. and Watterson, D.M. (1989) Computational and site-specific mutagenesis analysis of the asymmetric charge distribution on calmodulin. *Proteins: Structure, Function, and Genetics*, 6, 70-85.
11. Shoemaker, M.O., Lau, W., Shattuck, R.L., Kwiatowski, A.P., Matrisian, P.E., Guerra-Santos, L., Wilson, E., Lukas, T.J., Van Eldik, L. and Watterson, D.M.,

- (1990) Use of DNA sequence, mutant analysis and antisense oligodeoxynucleotides to examine the molecular basis of non-muscle myosin light chain kinase autoinhibition, calmodulin recognition and activity. *J. Cell Biol.* 111, 1117-1125.
12. Hinrichsen, R., **Wilson, E.**, Lukas, T., Craig, T., Schultz, J., and Watterson, D.M., (1990) Analysis of the molecular basis of calmodulin defects that affect ion channel mediated cellular responses by using site specific mutagenesis and microinjection. *J. Cell Biol.* 111, 2537-2542.
  13. Chabre, O., Conklin, B.R., Lin, H.Y., Lodish, H.F., **Wilson, E.**, Ives, H.E., Catanzariti, L., Hemmings, B.A., and Bourne, H.R. (1992) A recombinant calcitonin receptor independently stimulates cAMP and Ca<sup>2+</sup>/inositol phosphate signaling pathways. *Mol. Endo.* 6, 551-556.
  14. Peters, K.G., Marie, J., **Wilson, E.**, Ives, H.E., Escobedo, J., Delrosario, M.D., Mirza, D., Williams, L.T., (1992) An FGF Receptor Point Mutation That Abolishes Phosphatidylinositol Turnover and Ca<sup>++</sup> Mobilization but not Mitogenesis. *Nature* 358, 678-681.
  15. **Wilson, E.**, Mai, Q., Sudhir, K. Weiss, R.H., and Ives, H.E. (1993) Mechanical strain induces growth of vascular smooth muscle cells via autocrine action of PDGF., *J. Cell Biol.*123 741-747.
  16. Sudhir, K. **Wilson, E.** Chatterjee, K. and Ives, H.E. (1993) Mechanical strain and collagen potentiate the mitogenic activity of angiotensin II in rat vascular smooth muscle cells. *J. Clin. Invest.* 92 3003-3007.
  17. Clyman, R.I., Peters, K.G., Chen, Y.Q. , Escobedo, J., Williams, L.T., Ives, H.E., and **Wilson, E.** (1994) Phospholipase C<sub>g</sub> activation, phosphatidylinositol hydrolysis, and calcium mobilization are not required for FGF receptor-mediated chemotaxis. *Cell Adhesion and Communication* 1 333-342.
  18. Ma, Y.H., Reusch, H.P., **Wilson, E.**, Escobedo, J., Fantl, W.J., Williams, L.T., Ives, H.E., (1994) Activation of Na<sup>+</sup>/H<sup>+</sup> exchange by platelet derived growth factor involves phosphatidylinositol-3' kinase and phospholipase C<sub>g</sub>. *J. Biol. Chem.* 269 30734-30739.
  19. **Wilson, E.**, Sudhir, K., Ives, H.E., (1995) Mechanical strain is sensed by vascular smooth muscle cells through interaction with adhesion proteins. *J. Clin. Invest.* 96 2364-2372.
  20. Reusch, P. Wagday, H., Reusch, R., **Wilson, E.**, and Ives, H.E. (1996) Mechanical strain increases smooth muscle myosin and decreases nonmuscle myosin in rat vascular smooth muscle cells. *Circ. Res.* 79 1046-1053.
  21. **Wilson, E.**, Vives, F., Collins, T. and Ives, H.E., (1998) Strain-responsive regions in the platelet-derived growth factor-A Gene Promoter. *Hypertension* 31 [part 2] 170-175.
  22. Mathias, R.S., Shang, S.J., **Wilson, E.**, Mai, K., Gardner, P., and Ives, H.E. (1997) Non-capacitative calcium entry in Chinese hamster ovary cells expressing the platelet derived growth factor receptor. *J. Biol. Chem.* 272 29076-290826

23. Morawietz, H., Ma, Y.-H., Vives, F., **Wilson, E.**, Sukhatme, V.P., Holtz, J., and Ives, H.E. (In Press) Mechanical strain induces early growth response gene-1 expression in vascular smooth muscle cells *Circ. Res.*
24. **Wilson, E.**, Parrish, A.R., Bral, C.M. Williams, E.S., Ramos, K.S., (2002) Induction of proliferative vascular smooth muscle cell phenotypes by oxidative injury is regulated by extracellular matrix interactions *Atherosclerosis*, 162: 289-297.
25. Wu X, Davis GE, Meininger GA, **Wilson E** and Davis MJ (2001) Regulation of the L-type calcium channel by  $\alpha_5\beta_1$  integrin requires signaling between focal adhesion proteins. *J Biol Chem* 276, 30285-30292.
26. Davis MJ, Wu X, Nurkiewicz TR, Kawasaki J, Gui P, Hill MA and **Wilson E.** (2001) Regulation of ion channels by protein tyrosine phosphorylation. *Am J Physiol Heart Circ Physiol* 281: H1835-H1862.
27. Hayes, H. Kossman, M.S., **Wilson, E.** and Zawieja, D.C. (In Press) development and characterization of endothelial cells from rat microlymphatics. *Lymphatic Research and Biology*
28. Humphrey JD and **Wilson E.** (In Press) A potential role of activation in smooth muscle mechanotransduction during early hypertension *Journal of Biomechanics*
29. Luis A. Martinez-Lemus<sup>1</sup>, Xin Wu<sup>1</sup>, **Emily Wilson**<sup>1</sup> Michael A. Hill<sup>9</sup>, George E. Davis<sup>2</sup>, Michael J. Davis<sup>1</sup> and Gerald A. Meininger (In Press) Integrins as unique receptors for vascular control. *Journal of Vascular Research*

#### **Submitted:**

1. Jones, S.A., Patterson, J.L., Ramos, K.S., **Wilson, E** Modulation of ERK 1/2 Activity and Cell Cycle Regulatory Proteins in Oxidatively Stressed Vascular Smooth Muscle Cells (Submitted) *Cardiovascular Research*
2. Hayes, H. Donnini, S., Dawson, N., Parentie, A., **Wilson, E.**, and Zawieja, D.C., Microlymphatic endothelial cell VEGF Receptor Expression and VEGF-induced Chemotaxis (under revision).
3. Chao, J-T, Partridge, C. Neiger, J.D., Williams, E.S., Kaufman, S.J., Meininger, G.A, Ramos, K.S. and **Wilson, E.** (Submitted) Increased Alpha-7 integrin expression in vascular smooth muscle cells during Oxidative injury: a novel indicator for oxidative stress in VSMC? *Atherosclerosis, Thrombosis and Vascular Biology*
4. Williams, E.S., **Wilson, E.** and Ramos, K.S. (Submitted) Nuclear Factor Kappa B Participates in Matrix-Related Expression of Atherogenic Vascular Smooth Muscle Cell Phenotypes Following Oxidative Injury *Circ. Res.*
5. Partridge, C.R., Williams E.S., Lu, K.P., Johnson, C.D., Barhoumi, R., Meininger, G.A., **Wilson, E.** and Ramos, K.S. (Submitted) Genomic and Immunofluorescence analysis of interactive gene networks in oxidant-induced atherogenesis. *Circ. Res.*

### **Book Chapters:**

1. Haiech, J., Kilhoffer, M.C., Craig, T.A., Lukas, T.J., **Wilson, E.**, Guerra-Santos, L. and Watterson, D.M. (1990) Mutant analysis approaches to understanding calcium signal transduction through calmodulin and calmodulin regulated enzymes. *Advances in Experimental Medicine and Biology* Vol. **269** (D.E.M. Lawson and R. Pochet, eds.) Plenum Press, 43-56.
2. **Wilson, E.**, Watterson, D.M., and Collinge, M., (1990) A molecular genetics and mutant analysis approach for elucidation of molecular mechanisms of calcium signal transduction through calmodulin:calmodulin binding protein complexes. *Calcium in Plant Growth and Development* (R.T. Leonard and P.K. Hepler) The American Society of Plant Physiologist Series. Vol 4.
3. **Wilson, E.**, Watterson, D.M., and Collinge, M., (1990) A molecular genetics and mutant analysis approach for elucidation of molecular mechanisms of calcium signal transduction through calmodulin:calmodulin binding protein complexes. *Calcium in Plant Growth and Development* (R.T. Leonard and P.K. Hepler) The American Society of Plant Physiologist Series. Vol 4.
4. **Wilson E.**, and Meininger GA. Extracellular Matrix Changes During Aging and Alterations in Vascular Smooth Muscle Signaling In *Advances in Cell Aging and Gerontology* series, Elsevier (in press, 2002).
5. Humphrey JD, Rajagopal KR, **Wilson E.** The ubiquitous role of growth and remodeling in the vasculature. *Appl Mech Rev* (invited, 2002)

### **Abstracts** (Since 2000)

1. Partridge, C.R., **E. Wilson**, G.A. Meininger, E.S. Williams and K.S. Ramos. Altered expression of osteopontin, alpha 1 integrin subunit, and alpha-smooth muscle actin in vascular tissue in response to oxidative injury. 41<sup>st</sup> Annual Meeting of the Society for Toxicology, September 2001.
2. J.D. Neiger, C. Partridge, E.S. Williams, K. Ramos, **E. Wilson**, G.A. Meininger. Hypertension alters integrin-mediated changes in vascular tone and expression of integrin and extracellular matrix genes. Meeting of American Physiological Society on Physiological Genomics of Cardiovascular Disease: From Technology to Physiology, February 2002.
3. Chao, J.T., A. Papadopoulos, C. Partridge, E.S. Williams, G.A. Meininger, K. Ramos, **E. Wilson**. Alteration in integrin expression and integrin-mediated vascular responsiveness in oxidatively injured arteries. Meeting of American Physiological Society on Physiological Genomics of Cardiovascular Disease: From Technology to Physiology, February 2002.
4. Partridge, C.R., K.P. Lu, C.D. Johnson, E.S. Williams, G.A. Meininger, **E. Wilson**, K.S. Ramos. Transcriptome analysis of vascular tissue following oxidative injury. Meeting of American Physiological Society on Physiological Genomics of Cardiovascular Disease: From Technology to Physiology, February
5. Jones, S.A., Patterson, J.L., Ramos, K.S. and **Wilson, E.** Chronic oxidative injury of vascular smooth muscle cells alters expression of cell cycle regulatory proteins and activation of MAPkinase 3<sup>rd</sup> Annual Conference on Arteriosclerosis,

Thrombosis and Vascular Biology, NAVBO/American Heart Association, Salt Lake City UT, April 2002.

6. Neiger, J., Sheng, J, Patterson, J. and **Wilson E** (2001) Regulation of Endothelial Cell Integrin Expression by Angiogenic Growth Factors FASEB J. 407.8.
7. Jones, S., Williams, ES, Patterson, J, Ramos, KS, And Wilson, E., (2001) Growth, Matrix and Differential MAP Kinase Activation in Allylamine Injured Vascular Smooth Muscle Cells. FASEB J.
8. Hayes, H., **Wilson, E.** and Zawieja, DC (2001) Detection of Integrins on Rat Mesenteric Lymphatic Endothelial Cells FASEB J.
9. Meininger, G.A., Martinez-Lemus, L.A., Sun, Z., Trache, A., Wu, X., **Wilson, E.**, Davis, M.J., Pohl, U., Role of Extracellular Matrix-Integrin Interaction in Short and Long-Term Responses to Pressure 22<sup>nd</sup> Meeting of the European society for Microcirculation. August, 2002
10. Sarah A. Jones, Jan L. Patterson, Kenneth S. Ramos<sup>†</sup>, **Emily Wilson**, Chronic Oxidative Injury of Vascular Smooth Muscle Cells Alters Expression of Cell Cycle Regulatory Proteins and Activation of MAP Kinase, Mechanisms of Toxicity, Gordon Conference, July 2002.
11. Chao, J-T., Partridge C., Williams, ES., Meininger, GA., Ramos, KS., **Wilson, E.** Increased expression of  $\alpha 7$  integrin in oxidatively injured vascular smooth muscle cells. Submitted to Experimental Biology 2003; April 11-15, 2003; San Diego CA.
12. Wu, X., P. Gui, GE Davis, **E. Wilson**, GA Meininger, AP Braun, MJ Davis, Regulation of  $Ca^{2+}$  Activated  $K^{+}$  Channels by  $\alpha 5\beta 1$  Integrin. Submitted to Biophysical Society 2003; San Antonio, TX.
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