

## WALTER LEE MURFEE, PH.D.

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### ACADEMIC POSITIONS

- 2017-Present Associate Professor, Department of Biomedical Engineering, University of Florida
- 2017-Present Research Professor, Department of Biomedical Engineering, Tulane University
- 2014-2017 Associate Professor, Department of Biomedical Engineering, Tulane University
- 2007-2017 Assistant Professor, Department of Biomedical Engineering, Tulane University
- 2008-Present Adjunct Assistant Professor, Department of Physiology, Tulane University
- 2005-2007 Postdoctoral Fellow, Department of Bioengineering, University of California – San Diego
- 2000-2005 Graduate Research Associate, Department of Biomedical Engineering, University of Virginia

### EDUCATION

- 2005 ***University of Virginia***  
Doctor of Philosophy in Biomedical Engineering. Research focused on cellular dynamics during microvascular remodeling. Relevant courses include: Mammalian Physiology; Cell Mechanics Adhesion and Locomotion; Advanced Biomechanics; Vascular Biology; Constitutive Modeling; Theory of Elasticity; Instrumentation I and II.
- 1999 ***Massachusetts Institute of Technology***  
Bachelor of Science in Mechanical Engineering and a Minor in Economics. Relevant courses include: Product Engineering Process, Design and Manufacturing I and II; Mechanics and Materials I and II; Control System Principles; System Modeling I and II; Mechanical Vibrations; Thermal-Fluids Engineering I and II; Measurement and Instrumentation.

### RESEARCH EXPERIENCE

- 2007-Present ***University of Florida, Tulane University***  
Microvascular Dynamics Laboratory, Department of Biomedical Engineering: Investigating pericyte-endothelial interactions during angiogenesis, the relationships between angiogenesis and lymphangiogenesis, and the microvascular patterning alterations associated with age related diseases. A current focus is on the development of a novel tissue culture model that mimics the physiological complexity of intact microvascular networks ex vivo.
- 2005-2007 ***University of California – San Diego***  
Postdoctoral Fellow, Microcirculation Laboratory, Department of Bioengineering (Mentor: Dr. Geert Schmid-Schonbein): Investigated lymphatic endothelial cell structure, the altered microvascular network patterns associated with hypertension, and the effect of circulating protease activity on endothelial cell mechanotransduction.
- 2000-2005 ***University of Virginia***  
Graduate Research Assistant, Microvascular Remodeling Laboratory, Department of Biomedical Engineering (Advisor: Dr. Thomas C. Skalak): PhD dissertation work identified an arteriole/venous differential expression pattern for Neuron-Glia Antigen 2 (NG2), a membrane spanning proteoglycan, along quiescent adult microvascular networks and a correlation between NG2 upregulation along venules and capillary angiogenesis during network remodeling. Collaborative projects outside the scope of my PhD work entailed characterizing the arterialization of capillaries including the differentiation/acquisition of smooth muscle cells in

response to hemodynamic alterations (increased circumferential wall stress), high-frequency low-magnitude mechanical vibration, and interval sprint training exercise.

1997-1998 **Massachusetts Institute of Technology**  
Computer-Based Simulation of Construction Activities. Modeled the design and installation of electrical systems in construction. Contributed to the development of a process simulation model incorporating the electrical system with other sub-systems to systematically assess design and technology alternatives.

## INDUSTRY EXPERIENCE

1999-2000 **Arthur D. Little, Inc.** Cambridge, MA  
Participated in the design, procurement, building, and testing of military ground support equipment: specifically liquid cooling, air cooling, and generator models. Other experiences include: refrigerant market study, manufacturing cost analysis, LabView programming, and additional mechanical design work.

Summer 1998 **Pratt & Whitney** East Hartford, CT  
Contributed to the re-design of a high power turbine rotor in order to improve engine life. Conducted finite element analysis to confirm resizing of a first stage seal.

## PEER-REVIEWED PUBLICATIONS

- Suarez-Martinez AD, Peirce SM, Isakson B, Nice M, Lounsburye KM, Scallan JP, Murfee WL. (2018). Induction of Microvascular Network Growth in the Mouse Mesentery. *Microcirculation*. 25(8):e12502.
- Sure VN, Sakamuri SSV, Sperling JA, Evans WR, Merdzo I, Mostany R, Murfee WL, Busija DW, Katakam PVG. (2018). A novel high-throughput assay for respiration in isolated brain microvessels reveals impaired mitochondrial function in the aged mice. *Geroscience*. Aug;40(4):365-375.
- Ungvari Z, Tarantin S, Kiss T, Wren JD, Giles CB, Griffin CT, Murfee WL, Pacher P, Csiszar A. (2018). Endothelial dysfunction and angiogenesis impairment in the ageing vasculature. *Nature Reviews Cardiology*. 15(9):555-565.
- Suarez-Martinez AD, Bierschenk S, Huang K, Kaplan D, Bayer CL, Meadows SM, Sperandio M, Murfee WL. (2018) A Novel Ex Vivo Mouse Mesentery Culture Model for Investigating Angiogenesis in Microvascular Networks. *J Vasc Res*. 55(3):125-135.
- Hodges NA, Suarez-Martinez AD, Murfee WL. (2018) Understanding Angiogenesis During Aging: Opportunities for Discoveries and New Models. *J Appl Physiol*. (**Invited Review**) (In Press)
- Motherwell JM, Anderson CR, Murfee WL. (2018) Endothelial Cell Phenotypes are Maintained During Angiogenesis in Cultured Microvascular Networks. *Sci Rep*. 2018 Apr 12;8(1):5887.
- Anderson CA, Bokota RE, Majeste AE, Murfee WL, Wang S. (2017) A Microcontroller Operated Device for the Generation of Liquid Extracts from Conventional Cigarette Smoke and Electronic Cigarette Aerosol. *Journal of Visualized Experiments*. Jan 18;(131).
- Motherwell JM, Azimi MS, Spicer K, Alves NG, Hodges NA, Breslin JW, Katakam PVG, Murfee WL. (2017). Evaluation of Arteriolar Smooth Muscle Cell Function in an Ex Vivo Microvascular Network Model. *Sci Rep*. May 19;7(1):2195.
- Vinson BT, Phamduy TB, Shipman J, Riggs B, Strong AL, Sklare SC, Murfee WL, Burow ME, Bunnell BA, Huang Y, Chrisey DB. (2017). Laser direct-write based fabrication of a spatially-defined, biomimetic construct as a potential model for breast cancer cell invasion into adipose tissue. *Biofabrication*. 2017 May 11;9(2):025013.
- Azimi MS, Motherwell JM, Murfee WL. (2017). An Ex Vivo Method for Time-Lapse Imaging of Cultured Rat Mesenteric Microvascular Networks. *Journal of Visualized Experiments*. Feb 9;(120).

- Sweat RS, Sloas DC, Stewart SA, Czarny-Ratajczak M, Baddoo M, Eastwood JR, Suarez-Martinez AD, Azimi MS, Burks HE, Chedister LO, Myers L, Murfee WL. (2017). Aging Is Associated with Impaired Angiogenesis, but Normal Microvascular Network Structure in the Rat Mesentery. *Am J Physiol Heart Circ Physiol.* 1;312(2):H275-H284.
- Sweat RS, Azimi MS, Suarez-Martinez AD, Katakam P, Murfee WL. (2016). Lysophosphatidic acid does not cause blood/lymphatic vessel plasticity in the rat mesentery culture model. *Physiol Rep.* 2016 Jul;4(13).
- Sloas DC, Stewart SA, Sweat RS, Doggett TM, Alves NG, Breslin JW, Gaver DP, Murfee WL. (2016). Estimation of the Pressure Drop Required for Lymph Flow through Initial Lymphatic Networks. *Lymphatic Research and Biology.* 14(2):62-69
- Burks HE, Phamduy TB, Azimi MS, Saksena J, Burow ME, Collins-Burow BM, Chrisey DB, Murfee WL. (2016). Laser Direct-Write onto Live Tissues: A Novel Model for Studying Cancer Cell Migration. *J Cell Physiol.* 231(11):2333-2338.
- Corliss BA, Azimi MS, Munson J, Peirce SM, Murfee WL. (2016). Macrophages: An Inflammatory Link between Angiogenesis and Lymphangiogenesis. *Microcirculation.* 23(2):95-121.
- Phamduy TB, Sweat RS, Azimi MS, Burow ME, Murfee WL, Chrisey DB. (2015). Printing cancer cells into intact microvascular networks: a model for investigating cancer cell dynamics during angiogenesis. *Integr Biol (Camb).* 7(9):1068-78.
- Murfee WL, Sweat RS, Tsubota K, Mac Gabhann F, Khismatullin D, Peirce SM. (2015). Applications of Computational Models to Better Understand Microvascular Remodeling: A Focus on Biomechanical Integration across Scales. *Interface Focus.* Apr 6;5(2):20140077. **(Invited Review)**
- Azimi MS, Myers L, Lacey M, Stewart SA, Shi Q, Katakam PV, Mondal D, Murfee WL. (2015). An Ex Vivo Model for Anti-Angiogenic Drug Testing on Intact Microvascular Networks. *PLOS ONE.* 5;10(3):e0119227.
- Sweat RS, Sloas DC, Murfee WL. (2014) VEGF-C Induces Lymphangiogenesis and Angiogenesis in the Rat Mesentery Culture Model. *Microcirculation.* Mar; 21(6):532-540.
- Stapor PC, Sweat RS, Dashti DC, Betancourt AM, Murfee WL (2014) Pericyte Dynamics during Angiogenesis: New Insights from New Identities. *J Vasc Res.* 51:163-174. **(Invited Review)**
- Kelly-Goss MR, Sweat RS, Stapor PC, Peirce SM, Murfee WL. (2014) Targeting Pericytes for Angiogenic Therapies. *Microcirculation.* May; 21(4):345-357. **(Invited Review)**
- Kelly-Goss MR, Sweat RS, Azimi MS, Murfee WL. (2013) Vascular Islands during Microvascular Regression and Regrowth in Adult Networks. *Frontiers in Vascular Physiology.* May 16;4:108.
- Stapor PC, Azimi MS, Ahsan T, Murfee WL. (2013) An Angiogenesis Model for Investigating Multi-Cellular Interactions across Intact Microvascular Networks. *Am J Physiol Heart Circ Physiol.* 304(2):H235-45.
- Sweat RS, Stapor PC, Murfee WL. (2012) Relationships between Lymphangiogenesis and Angiogenesis during Inflammation in Rat Mesentery Microvascular Networks. *Lymphat Res Biol.* 10(4):198-207.
- Kelly-Goss MR, Winterer ER, Stapor PC, Yang M, Sweat RS, Stallcup WB, Schmid-Schonbein GW, Murfee WL. (2012) Cell Proliferation along Vascular Islands during Microvascular Network Growth. *BMC Physiology.* Jun; 12(1):7.
- Yang M, Murfee WL. (2012) The Effect of Microvascular Pattern Alterations on Network Resistance in Spontaneously Hypertensive Rats. *Medical & Biological Engineering & Computing.* 50(6):585-593.
- Stapor PC, Murfee WL. (2012) Spatiotemporal Distribution of Neurovascular Alignment in Remodeling Adult Rat Mesentery Microvascular Networks. *Journal of Vascular Research.* 25;49(4):299-308.

- Yang M, Stapor PC, Peirce SM, Betancourt AM, Murfee WL. (2012) Rat Mesentery Exteriorization: A Model for Investigating the Cellular Dynamics Involved in Angiogenesis. *Journal of Visualized Experiments*. 63: e3954.
- Stapor PC, Murfee WL. (2012) Identification of Class III  $\beta$ -Tubulin as a Marker of Angiogenic Perivascular Cells. *Microvascular Research*. 83(2):257-262. **(Cover Illustration)**
- Yang M, Aragon M, Murfee WL. (2011) Angiogenesis in Mesenteric Microvascular Networks From Spontaneously Hypertensive Versus Normotensive Rats. *Microcirculation*. Oct; 18(7): 574-582.
- Forouzan O, Burns JM, Robichaux JL, Murfee WL, Shevkoplyas SS. (2011) Passive recruitment of circulating leukocytes into capillary sprouts from existing capillaries in a microfluidic system. *Lab on a Chip*. Jun 7; 11(11): 1924-1932.
- Stapor PC, Wang W, Murfee WL, Khismatullin DB. (2011) The Distribution of Fluid Shear Stresses in Capillary Sprouts. *Cardiovascular Engineering and Technology*. 2(2): 124-136.
- Tran ED, Yang M, Chen A, DeLano FA, Murfee WL and Schmid-Schönbein GW. (2011) Matrix Metalloproteinase Activity Causes VEGFR-2 Cleavage and Microvascular Rarefaction in Mesentery. *Microcirculation*. April; 18(2): 228-237.
- Robichaux JL, Tanno E, Rappleye JW, Ceballos M, Stallcup WB, Schmid-Schönbein GW, Murfee WL. (2010) Lymphatic/Blood Endothelial Cell Connections at the Capillary Level in Adult Rat Mesentery. *Anatomical Record*. 293: 1629-1638. **(Cover Illustration)**
- Murfee WL, Rappleye JW, Ceballos M, Schmid-Schonbein GW. (2007) Discontinuous Expression of Endothelial Cell Adhesion Molecules along Initial Lymphatic Vessels in Adult Rat Mesentery: The Primary Valve Structure. *Lymphatic Research and Biology*. 5(2): 81-89.
- Binder KW, Murfee WL, Song J, Laughlin MH, Price RJ. (2007) Computational Network Model Prediction of Hemodynamic Alterations Due to Arteriolar Remodeling in Interval Sprint Trained Skeletal Muscle. *Microcirculation*. April-May; 14: 181-192.
- Taylor AC, Murfee WL, Peirce SM. (2007) EphB4 Expression along Adult Microvascular Networks: More than a Venous Specific Marker. *Microcirculation*. April-May; 14: 253-267.
- Murfee WL, Rehorn MR, Peirce SM, Skalak TC. (2006) Perivascular Cells along Venules Upregulate NG2 Expression during Microvascular Remodeling. *Microcirculation*. April; 13: 261-273.
- Murfee WL, Hammett LA, Evans C, Xie L, Squire M, Rubin C, Judex S, Skalak TC. (2005) High-Frequency Low Magnitude Vibrations Suppress the Number of Blood Vessels per Muscle Fiber in Mouse Soleus Muscle. *Journal of Applied Physiology*. June; 98: 2376-2380.
- Murfee WL, Skalak TC, Peirce SM. (2005) Differential Arterial/Venous Expression of NG2 Proteoglycan in Perivascular Cells along Microvessels: Identifying a Venule-Specific Phenotype. *Microcirculation*. March; 12(2): 151-160. **(Cover Illustration)**
- Murfee WL, Van Gieson EJ, Price RJ, Skalak TC. (2004) Cell Proliferation in Mesenteric Microvascular Network Remodeling in Response to Elevated Hemodynamic Stress. *Annals of Biomedical Engineering*. December; 32(12): 1662-1666. **(Cover Illustration)**
- Van Gieson EJ, Murfee WL, Skalak TC, Price RJ. (2003) Enhanced Smooth Muscle Cell Coverage of Microvessels Exposed to Increased Hemodynamic Stresses In Vivo. *Circulation Research*. May 2; 92(8): 929-936. **(Cover Illustration)**

## BOOK CHAPTERS

- Azimi MS, Lacey M, Mondal D, Murfee WL. (2016) An Ex Vivo Tissue Culture Model for Anti-Angiogenic Drug Testing. *Tumor Angiogenesis Assays: Methods and Protocols*. 1464:85-95
- Murfee WL. (2015) Implications of Fluid Shear Stress in Capillary Sprouting during Adult Microvascular Network Remodeling. *Mechanobiology of the Endothelium*. 166-184.
- Murfee WL, Schmid-Schonbein GW. (2008) Structure of Microvascular Networks in Genetic Hypertension. *Methods of Enzymology Series on Angiogenesis*. 444:271-284.

## COMMENTARIES

- Motherwell JM, Murfee WL. (2018). Mimicking the Microcirculation. *Nature Biomedical Engineering*. **(Invited)**
- Murfee WL, Peirce SM. (2017). Microfluidics Technologies and Approaches for Studying the Microcirculation. *Microcirculation*. 2017 Jul;24(5). **(Invited)**
- Murfee WL. (2017). When angiogenesis is not good enough. *J Physiol*. Mar 1;595(5):1439. **(Invited)**
- Schmid-Schoenbein GW, Murfee WL. (2008) In response to "Point: Counterpoint: There is/is not capillary recruitment in active skeletal muscle during exercise". *J Appl Physiol*. Mar;104(3): 897. **(Invited)**

## INVITED SEMINAR PRESENTATIONS

- Murfee WL. (May 2018). Microvascular Adaptations during Aging: Opportunities for New Models and Discoveries. *University of Florida – Institute on Aging*
- Murfee WL. (May 2017). A New View for Discovering Cellular Dynamics during Angiogenesis and Lymphangiogenesis. *KAIST-IBS Vascular Biology Conference – Symposium on Vascular Remodeling (Korea)*
- Murfee WL. (April 2017). Discovering Cell Dynamics during Microvascular Growth. *University of Florida – Department of Biomedical Engineering*
- Murfee WL. (March 2017). Understanding How Microvascular Networks Grow in the Adult. *Tulane University – Department of Cell and Molecular Biology*
- Murfee WL. (January 2017). Discovering Cell Dynamics during Microvascular Growth. *Pennsylvania State University – Department of Biomedical Engineering*
- Murfee WL. (September 2016). Discovering Cell Dynamics Involved in Angiogenesis and Lymphangiogenesis. *Louisiana State University Health Science Center – Department of Physiology*
- Murfee WL. (July 2016). Computational and Experimental Approaches for Advancing our Understanding of Microvascular Structure and Growth. *Ludwig-Maximilians-Universität München – Walter Brendel Centre of Experimental Medicine (Germany)*
- Murfee WL. (July 2016). Microvascular Network Structure and Remodeling: Angiogenesis to Lymphangiogenesis. *Charité – Universitätsmedizin Berlin – Institute for Physiology (Germany)*
- Murfee WL. (June 2016). Applications of Computational and Experimental Approaches for Investigating Microvascular Structure and Remodeling. *Tulane University – Hypertension & Renal Center of Excellence*
- Murfee WL. (May 2016). A New Model to Study Angiogenesis and Lymphangiogenesis at the Same Time. *The City College of New York – Department of Biomedical Engineering*

- Murfee WL. (December 2015). Discovering Cell Dynamics Involved in Angiogenesis and Lymphangiogenesis. *Yale University – Vascular Biology Seminar Series*
- Murfee WL. (May 2015). Hypertension to Aging: Advancing Our Understanding of Microvascular Growth. *Tulane University – Hypertension & Renal Center of Excellence*
- Murfee WL. (January 2015). Angiogenesis to Lymphangiogenesis: New Insights from New Dynamics. *University of Vermont – Department of Pharmacology and Vermont Cancer Center*
- Murfee WL. (November 2014). Discovering How Microvascular Networks Grow in the Adult. *University of Virginia – Department of Biomedical Engineering*
- Murfee WL. (October 2014). Biomedical Engineering and Microvascular Remodeling: New Discoveries and Future Applications. *Bio-frontier Symposium (Japan)*
- Murfee WL. (October 2014). Computational Biomechanics: Application of Integrative Models to Understand Microvascular Remodeling. *Chiba University – Department of Mechanical Engineering (Japan)*
- Murfee WL. (February 2014). Investigating Angiogenesis and Lymphangiogenesis at the Same Time. *Tulane University – Department of Physiology*
- Murfee WL. (November 2013). Angiogenesis to Lymphangiogenesis: New Insights from New Dynamics. *West Virginia University – Center for Cardiovascular and Respiratory Sciences*
- Murfee WL. (October 2013). Understanding How Microvascular Networks Grow in the Adult: From Angiogenesis to Lymphangiogenesis. *University of Kentucky – Department of Biomedical Engineering*
- Murfee WL. (September 2013). New Dynamics from Angiogenesis to Lymphangiogenesis. *Tulane University – Department of Biomedical Engineering*
- Murfee WL. (August 2013). New Dynamics from Angiogenesis to Lymphangiogenesis. *Tulane University – Department of Pharmacology*
- Murfee WL. (February 2013). Identification of Novel Cellular Dynamics Involved in Angiogenesis. *Ludwig Maximilian University of Munich – Symposium on Vascular Remodeling (Germany)*
- Murfee WL. (April 2012). Microvascular Structure and Hypertension: New Answers to Old Questions. *Tulane University – Hypertension & Renal Center of Excellence*
- Murfee WL. (May 2011). Understanding How Microvascular Networks Grow in the Adult: New Insights from a Systems Biology Perspective. *Texas A&M University – Department of Systems Biology and Translational Medicine*
- Murfee WL. (February 2011). Understanding How Microvascular Networks Grow in the Adult. *Tulane University – Department of Physiology*
- Murfee WL. (November 2010). Understanding How Microvascular Networks Grow in the Adult. *Tulane University – Center for Stem Cell Research and Regenerative Medicine*
- Murfee WL. (September 2010). Lymphatic/Blood Endothelial Cell Connections at the Capillary Level in Adult Microvascular Networks. *Louisiana State University Health Science Center – Department of Physiology*
- Murfee WL. (September 2009). Identifying the Role of Age-Related Microvascular Patterning Alterations in Hypertension. *Tulane University – Center for Aging*
- Murfee WL. (July 2008). Understanding How Microvascular Networks Grow in the Adult: The Structure of the Microcirculation During Hypertension. *Tulane University – Hypertension & Renal Center of Excellence*

- Murfee WL. (May 2008). The Identification of Novel Cellular Dynamics During Angiogenesis and Lymphangiogenesis. *Louisiana State University Health Science Center – Department of Physiology*
- Murfee WL. (February 2008). The Structure of the Microcirculation During Tissue Remodeling and Hypertension. *Tulane University – Department of Physiology*
- Murfee WL. (October 2007). Understanding How Microvascular Networks Grow in the Adult: Identification of Novel Perivascular Cell Dynamics, Arterial/Venous Phenotypes, and Connections with Other Network Systems. *Louisiana State University Health Science Center – Department of Anatomy*
- Murfee WL. (September 2007). Identifying Microvascular Network Structure and Remodeling Dynamics: New Insights from a Systems Biology Approach at the Tissue Level. *Tulane University – Department of Biomedical Engineering*
- Murfee WL. (May 2007). Understanding How Microvascular Networks Grow in the Adult: Identification of Novel Perivascular Cell Dynamics, Arterial/Venous Phenotypes, and Connections with Other Network Systems. *California Institute of Technology*
- Murfee WL. (March 2007). Understanding How Microvascular Networks Grow in the Adult: Identification of Novel Perivascular Cell Dynamics, Arterial/Venous Phenotypes, and Connections with Other Network Systems. *Tulane University – Department of Biomedical Engineering*
- Murfee WL. (February 2007). Identifying Novel Microvascular Structure and Network Remodeling Dynamics: New Insights from a Systems Biology Approach at the Tissue Level. *University of California – San Diego (Inaugural Presentation for Postdoctoral Seminar Series)*
- Murfee WL. (February 2007). Understanding How Microvascular Networks Grow in the Adult: Identification of Novel Perivascular Cell Dynamics, Arterial/Venous Phenotypes, and Connections with Other Network Systems. *Tufts University – Department of Biomedical Engineering*
- Murfee WL. (January 2007). Exploring Adult Microvascular Remodeling: Understanding Perivascular Cell Phenotypes, Arterial/Venous Identity, and the Connections with Other Network Systems. *University of California – Los Angeles – Department of Biomedical Engineering*
- Murfee WL. (November 2006). Exploring Adult Microvascular Remodeling: Understanding Perivascular Cell Phenotypes, Arterial/Venous Identity, and the Connections with Other Network Systems. *Pennsylvania State University – Department of Biomedical Engineering*
- Murfee WL. (March 2006). Perivascular Cell Dynamics During Adult Microvascular Remodeling: Understanding the Importance of Arterial/Venous Phenotype. *The City College of New York – Department of Biomedical Engineering*
- Murfee WL. (April 2005). Perivascular Cell Dynamics During Angiogenesis: Introduction of Neuron-Glia Antigen 2 (NG2) as a Marker of Activated Venules. *The Burnham Institute*

#### **INVITED ORAL PRESENTATIONS AT CONFERENCES**

- Murfee WL. (August 2018). Discovering Pericyte Dynamics during Angiogenesis. *11th World Congress for Microcirculation – Vancouver, Canada*
- Murfee WL. (April 2018). A New View for Old Questions: Rediscovering Angiogenesis and Lymphangiogenesis. *Experimental Biology (EB) – San Diego, CA*
- Murfee WL. (August 2017). Microvascular Adaptations during Aging: Opportunities for New Models and Discoveries. *2017 APS Conference Cardiovascular Aging: New Frontiers and Old Friends. – Westminster, CO*
- Murfee WL. (November 2016). Microvascular Adaptations during Aging. *2016 GSA Annual Scientific Meeting: Vascular Aging and Health (Pre-conference meeting). – New Orleans, LA*

- Murfee WL. (October 2016). Fundamental Questions about Lymphatic Biology and Implications for Tissue Engineering. *Biomedical Engineering Society Annual Conference (BMES) – Minneapolis, MN*
- Murfee WL. (November 2015). Manipulating Microvascular Growth with MSCs: Do we really know what they do? *13th Annual Meeting of the International Federation for Adipose Therapeutics and Science (IFATS) – New Orleans, LA*
- Murfee WL. (October 2014). Lymphatic/Blood Endothelial Cell Interrelationships in the Adult. *Vascular Biology 2014 – Monterey, CA*
- Murfee WL. (August 2014). Microvascular Network Remodeling in Response to Inflammation. *1st Pan American Congress of Physiological Sciences – Iguassu Falls, Brazil*
- Murfee WL. (July 2014). Blood Vessels to Lymphatics: A Pathway of Unanswered Questions. *World Congress of Biomechanics – Boston, MA*
- Murfee WL. (July 2014). Adding to Our Understanding about Microvascular Remodeling: From Capillary Sprouting to Network Patterning. *World Congress of Biomechanics – Boston, MA*
- Murfee WL. (April 2014). Pericytes, Lymphatics, and Unanswered Questions. *SMUG Meeting at Experimental Biology (EB) – San Diego, CA*
- Murfee WL, Brown JQ. (February 2014). Who Says You Can't Teach Sophomores Design: Interacting Through the Design Process. *ASEE-GSW Annual Conference – New Orleans, LA*
- Murfee WL. (July 2013). The Role of Pericytes in Microvascular Network Pattern Formation. *IUPS – Birmingham, UK*
- Murfee WL. (March 2012). Identifying Lymphatic/Blood Endothelial Cell Dynamics During Microvascular Network Growth. *Gordon Research Conference – Ventura, CA*
- Murfee WL. (April 2011). Injury and Stress-Induced Microvascular Network Remodeling. *Experimental Biology (EB) – Washington D.C.*

#### **ORAL PRESENTATIONS AT CONFERENCES**

- Azimi, MS, Motherwill, JM, Hodges N, Murfee WL. (October 2017). Lymphatic to Blood Vessel Transition in Adult Microvascular Networks. *Vascular Biology 2017 – Monterey, CA*
- Azimi MS, Strong AL, Bunnell BA, Murfee WL. (November 2015). Application of a Novel Ex Vivo Model For Evaluating Stem Cell Fate In A Microvascular Network. *13th Annual Meeting of the International Federation for Adipose Therapeutics and Science (IFATS) – New Orleans, LA*
- Azimi MS, Strong AL, Bunnell BA, Murfee WL. (October 2015). Aged Bone Marrow-Derived Stem Cells Display Increased Pericyte Fate in a Microvascular Network Model Ex Vivo. *Biomedical Engineering Society Annual Conference (BMES) – Tampa, FL*
- Sloas DC, Stewart SA, Sweat RS, Murfee WL. (June 2015). The Effects of Aging on Microvascular Network Resistance and Flow Heterogeneity in the Rat Mesentery. *2015 Summer Biomechanics, Bioengineering and Biotransport Conference (SB<sup>3</sup>C) – Snowbird, UT*
- Sweat RS, Chedister L, Sloas DS, Stewart SA, Murfee WL. (April 2014). The Effect of Aging on Microvascular Density and Angiogenesis. *Experimental Biology (EB) – San Diego, MA*
- Sweat RS, Murfee WL. (April 2013). VEGF-C Induces Lymphangiogenesis in the Rat Mesentery Culture Model. *Experimental Biology (EB) – Boston, MA*
- Azimi MS, Kelly-Goss MR, Stapor PC, Murfee WL. (October 2012). Identification of Novel Endothelial Cell Dynamics during Angiogenesis Using the Rat Mesentery Culture Model. *Biomedical Engineering Society Annual Conference (BMES) – Atlanta, GA*



Stapor PC, Ahsan T, Murfee WL. (April 2012). NG2 Inhibition Decreases Endothelial Cell Sprouting Along Venules: A Novel In Situ Angiogenesis Assay To Investigate Multicellular Interactions. *Experimental Biology (EB) – San Diego, CA*

Yang M, Murfee WL. (April 2012). The Effect of Network Pattern Alterations on Microvascular Resistance In Hypertension. *Experimental Biology (EB) – San Diego, CA*

Stapor PC, Murfee WL. (April 2011). Class III  $\beta$ -Tubulin Identification of Angiogenic Pericytes and Lymphatic Sprouts during Microvascular Remodeling. *Experimental Biology (EB) – Washington D.C.*

Robichaux, JL, Tanno E, Murfee WL. (April 2009). Non-Luminal Lymphatic/Blood Endothelial Connections Exist at the Capillary Level in Unstimulated Adult Rat Mesenteric Microvascular Networks. *Experimental Biology (EB) – New Orleans, LA*

Murfee WL, Skalak TC, Peirce SM. (October 2004). Lack of NG2 Proteoglycan Expression Identifies a Venule Specific Phenotype for Perivascular Cells. *Biomedical Engineering Society Annual Conference (BMES) – Philadelphia, PA*

## **POSTER PRESENTATIONS AT CONFERENCES**

Murfee WL. (July 2018). Initial Lymphatic Network Structure and Plasticity: Discoveries and Impacts on Biotransport. *World Congress of Biomechanics – Dublin, Ireland*

Hodges NA, Murfee WL. (April 2018). Angiogenesis is Not Impaired in Cultured Rat Mesenteric Microvascular Networks. *Experimental Biology (EB) – San Diego, CA*

Motherwell JM, Katakam P, Walter Murfee WL. (April 2018) An Ex Vivo Platform for Studying Angiogenesis in Perfused Microvascular Networks. *Experimental Biology (EB) – San Diego, CA*

Suarez-Martinez AD, Peirce-Cottler SM, Isakson B, Scallan J, Murfee WL. (April 2018) Induction of Microvascular Network Growth in the Mouse Mesentery. *Experimental Biology (EB) – San Diego, CA*

Azimi MS, Motherwell JM, Hodges NA, Murfee WL. (March 2018). Lymphatic to Blood Vessel Transition in Adult Microvascular Networks. *Gordon Research Conference – Lucca (Barga), Italy*

Motherwell JM, Murfee WL. (October 2017). Evaluation of Endothelial Cell Phenotype in the Rat Mesentery Culture Model. *Vascular Biology 2017 – Monterey, CA*

Suarez-Martinez AD, Kaplan D, Huang K, Meadows S, Bierschenk S, Sperandio M, Murfee WL. (2017) Introduction of the Ex Vivo Mouse Mesometrium Culture Model for Investigating Multicellular Dynamics During Angiogenesis. *Biomedical Engineering Society Annual Conference (BMES) – Phoenix, AZ*

Motherwell JM, Azimi M, Spicer K, Alves N, Breslin J, Katakam P, Murfee WL. (April 2016). Evaluation of Smooth Muscle Cell Function in the Rat Mesentery Culture Model. *Experimental Biology (EB) – Chicago, IL*

Suarez-Martinez AD, Kaplan D, Huang K, Meadows S, Bierschenk S, Sperandio M, Murfee WL. (April 2016). Development of the Ex Vivo Mouse Mesometrium Model to Investigate Multicellular Dynamics during Angiogenesis. *Experimental Biology (EB) – Chicago, IL*

Suarez-Martinez AD, Lane JL, Murfee WL. (April 2016). Aged Microvascular Networks Display Increased Pericyte Coverage along Capillaries. *Experimental Biology (EB) – Chicago, IL*

Hodges NA, Barr RW, Murfee WL. (April 2016). Maintenance of Nerves in the Rat Mesentery Culture Model. *Experimental Biology (EB) – Chicago, IL*

Murfee WL, Katakam P, Bunnell BA, Azimi MS, Motherwell JM. (November 2016). A New Ex Vivo Tool for Stem Cell Fate and Functional Studies in Cultured Microvascular Networks. *19th International Vascular Biology Meeting – Boston, MA*

Motherwell JM, Azimi MS, Katakam P, Murfee WL. (October 2016). Development of an Ex Vivo Intact Microvascular Network Model: Evaluation of Smooth Muscle Cell Constriction. *Biomedical Engineering Society Annual Conference (BMES) – Minneapolis, MN*

Hodges NA, Barr RW, Lane JH, Murfee WL. (October 2016). The Effect of Media Type on Nerve Presence in Cultured Microvascular Networks with Blood Vessels and Lymphatics. *Biomedical Engineering Society Annual Conference (BMES) – Minneapolis, MN*

Motherwell JM, Azimi MS, Katakam P, Murfee WL. (March 2016). Evaluation of Smooth Muscle Cell Function in Cultured Microvascular Networks. *Experimental Biology (EB) – San Diego, CA*

Hodges NA, Barr RW, Murfee WL. (March 2016). The Effect of Media Type on Nerve Presence in the Cultured Microvascular Networks. *Experimental Biology (EB) – San Diego, CA*

Azimi MS, Strong AL, Dutreil MF, Fishel RL, Bunnell BA, Murfee WL. (March 2016). Evaluation of Stem Cell Fate in Cultured Microvascular Networks. *Experimental Biology (EB) – San Diego, CA*

Murfee WL. Lymphatic/Blood Vessel Plasticity in Adult Microvascular Networks: Can Endothelial Cells Switch their Phenotype? *Gordon Research Conference – Ventura, CA*

Motherwell JM, Azimi MS, Katakam P, Murfee WL. (January 2016). Evaluation of Smooth Muscle Cell Function in Cultured Microvascular Networks. 2016 Cell and Molecular Bioengineering and Advanced Biomanufacturing Joint Conference – *New Orleans, LA*

Azimi MS, Strong AL, Saksena J, Chrisey DB, Dutreil MF, Bunnell BA, Murfee WL. (January 2016). A Novel Ex Vivo Microvascular Network Model for Screening Stem Cell Fate. 2016 Cell and Molecular Bioengineering and Advanced Biomanufacturing Joint Conference – *New Orleans, LA*

Murfee WL, Azimi MS, Strong AL, Bunnell BA. (November 2015). Pericyte Fate Depends on Stem Cell Type and Age in Cultured Microvascular Networks. 2015 Southeast Regional IDEa Meeting. – *Biloxi, MS*

Sloas DC, Stewart SA, Murfee WL. (September 2015). Estimation of Pressure Drop Required for Lymph Flow through Initial Collecting Lymphatics. 10<sup>th</sup> World Congress for Microcirculation – *Kyoto, Japan*

Murfee WL, Azimi MS, Strong AL, Bunnell BA. (September 2015). Aged Bone Marrow-Derived Stem Cells Display Increased Pericyte Fate in Cultured Microvascular Networks. 10<sup>th</sup> World Congress for Microcirculation – *Kyoto, Japan*

Azimi MS, Strong AL, Phamduy TB, Chrisey DB, Bunnell BA, Murfee WL. (June 2015). Biomimetic Ex Vivo Model for Tracking Stem Cells during Microvascular Network Growth. *2015 Summer Biomechanics, Bioengineering and Biotransport Conference (SB<sup>3</sup>C) – Snowbird, UT*

Sweat RS, Murfee WL. (March 2015). Lysophosphatidic Acid Induces Angiogenesis in Intact Ex Vivo Microvascular Networks. *Experimental Biology (EB) – Boston, MA*

Azimi MS, Strong AL, Phamduy TB, Chrisey DB, Bunnell BA, Murfee WL. (March 2015). Tracking Human Adipose-Derived Stem Cells (hASCs) in an Ex Vivo Microvascular Network Model. *Experimental Biology (EB) – Boston, MA*

Sloas DC, Stewart SA, Murfee WL. (March 2015). Estimation of Pressure Drop Required for Lymph Flow through Initial Collecting Lymphatics. *Experimental Biology (EB) – Boston, MA*

Stewart SA, Sloas DC, Murfee WL. (March 2015). The effect of aging on microvascular network patterning in the rat mesentery. *Experimental Biology (EB) – Boston, MA*

- Sweat RS, Chedister L, Sloas DS, Stewart SA, Murfee WL. (April 2014). The Effect of Aging on Microvascular Density and Angiogenesis. *Experimental Biology (EB) – San Diego, CA*
- Sweat RS, Phamduy T, Chrisey D, Murfee WL. (April 2014) The Effect of Cancer Cells on Angiogenesis: Engineering the Cancer Niche. *Experimental Biology (EB) – San Diego, CA*
- Azimi MS, Mathur A, Mondal D, Murfee WL. (April 2014) A Novel Ex Vivo Tissue Culture Assay for Determining the Effects of Anti-Tumor Drugs on Angiogenesis. *Experimental Biology (EB) – San Diego, CA*
- Azimi MS, Stewart SA, Murfee WL. (October 2013) Time Lapse Imaging of Microvascular Network growth during Angiogenesis Using a New Ex Vivo Tissue Culture Model. *Vascular Biology 2013 – Hyannis, MA*
- Sweat RS, Murfee WL. (July 2013) VEGF-C Induces Lymphangiogenesis and Angiogenesis in the Rat Mesentery Culture Model. *IUPS – Birmingham, UK*
- Kelly-Goss MR, Sweat RS, Murfee WL. (April 2013) Vascular Islands Increase during Microvascular Network Regression and Proliferate during Angiogenesis. *Experimental Biology (EB) – Boston, MA*
- Stapor PC, Murfee WL. (April 2013) Human Pericyte Expression of Class III  $\beta$ -tubulin and Inhibition of Migration and Proliferation with Paclitaxel. *Experimental Biology (EB) – Boston, MA*
- Sweat RS, Murfee WL. (April 2013) VEGF-C Induces Lymphangiogenesis in the Rat Mesentery Culture Model. *Experimental Biology (EB) – Boston, MA*
- Kelly-Goss MR, Sweat RS, and Murfee WL. (October 2012) Vascular Islands Increase during Regression in Adult Rat Mesenteric Microvascular Networks. *Biomedical Engineering Society Annual Conference (BMES) – Atlanta, GA*
- Stapor PC, Ahsan T, Murfee WL. (April 2012) NG2 Inhibition Decreases Endothelial Cell Sprouting Along Venules: A Novel In Situ Angiogenesis Assay To Investigate Multicellular Interactions. *Experimental Biology (EB) – San Diego, CA*
- Yang M, Murfee WL. (April 2012) The Effect Of Network Pattern Alterations On Microvascular Resistance In Hypertension. *Experimental Biology (EB) – San Diego, CA*
- Sweat RS, Stapor PC, Murfee WL. (April 2012) Temporal Relationship between Inflammation-Induced Lymphangiogenesis And Angiogenesis In Rat Mesenteric Microvascular Networks. *Experimental Biology (EB) – San Diego, CA*
- Yang M, Murfee WL. (September 2011) The Effect of Microvascular Network Structure Alterations on Network Resistance in Spontaneously Hypertensive Rats. *SE Regional IDeA Meeting – New Orleans, LA*
- Yang M, Murfee WL. (May 2011) Angiogenesis is not Impaired in Mesenteric Microvascular Networks in Spontaneously Hypertensive Rats. *The 6th Gulf Coast Physiology Society Meeting.- Jackson, MS*
- Forouzan O, Murfee WL, Shevkoplyas SS. (April 2011) Passive Recruitment of Circulating Leukocytes into Capillary Sprouts from Existing Capillaries. *Experimental Biology (EB) – Washington D.C.*
- Stapor PC, Murfee WL. (April 2011) Class III  $\beta$ -Tubulin Identification of Angiogenic Pericytes and Lymphatic Sprouts during Microvascular Remodeling. *Experimental Biology (EB) – Washington D.C.*
- Wang W, Stapor PC, Murfee WL, Khismatullin DB. (October 2010) Influence of Permeability on Shear Stress Distribution Along Capillary Sprouts. *Biomedical Engineering Society Annual Conference (BMES) – Austin, TX*
- Murfee WL. (September 2010) Identification of Novel Endothelial Cell Dynamics During Angiogenesis. *9<sup>th</sup> World Congress for Microcirculation – Paris, France*

- Yang M, Murfee WL. (September 2010) Angiogenesis in Mesenteric Microvascular Networks in Spontaneously Hypertensive Versus Normotensive Rats. *9<sup>th</sup> World Congress for Microcirculation – Paris, France*
- Stapor PC, Murfee WL. (September 2010) Spatial Distribution of Neurovascular Alignment In Adult Rat Mesentery Microvascular Networks. *9<sup>th</sup> World Congress for Microcirculation – Paris, France*
- Stapor PC, Murfee WL. (April 2010) Neurovascular Alignment in Adult Rat Mesentery Microvascular Networks. *Experimental Biology (EB) – Anaheim, CA*
- Yang M, Jan T, Murfee WL. (April 2010) Comparison of the Microvascular Network Resistance between Normotensive and Spontaneously Hypertensive Rats. *Experimental Biology (EB) – Anaheim, CA*
- Yang M, Murfee WL. (January 2010) The Influence of Microvascular Network Patterning Alterations on Network Resistance in Young Spontaneously Hypertensive Rats. *Louisiana NCCR/IDEA Biomedical Research Symposium – Baton Rouge, LA*
- Stapor PC, Murfee WL, Khismatullin DB. (October 2009) Determination of Shear Stress Magnitudes Along Capillary Sprouts. *Biomedical Engineering Society Annual Conference (BMES) – Pittsburgh, PA*
- Robichaux, JL, Tanno E, Murfee WL. (April 2009) Non-Luminal Lymphatic/Blood Endothelial Connections Exist at the Capillary Level in Unstimulated Adult Rat Mesenteric Microvascular Networks. *Experimental Biology (EB) – New Orleans, LA*
- Aragon M, Antoine D, Murfee WL. (April 2009) Spontaneously Hypertensive Rat Mesenteric Microvascular Networks Undergo Angiogenesis in Response to a Wound Healing Stimulus. *Experimental Biology (EB) – New Orleans, LA*
- Yang M, Murfee WL. (April 2009) Identification of Microvascular Patterning Alterations in Young Spontaneously Hypertensive Rats. *Experimental Biology (EB) – New Orleans, LA*
- Wheat R, Walpole J, Mac Gabhann F, Bailey AM, Glaw J, Murfee WL and Peirce SM. (April 2009) Microvascular NG2 Expression Patterns In Response To Aging, Ischemic Injury, And Disease In Mouse Spinotrapezius Muscle. *Experimental Biology (EB) – New Orleans, LA*
- Chen A, DeLano FA, Schmid-Schonbein GW, Murfee WL. (April 2008) Microvascular Network Restructuring Associated with MMP Inhibition in Spontaneously Hypertensive Rats. *Experimental Biology (EB) – San Diego, CA*
- Murfee WL, Schmid-Schonbein GW. (March 2008) Identification of Disconnected Endothelial Cell Segments and Lymphatic/Blood Vessel Connections in Adult Rat Mesenteric Microvascular Networks. *Gordon Research Conference – Ventura, CA*
- Murfee WL, Rappleye JW, Ceballos M, Schmid-Schonbein GW. (August 2007) Direct Connections Between Lymphatic and Blood Capillary Sprouts in Adult Microvascular Networks. *8<sup>th</sup> World Congress for Microcirculation – Milwaukee, WI.*
- Murfee WL, Rappleye JW, Ceballos M, Schmid-Schonbein GW. (April 2007) Identification of Lymphatic/Blood Vessel Connections at the Capillary Level in Adult Rat Mesenteric Microvascular Networks. *Experimental Biology (EB) – Washington D.C.*
- Murfee WL, Rappleye JW, Schmid-Schonbein GW. (April 2007) Analysis of Primary Valve Structure Along Initial Lymphatic Networks in Adult Rat Mesentery. *Experimental Biology (EB) – Washington D.C.*
- Murfee WL, Peirce SM, Skalak TC. (April 2006) NG2 Is Functionally Involved in Microvascular Remodeling. *Federation for the American Societies for Experimental Biology (FASEB) – San Francisco, CA*
- Murfee WL, Peirce SM, Skalak TC. (April 2005) NG2 Proteoglycan Expression Is Dynamically Upregulated By Perivascular Cells Along Venules During Microvascular Remodeling. *Graduate Biosciences Society Student Symposium – Charlottesville, VA*

Murfee WL, Peirce SM, Skalak TC. (April 2005) NG2 Proteoglycan Expression Is Dynamically Upregulated By Perivascular Cells Along Venules During Microvascular Remodeling. *Federation for the American Societies for Experimental Biology (FASEB) – San Diego, CA*

Murfee WL, Hammett LA, Evans C, Xie L, Squire M, Rubin C, Judex S, Skalak TC. (October 2004) High-Frequency Low Magnitude Vibrations Induce Vascular Remodeling in Mouse Soleus Muscle. *Biomedical Engineering Society Annual Conference (BMES) – Philadelphia, PA*

Murfee WL, Van Gieson EJ, Price RJ, Skalak TC. (April 2003) Smooth Muscle and Perivascular Cell Proliferation Associated with Elevated Hemodynamic Stress. *Federation for the American Societies for Experimental Biology (FASEB) – San Diego, CA*

## **PROFESSIONAL MEMBERSHIP**

2013-Present North American Vascular Biology Organization (NAVBO)

2012-Present American Heart Association

2008-Present American Association of Anatomists

2007-Present AEMB Biomedical Engineering Student National Honors Society

2007-Present American Society for Engineering Education

2006-Present American Physiological Society

2006-Present The Microcirculatory Society

2000-Present Biomedical Engineering Society (BMES)

## **PROFESSIONAL SERVICE**

2017-Present Microcirculatory Society, Programming Committee Chair

2017-Present AEMB Biomedical Engineering Student National Honors Society, MINDS Program Mentor

2017-Present Microcirculatory Society, Kaley Award Committee

2017-Present Associate Editor, Microcirculation

2017-Present 11th World Congress for Microcirculation, Scientific Advisory Committee

2018 NIH HM Study Section, Ad-Hoc Grant Reviewer

2018 NIH Study Section, Special Emphasis Panel Review for Small Business Innovation Research (SBIR) Phase I (R34) & Fast Track/Phase II (R44) Applications, Grant Reviewer

2018 South Carolina EPSCoR Program, Grant Reviewer

2018 NIH PTHE Study Section, Mail-In Grant Reviewer

2018 American Heart Association, Vas Bio & Blood Pressure BSc Fellowship Committee, Grant Reviewer

2018 Abstract Reviewer for the 8<sup>th</sup> World Congress of Biomechanics – Dublin, Ireland

2017 Co-chair of the Session, entitled “Engineering Vascular Morphogenesis,” at Vascular Biology 2017 – Monterey, CA

- 2017 Co-chair of the AEMB Session, entitled “Mentoring for Innovative Design Solutions (MINDS) Scholars Workshop,” at the Biomedical Engineering Society Annual Conference (BMES) – Phoenix, AZ
- 2017 U.S. Army Medical Research and Materiel Command, Peer Reviewed Medical Research Program (PRMRP), Grant Reviewer
- 2017 NIH BTSS Study Section, Ad-Hoc Grant Reviewer
- 2017 National Sciences and Engineering Research Council of Canada, Discovery Grants Program, Grant Reviewer
- 2017 American Heart Association, Vascular BioBP BSc2, Grant Reviewer
- 2016-2017 Guest Editor, Microcirculation, Special Issue: New and Emerging Tools for Studying the Microvasculature - Microfluidics in Vascular Research
- 2017 Abstract Reviewer for the Tissue Engineering Track, Biomedical Engineering Society Annual Conference (BMES) – Phoenix, AZ
- 2016 Co-chair of the Session, entitled “Microcirculation,” at the 19<sup>th</sup> International Vascular Biology Meeting – Boston, MA
- 2016 Co-chair of the Session, entitled “Cancer Technologies,” at the Biomedical Engineering Society Annual Conference (BMES) – Minneapolis, MN
- 2016 Abstract Reviewer for the Tissue Engineering Track, Biomedical Engineering Society Annual Conference (BMES) – Minneapolis, MN
- 2015 Co-chair of the Session, entitled “MCS Young Investigator Poster Session,” at Experimental Biology 2015 – San Diego, CA
- 2016 Abstract Reviewer for the Summer Biomechanics, Bioengineering, Biotransport Meeting (SB3C2016) – National Harbor, MD
- 2015 American Heart Association, Vascular BioBP BSc3, Grant Reviewer
- 2015 Abstract Reviewer for the Southern Biomedical Engineering Conference – Shreveport, LA
- 2015-2017 Microcirculatory Society, Secretary
- 2015 Co-chair of the Session, entitled “Biological Flows in Interstitium and Lymphatics,” at Summer Biomechanics, Bioengineering and Biotransport Conference – Snowbird, UT
- 2015 Co-chair of the Session, entitled “Biomechanics of Microcirculation and Blood Cells,” at Summer Biomechanics, Bioengineering and Biotransport Conference – Snowbird, UT
- 2015 Co-chair of the Session, entitled “MCS Young Investigator Poster Session,” at Experimental Biology 2015 – Boston, MA
- 2014-2015 Microcirculatory Society, Council Member
- 2014 Microcirculatory Society, Development Committee
- 2014 Co-chair of the Session, entitled “Molecular and Cellular Dynamics of Angiogenesis,” at Vascular Biology 2014 – Monterey, CA
- 2014 Co-chair of the Session, entitled “MCS President’s Symposium II: Rapid Fire,” at Experimental Biology 2014 – San Diego, CA

2013 Chair of the Session, entitled "Pericyte Modulation of Microvascular Function," at Vascular Biology 2013 – Hyannis, MA

2014 Chair of the Session, entitled "Hands-On Learning and Design III," at ASEE-GSW Annual Conference

2014 Abstract Reviewer for the ASEE-GSW Annual Conference

2013-Present AEMB Biomedical Engineering Student National Honors Society, Board of Directors.

2013 Chair of the Session, entitled "Tissue Engineered Models for Study of Disease and Drug Discovery II," at the Biomedical Engineering Society Annual Conference (BMES) – Seattle, WA

2013 Abstract Reviewer for the Tissue Engineering Track, Biomedical Engineering Society Annual Conference (BMES) – Seattle, WA

2013 Abstract Reviewer for the Undergraduate Research Track, Biomedical Engineering Society Annual Conference (BMES) – Seattle, WA

2013 Chair of the Microcirculatory Society Young Investigator Symposium Session at Experimental Biology (EB) 2013 – Boston, MA

2012-2014 Microcirculatory Society, Publications Committee

2012 Chair of the Session, entitled "Microvessel Development in Tissue Engineering Constructs," at the Biomedical Engineering Society Annual Conference (BMES) – Atlanta, GA

2012 Abstract Reviewer for the Tissue Engineering Track, Biomedical Engineering Society Annual Conference (BMES) – Atlanta, GA

2012 Abstract Reviewer for the Undergraduate Research Track, Biomedical Engineering Society Annual Conference (BMES) – Atlanta, GA

2011-Present Associate Editor, BMC Physiology

2011-Present Review Editorial Board member for Frontiers in Computational Physiology and Medicine, a specialty of Frontiers in Physiology

2011 Chair of the American Physiological Society Featured Topic Session, entitled "Adaptation of the Microcirculation to Inflammatory Insult," at Experimental Biology (EB) 2011 – Washington, D.C.

2009-2012 Microcirculatory Society, Membership Committee

2008-2009 Chair of the American Association of Anatomists Hybrid Symposium, entitled "System Biology Approaches for Investigating Microvascular Remodeling," at Experimental Biology (EB) 2009 – New Orleans, LA

2008-2009 Chair of the American Physiological Society Featured Topic Session, entitled "Lymphatic Endothelial Cells: Passive or Active Participants in Lymphatic Function," at Experimental Biology (EB) 2009 – New Orleans, LA.

2005-Present Reviewer for Journal Publications: *Nature Biomedical Engineering, Circulation, Integrative Biology, FASEB, Scientific Reports, Journal of Physiology, Microcirculation, Lymphatic Research and Biology, American Journal of Physiology: Heart and Circulatory Physiology, Journal of Applied Physiology, Annals of Biomedical Engineering, PLOS One, Microvascular Research, Journal of Vascular Research, American Journal of Pathology, Cell Biochemistry and Function, Cardiovascular Research, Journal of Visualized Experiments, Journal of Diabetes and Its Complications, Journal of Materials Chemistry B, Biomedical Optics Express, Biochemical Engineering Journal, BMC Physiology, Vascular Pharmacology, Physical Review E., Biomechanics and Modeling in Mechanobiology, Comprehensive Physiology*

## **INSTITUTIONAL SERVICE AT THE UNIVERSITY OF FLORIDA**

- 2017-Present Biomedical Engineering Department, Undergraduate Studies Committee
- 2017-Present Biomedical Engineering Department, Research Committee
- 2017-Present Biomedical Engineering Department, Executive Committee
- 2017-Present Biomedical Engineering Department, Faculty Search Committee
- 2017-Present Biomedical Engineering Department, BME Tenure & Promotion Committee

## **INSTITUTIONAL SERVICE AT TULANE UNIVERSITY**

- 2017 Dean Search Committee
- 2016-2017 Tulane University Wall Honors Society Fellow
- 2016-2017 IT Senate Committee
- 2015 Goldwater Scholarship Nomination Committee
- 2014-2016 Tulane University Honors Program Butler Society Fellow
- 2014-2017 School of Science and Engineering Grievance Committee
- 2013-2017 Biomedical Engineering Department External Constituency Committee
- 2013-2015 Health Professions Committee
- 2013 Goldwater Scholarship Nomination Committee
- 2011-2012 School of Science and Engineering Nominating Committee
- 2011-Present Tulane University Committee on Academic Requirements
- 2010-Present Biomedical Engineering Department Undergraduate Studies Committee
- 2008-Present Biomedical Engineering Department Class Advisor
- 2008-2009 Biomedical Engineering Department Seminar Series (Organizer)
- 2007-Present Biomedical Engineering Department Faculty Search Committee Member

## **INSTITUTIONAL SERVICE PRIOR TO TULANE UNIVERSITY**

- 2007 Co-founder of the Bioengineering Postdoctoral Seminar Series at the University of California – San Diego
- 2002-2003 University of Virginia Student Chapter of the Biomedical Engineering Society (BMES) Vice-President, recipient of the National BMES Meritorious Achievement Award for Student Chapters

## **AWARDS/HONORS**

- 2017 Carol Lavin Bernick Faculty Grant, Tulane University
- 2017 Teacher of the Year, Department of Biomedical Engineering, Tulane University



- 2016 Teacher of the Year, Department of Biomedical Engineering, Tulane University
- 2016 Excellence in Teaching Recognition, Science and Engineering Honor Society, Tulane University
- 2016 Carol Lavin Bernick Faculty Grant, Tulane University
- 2016 MCS Travel Award for Outstanding Young Investigators, The Microcirculatory Society
- 2014 Award for Excellence in Lymphatic Research, The Microcirculatory Society
- 2011-2017 Tulane Newcomb Fellow
- 2009 Teacher of the Year, Department of Biomedical Engineering, Tulane University
- 2007 August Krogh Young Investigator Travel Award, The Microcirculatory Society
- 2005-2007 Post Doctoral Fellow, NRSA Institutional Training Grant (Dr. Shu Chien, PI)
- 2005 Benjamin Zweifach Student Award, The Microcirculatory Society
- 2005 Department of Biomedical Engineering Student Elected Teaching Assistant Award
- 2005 Department of Biomedical Engineering nominee for the Outstanding Graduate Teaching Assistant Teaching Award
- 2004-2005 Department of Biomedical Engineering representative on the search/interview committee for the new Dean of Engineering
- 2003-2004 Predoctoral Trainee, GANN fellowship (Dr. Milton Adams, PI)
- 2003 Nominated for the University of Virginia Seven Society Graduate Fellowship for Superb Teaching

**TEACHING EXPERIENCE AT THE UNVIERSITY OF FLORIDA**

- 2018 BMEN4632, Biomedical Transport Phenomena
- 2017 BMEN 1008, Introduction to Biomedical Engineering (Guest Lecturer)

**TEACHING EXPERIENCE AT TULANE UNIVERSITY**

- 2013 2017 BMEN 4910, Research and Professional Experience
- 2012 BMEN 4910, Research and Professional Practice (Lectures on Abstract and Thesis Preparation)
- 2011-2013 BMEN 4030-4040, Team Design (Team Mentor, Faculty Panel Member, Guest Lecturer)
- 2010-2017 AGST 706, Research Topics in Aging (Lecture on Aging Impaired Vascular Remodeling)
- 2010-2017 AGST 704, Interdisciplinary Seminar in Aging (Lecture on Angiogenesis and Aging)
- 2008-2016 BMEN 6430, Vascular Bioengineering
- 2008-2015 BMEN 2310, Product and Experimental Design
- 2008-2013 BMEN 3070, Quantitative Physiology (Peripheral Circulation I and II Lectures; Microcirculation Laboratory I and II)
- 2007-2010 BMEN 330, Biomechanics
- 2008, 2009 Cell 608, Advanced Cell and Developmental Biology (Lecture on Angiogenesis)

- 2008 CENG 250, Introduction to Biotechnology (Lecture on the Introduction to Angiogenesis: Integration of Cellular Dynamics)
- 2007 BMEN 201, Experimental Design (Lecture on the Parallels between Experimental and Product Design)

#### **TEACHING EXPERIENCE PRIOR TO TULANE UNIVERSITY**

- 2007 BE122A, Biomechanics (Lecture on the Effects of Stresses on Tissue Remodeling; Lecture on Introduction to Angiogenesis and Computational Modeling of Vascular Networks; Lecture on Microvascular Network Remodeling and the Effects of Mechanical Stresses) - *University of California - San Diego*
- 2006 BE122B, Biomechanics (Lecture on the Motivation for Understanding Stresses along the Vasculature) - *University of California - San Diego*
- 2005 BIOM 322, Biomechanics and Biotransport (Lecture on the Introduction to the Concept of the Stress Vector; Lecture on Blood Cell Structure and Deformability) - *University of Virginia*
- 2004 BIOM 463-1, Biomedical Engineering Capstone Senior Design I (Lecture on Concept Selection, Sketching and Detailed Design; Lecture on Computer Aided Design) - *University of Virginia*
- 2004 BIOM 200, Biomedical Engineering Design and Discovery (Lecture on the Design Process; Lecture on Experimental Design) - *University of Virginia*
- 2003 BIOM 200, Biomedical Engineering Design and Discovery (Teaching Assistant involved in overall organization, lecture design, and creation of assignments. Mentored student design teams during the development of course long projects. Lecture on Experimental Design; Lecture on Introduction to Biomechanics; Lectures on Introduction to Matlab) - *University of Virginia*
- 2002 BIOM 200, Biomedical Engineering Design and Discovery (Teaching Assistant for inaugural course offered to undergraduates. Mentored student design teams during the development of course long projects. Lecture on Experimental Design; Lecture on Introduction to Biomechanics) - *University of Virginia*

#### **DOCTORAL STUDENT MENTORING EXPERIENCE**

- 2015-Present Jessica Motherwell, Tulane Graduate Bioinnovation Program, PhD Research Advisor
- 2015-Present Ariana Saurez-Martinez, Tulane Graduate Biomedical Engineering Student, PhD Research Advisor
- 2014-Present Nicholas Hodges, Tulane Graduate Biomedical Engineering Student, PhD Research Advisor
- 2011-2017 Sadegh Azimi, Tulane Graduate Biomedical Engineering Student, PhD Research Advisor
- 2010-2015 Rick Sweat, Tulane Graduate Biomedical Engineering Student, PhD Research Advisor
- 2008-2013 Peter Stapor, Tulane Graduate Biomedical Engineering Student, PhD Research Advisor
- 2008-2012 Ming Yang, Tulane Graduate Biomedical Engineering Student, PhD Research Advisor

#### **MASTERS STUDENT MENTORING EXPERIENCE**

- 2012-2013 Molly Kelly-Goss, Tulane Graduate Biomedical Engineering Student, MS Research Advisor
- 2008-2010 Jennifer Robichaux, Tulane Graduate Biomedical Engineering Student, MS Research Advisor

#### **GRADUATE STUDENT THESIS COMMITTEE EXPERIENCE**

2017 Sadegh Azimi, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Chairman

2017 Xun Zhang, University of South Florida Graduate Medicine Molecular Pharmacology & Physiology Student, PhD Thesis Committee External Chair

2017 Chase Anderson, Tulane Graduate Cell and Molecular Biology Student, PhD Thesis Committee Member

2017 Katy Robison, Tulane Graduate Biomedical Engineering Student, MS Thesis Committee Member

2016 You Lou, Tulane Graduate Center for Aging Student, PhD Thesis Committee Member

2016 Lina Quijano, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Member

2016 Liana Boraas, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Member

2016 Ashwin Sivakumar, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Member

2016 Nicholas Pashos, Tulane Graduate Bioinnovation Program, PhD Thesis Committee Member

2016 Rajaprabhakaran Gowthamran, Tulane Graduate Pharmacology Student, MS Thesis Committee Member

2016 Emily Relle, Tulane Graduate Biomedical Engineering Student, MS Thesis Committee Member

2015 Venkata N.L.R. Sure, Tulane Graduate Pharmacology Student, PhD Thesis Committee Member

2015 Connor MacCrimmon, Tulane Graduate Biomedical Engineering Student, MS Thesis Committee Member

2015 Rick Sweat, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Chairman

2015 Gary Catig, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Member

2015 Chandler Faulman, Tulane Graduate Biomedical Engineering Student, MS Thesis Committee Member

2015 Julia Guidry, Tulane Graduate Biomedical Engineering Student, MS Thesis Committee Member

2015 Parastoo Khoshaklagh, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Member

2014 Theresa Phamduy, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Member

2014 Travis Doggett, LSU-HSC Graduate Physiology Student, PhD Thesis Committee Member

2014 Carrie Griffith, Tulane Graduate Biomedical Engineering Student, MS Thesis Committee Member

2014 Elaine Horne, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Member

2013 Peter Stapor, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Chairman

2013 Mathew Triscott, Tulane Graduate Biomedical Engineering Student, MS Thesis Committee Member

2013 Eliot Neal, Tulane Graduate Biomedical Engineering Student, MS Thesis Committee Member

2013 Kristen Lynch, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Member

2013 Emma Pineda Fortin, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Member

2013 Russel Wolfe, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Member

2013 Xiaoxi Yang, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Member

2013 Karen Wang, Tulane Graduate Cell and Molecular Biology Student, PhD Thesis Committee Member

2013 Hongzhi Lan, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Member

2012 Ming Yang, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Chairman

2012 Jennie Burns, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Member

2012 Kristine Kurtz, LSU-HSC Graduate Physiology Student, PhD Thesis Committee Member

2012 Lowry Curley, Tulane Graduate Biomedical Engineering Student, PhD Thesis Committee Member

2012 Lisa Hua, Tulane Graduate Cell and Molecular Biology Student, PhD Thesis Committee Member

2011 Marie Jacob, Tulane Graduate Cell and Molecular Biology Student, PhD Thesis Committee Member

2011 Christopher Rodell, Tulane Graduate Biomedical Engineering Student, MS Thesis Committee Member

2010 Jennifer Robichaux, Tulane Graduate Biomedical Engineering Student, MS Thesis Committee Chairman

2009 David Simon, Tulane Graduate Biomedical Engineering Student, MS Thesis Committee Member

2008 Megan Morris, Tulane Graduate Biomedical Engineering Student, MS Thesis Committee Member

**GRADUATE STUDENT QUALIFYING EXAM COMMITTEE EXPERIENCE**

2017 Casandra Conway, Tulane Graduate Biomedical Engineering Student, Committee Member

2017 Nithya Kasireddy, Tulane Graduate Biomedical Engineering Student, Committee Member

2017 Ariana Saurez-Martinez, Tulane Graduate Biomedical Engineering Student, Committee Member

2016 Nicholas Hodges, Tulane Graduate Biomedical Engineering Student, Committee Member

2016 Gina Goorley, Tulane Graduate Biomedical Engineering Student, Committee Member

2016 Jessica Motherwell, Tulane Graduate IGERT-Bioinnovation Student, Committee Member

2016 Angela Crist, Tulane Graduate Cell and Molecular Biology Student, Committee Member

2016 You Lou, Tulane Graduate Center for Aging Student, Committee Member

2015 Lina Quijano, Tulane Graduate Biomedical Engineering Student, Committee Member

2015 Katherine Elfer, Tulane Graduate Biomedical Engineering Student, Committee Member

2015 Benjamin Vinson, Tulane Graduate IGERT-Bioinnovation Student, Committee Member

2014 Nicholas Pashos, Tulane Graduate IGERT-Bioinnovation Student, Committee Member

2014 Jason Ryans, Tulane Graduate Biomedical Engineering Student, Committee Member

2014 Ashwin Svakumar, Tulane Graduate Biomedical Engineering Student, Committee Member

2013 Sadegh Azimi, Tulane Graduate Biomedical Engineering Student, Chair

2013 Travis Doggett, LSU-HSC Graduate Physiology Student, Committee Member

2012 Rick Sweat, Tulane Graduate Biomedical Engineering Student, Chair

2012 Xiaoxi Yang, Tulane Graduate Biomedical Engineering Student, Committee Member

2011 Omid Forouzan, Tulane Graduate Biomedical Engineering Student, Committee Member

2011 Jennie Burns, Tulane Graduate Biomedical Engineering Student, Committee Member

2011 Karol Wang, Tulane Graduate Cell and Molecular Biology Student, Committee Member

2010 Carol Chen, Tulane Graduate Biomedical Engineering Student, Committee Member

2010 Peter Stapor, Tulane Graduate Biomedical Engineering Student, Chair

2009 Lisa Hua, Tulane Graduate Cell and Molecular Biology Student, Committee Member

2009 Lowry Curley, Tulane Graduate Biomedical Engineering Student, Committee Member

2009 Ming Yang, Tulane Graduate Biomedical Engineering Student, Chair

2009 Russel Wolfe, Tulane Graduate Biomedical Engineering Student, Committee Member

2009 Hongzhi Lan, Tulane Graduate Biomedical Engineering Student, Committee Member

2008 Heather Vinet, Tulane Graduate Biomedical Engineering Student, Co-Chair

#### **UNDERGRADUATE STUDENT MENTORING EXPERIENCE**

2018-Present Jack Wang, University of Florida Undergraduate Biomedical Engineering Student, Research Advisor

2015-Present Dana Kaplan, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2015-Present Ryan Barr, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2015-Present Matthew Nice, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2015-2017 Ryan Fishel, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2015-2017 Hayden Lane, Tulane Undergraduate Biomedical Engineering Student

2015-2017 Kristine Spicer, Tulane Undergraduate Biomedical Engineering Student

2014-2015 Qirong Shi, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2013-2015 David Sloas, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2013-2015 Scott Stewart, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2012-2014 Lee Chedister, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2011-2013 Olivia Bigazzi, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2011-2013 Elizabeth Townsend, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2010-2013 Erica Winterer, Tulane Undergraduate Biomedical Engineering Student, Research Advisor

2010-2013 Molly Kelly-Goss, Tulane Undergraduate Biomedical Engineering Student, Research Advisor

2010-2013 Hudson Chien, Tulane Undergraduate Biomedical Engineering Student, Research Advisor

Summer 2010 Erin Vincent, Xavier Undergraduate Student, Summer Internship Advisor

2009-2010 Garret Gros, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

Summer 2008 Thomas Jan, Tulane Medical Student, Summer Internship Advisor

2008-2009 Jonathon Garrett, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2008-2009 Kate Schimmer, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2008-2009 Mario Aragon, Tulane Undergraduate Biomedical Engineering Student, Research /Senior Thesis Advisor

Summer 2008 Eleanor Tanno, UVA Undergraduate Biomedical Engineering Student, Summer Internship Advisor

2007-2008 DeJeune Antione, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2007-2008 Brooke Lovett, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2007-2008 Samantha Warren, Tulane Undergraduate Biomedical Engineering Student, Senior Thesis Advisor

2007-Present Andrew Chen, UCSD Undergraduate Biomedical Engineering Student, Research Project Advisor

Summer 2006 Mariana Ceballos, Florida International University Undergraduate Bioengineering Student, Summer Internship Project Advisor

2005-2006 Gordon Ho, UCSD Undergraduate Biomedical Engineering Student, Research Project Advisor

Summer 2005 Michael Rehorn, UVA Undergraduate Biomedical Engineering Student, Summer Project Advisor

Summer 2004 Caroline Evans, UVA Undergraduate Biomedical Engineering Student, Summer Project Advisor

2003-2004 Shivi Srikanth, Virginia Commonwealth University Undergraduate Student, Lab Technician Co-Advisor

Summer 2003 Laura Hammett, University of Miami Undergraduate Biomedical and Electrical Engineering Student, Summer Internship Project Advisor

## **RESEARCH FUNDING**

NIH R01 (Role: Principal Investigator)  
Project #: 1R01AG049821-01A1  
Project Title: Angiogenesis Model for Aging Research  
Duration: 09/16 – 04/20

The overall goal of this proposal is to provide novel information towards understanding impaired angiogenesis in aged tissues, while establishing an innovative ex vivo tissue culture model that enables real-time, mechanistic investigation in an intact aged microvascular network.

NIH Centers of Biomedical Research Excellence COBRE (Role: Junior Investigator)  
Project #: P20GM103629-01A1 (PI: M. Jazwinski)  
Project Title: Mentoring Research Excellence in Aging and Regenerative Medicine  
Duration: 08/12 – 05/17

The grant provides R01 level funding for 5 junior investigators. The specific projects focused on critical mechanisms and processes involved in the aging related dysfunction. The overall goal of the sub-project is to determine the role of pericytes in age-related impairment of angiogenesis.

Louisiana Board of Regents (Role: Principal Investigator)  
Project Number: LEQSF-EPS(2012)-SURE-64  
Project Title: A New Mode for Endothelial Cell Dynamics during Angiogenesis  
Duration: 06/12 – 05/13

This grant provided salary support and resources for an undergraduate research project focused on identifying a novel mode for endothelial cell dynamics during angiogenesis.

NIH Centers of Biomedical Research Excellence COBRE (Role: Junior Investigator)  
Project #: P20RR017659-10 (PI: L. Gabriel Navar)  
Project Title: Tulane COBRE in Hypertension and Renal Biology  
Duration: 07/10 – 06/12

The overall goal of the funded pilot project was to determine the effect of microvascular patterning alterations associated with hypertension on microvascular network resistance.

Louisiana Board of Regents (Role: Principal Investigator)  
Project Number: LEQSF(2009-12)-RD-A-19  
Project Title: Identification of Lymphatic Structure and Function in Adult Microvascular Networks  
Duration: 06/09 – 06/12

The overall goal of the grant was to investigate the functional and spatial coordination between blood and lymphatic capillaries in adult microvascular networks.

Tulane University-Research Enhancement Fund (Role: Co-Investigator)  
Project Title: Environmental Control of Live Cell Imaging under Hypoxia and Normoxic Conditions  
Duration: 07/08 – 07/10

The goal of the grant was to acquire a hypoxia chamber for in vitro cellular studies.

Tulane University-Research Enhancement Fund (Role: Principal Investigator)  
Project Title: The Development of a Functional Imaging Resource  
Duration: 01/08 – 01/10

The goal of the grant was to acquire a spinning disk confocal system for real time fluorescent cell imaging.

## **TEACHING ENHANCEMENT FUNDING**

NSF – General and Age Related Disabilities Engineering (GARDE) (Role: Principal Investigator)  
Project Number: 1159300  
Project Title: Assistive Technology Projects for Persons with Disabilities  
Duration: 09/12 – 08/17

The overall goal of the grant is to support the undergraduate biomedical engineering senior design course. The objective of this course is to provide students with a meaningful design experience and provide assistive technologies to individuals with disabilities.

Louisiana Board of Regents (Role: Co-Investigator)  
Project Number: LEQSF(2012-113)-ENH-TR-25 (PI: D. Gaver)  
Project Title: Educational Enhancement through Grand Challenges in Biomedical Engineering

Duration: 06/12 – 06/13

The overall goal of the grant was to enhance current undergraduate laboratory resources in the Department of Biomedical Engineering at Tulane University through the creation of a new laboratory based design course focused on current challenges in the field.