

**CURRICULUM VITAE**  
Robert Wade Siggins II, Ph.D.

**Current Title:** Assistant Professor  
**Business Address:** 533 Bolivar St.  
CSR Room 306  
New Orleans, LA 70112  
**Business Telephone and Fax:** (ph): 504-568-2045; (fax): 504-568-7899  
**Business email Address:** rsiggi@lsuhsc.edu

**Education:**

1995-1999	Bachelor of Arts in History Bachelor of Science in Biological Sciences Emphasis: Molecular Biology Minor: Chemistry University of Southern Mississippi, Hattiesburg, MS Thesis Title: "Mutagenesis and analysis of potential phosphorylation sites in the glycolytic transcriptional activator protein Gcr1p" Thesis Advisor: George M. Santangelo, Ph.D. Graduation Date: May 14, 1999 Dean's List 1995-1998 President's List 1998-1999
2002-2006	Candidate for Doctor of Philosophy in Physiology Louisiana State University Health Sciences Center, New Orleans, LA Dissertation Title: "Cardiac Stem Cells: Characterization of Niches and the Migratory Phenotype" Dissertation Advisor: Conrad A. Hornick, Ph.D. Graduation Date: August 15, 2006
2006-2007	Postdoctoral Fellow, Cardiovascular Research Center New York Medical College, Valhalla, NY
2007-2010	Postdoctoral Fellow, Comprehensive Alcohol Research Center, Department of Physiology Louisiana State University Health Sciences Center, New Orleans, LA

**Academic, Professional, and Research Appointments:**

2010-2013	Instructor, Department of Physiology Louisiana State University Health Sciences Center New Orleans, LA
2013-present	Assistant Professor, Department of Physiology Louisiana State University Health Sciences Center New Orleans, LA

### **Membership in Professional Organizations:**

2003-2004	Graduate Student Council, Representative, Department of Physiology, LSU Health Sciences Center
2003-2004	New Orleans Public Schools Science Partnership
2008-2009	American Federation for Medical Research
2009-present	American Association for the Advancement of Science
2009-present	Research Society on Alcoholism
2009	NIAAA Alcohol Trainee Workshop, Program Committee Member
2011-present	American Physiological Society
2011-2014	American Association for the Advancement of Science

### **Awards and Honors:**

1999	Outstanding Senior Biology Graduate, University of Southern Mississippi
1999	Magna Cum Laude, University of Southern Mississippi
1995-1999	Sam E. Woods Presidential Scholarship, University of Southern Mississippi
1996	Outstanding Freshman Male, University of Southern Mississippi
2008	American Federation for Medical Research, SAFMR SSCI Trainee Award
2009	Junior Investigator Award, Research Society on Alcoholism
2009	Travel Award, RSA/ISBRA Satellite Meeting
2009	Travel Award, Alcohol and Immunology Research Interest Group Meeting
2010	Junior Investigator Award, Research Society on Alcoholism

## **TEACHING EXPERIENCE AND RESPONSIBILITIES**

### **Formal Course Responsibilities**

#### ***Graduate Courses***

2008	Extremes in Physiology (Invited Moderator)
2008-current	Perspectives in Alcohol Research (Mentor & Course Director (2015))
2008	Cardiovascular Physiology (Lecturer)
2008	Theory and Application of Cutting-edge Technology for Biomedical Research (Lecturer)
2012-current	Interdisciplinary Program, Biological Systems Course (Lecturer and Section Director for Gastrointestinal Physiology)
2014	Modern Breakthroughs in Biomedical Research: A Focus on New Techniques and Technologies (Course Director)

#### ***Other Courses***

2004-2005	Nursing Physiology (Lecturer)
2010-2014	Physiology for Dental Hygiene (Lecturer)

2011-2014	Nursing Pathophysiology (Lecturer)
2015-current	Physiology for Dental Hygiene (Course Director)
2015-current	Dental Physiology (Lecturer)

### ***Graduate Lectures***

#### Extremes in Physiology

“Altitude and Hematopoiesis”

#### Perspectives in Alcohol Research

“Alcohol, Wnt Signaling, and Dendropoiesis”

“Alcohol, Aging and Stem Cells”

#### Cardiovascular Physiology

“Stem Cells and the Cardiovascular System: From Embryo to Adult”

#### Theory and Application of Cutting Edge Technology for Biomedical Research

“PCR & RT-qPCR”

#### Interdisciplinary Program, Biological Systems Course

“Essential Concepts: Mechanisms of Membrane Transport & Force Generation”

“Introduction & Motility Mechanisms”

“Cephalic Phase of Digestion”

“Gastric Phase of Digestion”

“Early Intestinal Phase of Digestion”

“The Liver & Pancreas”

“Late Intestinal Phase of Digestion & the Colon”

#### Modern Breakthroughs in Biomedical Research: A Focus on New Techniques and Technologies“

“Introduction & Droplet Digital PCR”

“HIV & Gene Therapy—Cure on the Horizon?”

“Student Presentations from RSoA or other Conferences”

### ***Other Lectures***

#### Nursing Physiology

“Membranes and Compartments”

“Transmembrane Potential”

“Proteins and Mediated Transport”

#### Physiology for Dental Hygiene

“Homeostatic Mechanisms and Movement of Molecules across Cell Membranes”

“Wound Healing”

“Renal Physiology I”

“Renal Physiology II”

“Calcium & Bone”

“Oral Physiology”

#### Nursing Pathophysiology

“Immune System-related Diseases”

“Disorders of the Musculoskeletal System”

“Metabolic & Rheumatic Disorders”

“Case Study: Gout”

“Case Study: Osteoarthritis & Rheumatoid Arthritis”

#### Dental Physiology

“Overview of GI Physiology”

“Hormonal and Gastric Secretions”

“Pancreatic and Salivary Secretions”

“Digestion/Absorption: Carbohydrates, Proteins”

“Digestion and Absorption of Lipids”  
 “The Large Intestine”  
 “Oral Physiology I”  
 “Oral Physiology II”

**Departmental/Interdisciplinary Teaching Conferences**

**Departmental Seminars:**

November 18, 2009 “Acute Alcohol Intoxication Inhibits the Bone Marrow Lin-ckit+ Sca-1+VEGFR2+ Cell Response to Septicemia”  
 August 5, 2010 “Alcohol and Impaired Myelo-Dendropoiesis”  
 June 7, 2012 “DNA Methylation and Bone Marrow Progenitor Cell Differentiation: Possible Interactions with the NOTCH Signaling Pathway”  
 April 18, 2013 “Mechanisms of Alcohol Disrupted Myelopoiesis”  
 May 8, 2014 “Alcohol Abuse, HIV, & the Mitochondrial Free Radical Theory of Aging”

**LSUHSC Seminars:**

October 18, 2012 “Alcohol Attenuates NOTCH-mediated Dendropoiesis”  
 December 12, 2014 “RedOx Status in Bone Marrow Stem Cells & Mitohormesis”  
 September 23, 2015 “Mitohormesis & RedOx Status in T Lymphocytes”

**Undergraduate, Medical, and Graduate Students Trained:**

2015-current Domonique Smith  
 Masters Candidate  
 Project: “Chronic Alcohol Alters DNMT Activity in Mesenchymal Stromal Cells”  
 2015 Joseph Bradford, Jr.  
 Undergraduate  
 Project: “Chronic Alcohol Alters DNMT Activity in Mesenchymal Stromal Cells”  
 2014 Daniel Martinez  
 Ph.D. Candidate  
 Project: “Chronic Alcohol Enhances DNMT-3a and 3b Activity *In vitro* and *In vivo*”  
 2012-2013 Garland Michael Upchurch  
 M.D./Ph.D. Candidate  
 Project: “Alcohol Disrupts NOTCH-dependent Dendropoiesis”  
 2012 Jennifer Ramsey  
 Ph.D. Candidate  
 Project: “Chronic Alcohol Administration Disrupts Bone Marrow Mesenchymal Stem Cell Differentiation”  
 2012 Andrew Prince  
 Undergraduate  
 Project: “Alcohol and SIV Promote Bone Marrow Mesenchymal Stem Cell Adipogenesis”  
 2011-2012 Valerie Piet  
 Ph.D. Candidate  
 Project: “The Effects of Simian Immunodeficiency Virus Proteins and Alcohol on Bone Marrow Mesenchymal Stem Cell Differentiation Potential”

**Thesis and Dissertation Committees:**

2014-current Stephen Ford, M.D., Ph.D. Candidate  
2015-current Matthew Dean, Ph.D. Candidate  
2015-current Alan Mouton, Ph.D. Candidate

**RESEARCH AND SCHOLARSHIP**

**Grants and Contracts:**

**Funded:**

K99AA020312 Siggins, R.W. 03/01/11-08/31/13  
NIH/NIAAA

***“Alcohol-induced Osteoimmunopathies: A Unifying Explanatory Mechanism”***

The goal of this project is to identify the central mechanisms involved in altered Wnt and Notch signaling in the Osteoclast-Dendritic Cell Progenitor, leading to enhanced osteoclastogenesis.

Role: PI

R00AA020312 Siggins, R.W. 09/01/13-08/31/16  
NIH/NIAAA

***“Alcohol-induced Osteoimmunopathies: A Unifying Explanatory Mechanism”***

The goal of this project is to identify the central mechanisms involved in altered Wnt and Notch signaling in the Osteoclast-Dendritic Cell Progenitor, leading to enhanced osteoclastogenesis.

Role: PI

P60AA009803 Molina, P.E.. 12/01/14-11/30/19  
NIH/NIAAA

***“LSUHSC-NO Comprehensive Alcohol-HIV/AIDS Research Center”***

The goals of this Center are to examine the impact of alcohol use disorders (AUDs) on HIV disease progression. Specifically, our RC will examine the effects of AUDs on accelerated and/or accentuated aging in the HIV population.

Roles: Co-I (RC3); Co-director (Analytical Core)

ADACE Pilot Grant Ronis, M.; Siggins, R.W. 06/01/15-05/31/16  
**"Molecular Mechanisms Underlying Ethanol Stimulated B Cell Differentiation in Alcoholic Liver Disease"**

The proposed study is designed to examine the role of autoreactive B cells in alcoholic liver disease.

Role: Co-PI

**Pending Funding:**

**Non-funded applications (last three years):**

Ad. Suppl. (P60AA009803) Molina, P.E.. 7/01/15-6/30/17  
NIH/NIAAA

***“AUD, HIV, Mitochondrial Damage and Immune Aging”***

The goals of these studies will determine how alcohol and HIV damage mitochondria, thus leading to unhealthy aging.

Roles: Co-I

RES025902A                      Welsh, D.A.; Siggins, R.W.                      12/01/15-11/30/17)  
NIH/NIEHS                      \$140,082.00/yr

**"The Deepwater Horizon Oil Spill and Immunotoxicity"**

This study will assess the effects of oil constituents, dispersants, oil-dispersant mixtures, and the oil spill-related psychosocial stress on induction of CD8+ T-cell immune senescence and mitochondrial dysfunction.

ADACE Pilot Grant                      Johnson, L.J; Siggins, R.W.                      01/01/14-12/31/15

**"A Randomized Clinical Trial to Ameliorate Alcohol Withdrawal Syndrome-induced Immune Dysfunction"**

The proposed study was designed to examine the ability of an  $\alpha$ -2 adrenergic agonist, dexamedetomidine, to ameliorate immune dysfunction that accompanies alcohol withdrawal syndrome.

Role: Co-PI

ADACE Pilot Grant                      Siggins, R.W.                      01/01/14-12/31/15

**"Alcohol and Illicit Drugs Impair Endothelial Progenitor Cell Function at the Initiation of Bone Fracture Repair"**

This grant proposal has been designed to examine primary human endothelial progenitor cells (EPCs) from patients entering Interim LSU Hospital for treatment of long bone fracture.

Role: PI

**Journal Publications:**

**Refereed:**

Bearzi, C., Rota, M., Hosoda, T., Tillmanns, J., Nascimbene, A., DeAngelis, A., Yasuzawa-Amano, S., Trofimova, I., **Siggins, R.W.**, LeCapitaine, N., Cascapera, S., Beltrami, A.P., D'Alessandro, D.A., Zias, E., Quaini, F., Urbanek, K., Michler, R.E., Bolli, R., Kajstura, J., Leri, A., and Anversa, P. Human Cardiac Stem Cells. *Proceedings of the National Academy of Sciences*, 2007, 104(35): 14068-14073.

Tillmanns, J., Rota, M., Hosoda, T., Misao, Y., Esposito, G., Gonzalez, A., Vitale, S., Parolin, C., Yasuzawa-Amano, S., Muraski, J., De Angelis, A., LeCapitaine, N., **Siggins, R.W.**, Loreda, M., Bearzi, C., Bolli, R., Urbanek, K., Leri, A., Kajstura, J., and Anversa, P. Formation of Large Coronary Arteries by Cardiac Progenitor Cells. *Proceedings of the National Academy of Sciences*, 2008, 105(5):1668-1673.

**Siggins, R.W.**, Zhang, P., Welsh, D.A., LeCapitaine, N.J., and Nelson, S. Stem Cells, Phenotypic Inversion, and Differentiation. *International Journal of Clinical and Experimental Medicine*. 2008, 1(1): 2-21.

Zhang, P., Nelson, S., Bagby, G.J., **Siggins, R.W.**, Shellito, J.E., and Welsh, D.A. Lineage-c-kit+Sca-1+ Cell Response to Escherichia Coli Bacteremia in Balb/c Mice. *Stem Cells*. 2008, 26(7):1778-1786.

Zhang, P., Welsh, D.A., **Siggins, R.W.**, Bagby, G.J., Raasch, C.E., Happel, K.I., and Nelson, S. Acute Alcohol Intoxication Inhibits the Lineage-c-kit+Sca-1+ Cell Response to Escherichia Coli Bacteremia. *Journal of Immunology*. 2009, 182(3)1568-1576.

**Siggins, R.W.**, Bagby, G.J., Molina, P.E., Dufour, J., Nelson, S., and Zhang, P. Alcohol Exposure Impairs Myeloid Dendritic Cell Function in Rhesus Macaques. *Alcoholism: Clinical and Experimental Research*. 2009, 33(9):1524-1531.

Raasch, C.E., Zhang, P., **Siggins, R.W.**, LaMotte, L., Bagby, G.J., and Nelson, S. Acute Alcohol Intoxication Impairs the Hematopoietic Precursor Cell Response to Pneumococcal Pneumonia. *Alcoholism: Clinical and Experimental Research*. 2010, 34(12):2035-2043.

**Siggins, R.W.**, Melvan, J.N., Welsh, D.A., Bagby, G.J., Nelson, S., and Zhang, P. Alcohol Suppresses the Granulopoietic Response to Pulmonary Streptococcus pneumonia Infection with Enhancement of STAT3 Signaling. *Journal of Immunology*. 2011, 186(7):4306-4313.

Melvan, J.N., **Siggins, R.W.**, Bagby, G.J., Stanford, W.L., Welsh, D.A., Nelson S., and Zhang, P.. Suppression of Stem Cell Antigen-1 Response and Granulocyte Lineage Expansion by Alcohol During Septicemia. *Critical Care Medicine*. 2011, 39(9):2121-2130.

Melvan J.N., **Siggins R.W.**, Stanford W.L., Porretta C., Nelson S, Bagby G.J., and Zhang P. Alcohol Impairs the Myeloid Proliferative Response to Bacteremia in Mice by Inhibiting the Stem Cell Antigen-1/ERK Pathway. *Journal of Immunology*. 2012; 188(4):1961-9.

Shi X., **Siggins R.W.**, Stanford W.L., Melvan, J.N., Basson, M.D., and Zhang P. Toll-Like Receptor 4/Stem Cell Antigen-1 Signaling Promotes Hematopoietic Precursor Cell Commitment to Granulocyte Development during the Granulopoietic Response to E. coli Bacteremia. *Infection and Immunity*. 2013; 81(6):2197-2205.

**Siggins R.W.**, Hossain F., Rehman T., Melvan J.N., Zhang P., and Welsh D.A. Cigarette smoke alters the hematopoietic stem cell niche. *Medical Sciences*. 2014;2:37-50. doi: 10.3390/medsci2010037. [www.mdpi.com/journal/medsci](http://www.mdpi.com/journal/medsci).

**Siggins R.W.**, Molina P., Zhang P, Bagby G.J., Nelson S., Dufour J., LeCapitaine N.J., Walsh C., and Welsh D.A. Chronic alcohol administration in rhesus macaques during the early stage of Simian Immunodeficiency Virus infection dysregulates late stage myelopoiesis. *Alcoholism: Clinical and Experimental Research*. 2014; 38(7):1993-2000.

Bagby, G.J., Amedee, A.M., **Siggins, R.W.**, Molina, P.E., Nelson, S, and Veazey, R. Alcohol and HIV Effects on the Immune System. *Alcohol Research: Current Reviews*. 2015; 37(2):287-297.

Souza-Smith, F., **Siggins, R.W.**, and Molina, P.E. Mesenteric lymphatic-perilymphatic adipose crosstalk; role in alcohol-induced perilymphatic adipose tissue inflammation. *Alcoholism: Clinical and Experimental Research*. 2015; 39(8):1380-1387.

Katz, P.S.\*, **Siggins, R.W.\***, Porretta, C., Armstrong, M.L., Zea, A.H., Mercante, D.E., Parsons, C., Veazey, R.S., Bagby, G.J., Nelson, S., Molina, P.E., and Welsh, D.A. Chronic alcohol increases CD8+ T-cell immunosenescence in simian immunodeficiency virus-infected rhesus macaques. *Alcohol*. 2015; 49(8):759-765. \* indicates co-first authorship

**Book Chapters:**

**Siggins, R.W.** and Hornick, C.A. "Endothelial Cell Responses to Physiological and Pathophysiological Environments." In: *Anti-Angiogenic Functional and Medicinal Foods*. Lasso, J., Bagchi, D., and Shahidi, F., eds., CRC Press, 2007.

Leri, A., Boni, A., **Siggins, R.W.**, Nascimbene, A., and Hosoda, T. "Cardiac Stem Cells and Their Niches." In: *Cardiac Regeneration and Stem Cell Therapy*. Leri, A., Anversa, P., and Frishman, W., eds., Malden: Blackwell Publishing, 2007.

**Published Abstracts:**

Boni, A., Rota, M., **Siggins, R.W.**, Hosoda, T., Nascimbene, A., Amano, K., Gonzalez Miqueo, A., Amano, S., Vitale, S., Trofimova, I., Bearzi, C., Valentini, S., Urbanek, K., Kajstura, J., Anversa, P., and Leri, A. Cardiac Progenitor Cell Migration after Myocardial Infarction. Meeting of the American Heart Association, Nov. 2006, Oral Presentation.

Tillmanns, J., Rota, M., Hosoda, T., Amano, S., Rotatori, F., LeCapitaine, N., **Siggins, R.W.**, Hintze, Jr, T., Esposito, G., De Angelis, A., Loredi, M., Misao, Y., Bearzi, C., Urbanek, K., Leri, A., Kajstura, J., Sonnenblick, E.H., and Anversa, P. IGF-1 and HGF Promote the Engraftment of Cardiac Stem Cells, which in Turn Regenerate the Entire Coronary Vasculature and the Dead Myocardium after Infarction in Rats. Meeting of the American Heart Association, Nov. 2006, Oral Presentation.

Hosoda, T., Bearzi, C., Amano, S., Rota, M., Valentini, S., Delucchi, F., Tillmanns, J., Nascimbene, A., De Angelis, A., **Siggins, R.W.**, Zias, E., Quaini, F., Urbanek, K., Leri, A., Kajstura, J., Bolli, R., and Anversa, P. Human Cardiac Progenitor Cells Regenerate Cardiomyocytes and Coronary Vessels Repairing the Infarcted Myocardium. Meeting of the American Heart Association, Nov. 2006, Oral Presentation.

Hosoda, T., Bearzi, C., Rota, M., Amano, S., Valentini, S., Delucchi, F., Tillmanns, J., Nascimbene, A., De Angelis, A., **Siggins, R.**, Zias, E., Quaini, F., Urbanek, K., Leri, A., Kajstura, J., Bolli, R., and Anversa, P. Human Cardiac Progenitor Cells. Meeting of the American Heart Association, Nov. 2006, Oral Presentation.

Hosoda, T., Yasuzawa-Amano, S., Amano, K., Boni, A., Urbanek, K., Delucchi, F., Padin-Iruegas, M.E., Gonzalez Miqueo, A., **Siggins, R.W.**, Misao, Y., LeCapitaine, N.J., Iaffaldano, G., Sonnenblick, E.H., and Kajstura, J. Defects in the c-kit-SCF System Have Profound Effects on Myocardial Gene Expression. Meeting of the American Heart Association, Nov. 2007, Poster Presentation.

Mosna, F., Bearzi, C., Rota, M., Hosoda, T., Tillmanns, J., Yasuzawa-Amano, S., Trofimova, I., **Siggins, R.W.**, LeCapitaine, N., D'Alessandro, D.A., Zias, E., Quaini, F., Urbanek, K., Rimoldi, O., Michler, R.E., Bolli, R., Kajstura, J., Leri, A., Frishman, W.H., and Anversa, P. Origin and Therapeutic Efficacy of Human Cardiac Progenitor Cells. Meeting of the American Heart Association, Nov. 2007, Poster Presentation.

Hosoda, T., Yasuzawa-Amano, S., Amano, K., Boni, A., Urbanek, K., Delucchi, F., Arcarese, M.L., Gonzalez Miqueo, A., **Siggins, R.W.**, Misao, Y., LeCapitaine, N.J., Mosna, F., Sonnenblick, E.H., Kajstura, J., Bolli, R., Anversa, P., and Leri, A. Deregulation of MicroRNAs in the Heart of c-kit-Defective Mice. Meeting of the American Heart Association, Nov. 2007, Oral Presentation.



Boni, A., Nascimbene, A., **Siggins, R.**, Urbanek, K., Amano, K., Delucchi, F., Yasuzawa-Amano, S., LeCapitaine, N., Trofimova, I., Di Marco, A., Vitale, S., Small, N., Mosna, F., Gonzalez, A., Rimoldi, O., Kajstura, J., Anversa, P., and Leri, A. Notch1 Receptor Enhances Myocyte Differentiation of Cardiac Progenitor Cells and Myocardial Regeneration After Infarction. Meeting of the American Heart Association, Nov. 2007, Oral Presentation.

Delucchi, F., Urbanek, K., Boni, A., **Siggins, R.**, Amano, K., Iaffaldano, G., Yasuzawa-Amano, S., LeCapitaine, N., Vitale, S., Gonzalez, A., Di Marco, A., Trofimova, I., Rizzi, R., Misao, Y., Anversa, P., Kajstura, J., and Leri, A. Notch Regulates Cardiac Progenitor Cell Commitment and Myocyte Formation in the Embryonic Mouse Heart. Meeting of the American Heart Association, Nov. 2007, Oral Presentation.

**Siggins, R.W.**, Welsh, D.A., Nelson, S., Bagby, G.J., Shellito, J.E., and Zhang, P. The Hematopoietic Stem Cell Response to Gram Negative Bacteremia. The Southern Regional Meeting of the SSCI, Feb. 2008; Oral Presentation.

**Siggins, R.W.**, Nelson, S., Welsh, D.A., Bagby, G.J., Shellito, J.E., and Zhang, P. Alcohol Inhibits the Hematopoietic Stem Cell Response to Bacteremia. Research Society on Alcoholism, June 30, 2008; Poster Presentation.

**Siggins, R.W.**, Nelson, S., Bagby, G.J., Shellito, J.E., Dufour, J. Welsh, D.A., and Zhang, P. The Effects of Alcohol on Myeloid Dendritic Cell Function in Rhesus Macaques. Society of Leukocyte Biology, November 7, 2008; Poster Presentation.

**Siggins, R.W.**, Welsh, D.A., Bagby, G.J., Raasch C.E., Happel, K.I., Nelson, S., and Zhang, P. Acute Alcohol Intoxication Inhibits the Hematopoietic Precursor Cell Response to Escherichia coli Bacteremia. Experimental Biology, April 2009; Poster Presentation.

**Siggins, R.W.**, Melvan, J.N., Bagby, G.J., Welsh, D.A., Nelson, S., and Zhang, P. Alcohol Inhibits Expression of Granulopoietic Transcription Factors in Hematopoietic Precursor Cells Following Bacteremia. Research Society on Alcoholism, June 2009; Poster Presentation.

LeCapitaine, N.J., Zhang, P., **Siggins, R.W.**, Porretta, C., Nelson, S., Shellito, J., and Welsh, D.A. Acute Alcohol Intoxication Decreases Total Blood Microparticle Content. Research Society on Alcoholism, June 2009; Poster Presentation.

**Siggins, R.W.**, Welsh, D.A., Bagby, G.J., Nelson, S., and Zhang, P. Acute alcohol intoxication inhibits the bone marrow lin-c-kit+Sca-1+VEGFR2+ cell response to septicemia. Alcohol and Immunology Research Interest Group Meeting, November 20, 2009, Oral Presentation.

LeCapitaine, N.J., **Siggins, R.W.**, Zhang, P., DeBoisblanc, B., and Welsh, D.A. Plasma Microparticles Contain Functional Mitochondria. The Southern Regional Meeting of the SSCI, February 2010; Poster Presentation.

**Siggins, R.W.**, Welsh, D.A., Bagby, G.J. Nelson, S., and Zhang, P. The Bone Marrow Lin-C-kit+Sca-1+VEGFR2+ Cell Response to Septicemia. American Thoracic Society International Conference, May 18, 2010, Poster Presentation

**Siggins, R.W.**, Melvan, J.N., Bagby, G.J. Nelson, S., and Zhang, P. Alcohol Abuse and the Impairment of Hematopoiesis. RSA Symposium: "Biological Systems Approach to Understanding Alcohol-Induced Tissue Injury," June 27, 2010, Oral Presentation.

**Siggins, R.W.**, Welsh, D.A., Bagby, G.J. Nelson, S., and Zhang, P. Acute Alcohol Intoxication Inhibits the Bone Marrow Lin-c-kit+Sca-1+VEGFR2+ Cell Response to E. coli Bacteremia. Research Society on Alcoholism, June 29, 2010, Poster Presentation.

**Siggins, R.W.**, Molina, P.E., Nelson, S., Bagby, G.J., Kolls, J.K., Welsh, D.A., and Zhang, P. Alcohol Enhances Osteoclastogenesis and Inhibits Dendropoiesis. Alcohol and Immunology Research Interest Group Meeting, November 19, 2010, Poster Presentation.

Hossain, f., Subramaniam, V., **Siggins, R.W.**, Zhang, P., Shellito, J., and Welsh, D.A. Chronic Cigarette Smoke Exposure Perturbs the Functional Properties of Murine Mesenchymal Stem Cells. The Southern Regional Meeting of the SSCI, Feb. 2011, Oral Presentation.

Zhang, P., **Siggins, R.W.**, Welsh, D.A., Bagby, G.J., Dufour, J.P., and Nelson, S. The Effects of Excessive Alcohol Consumption on the Development of Myelosuppression During SIV Infection. Society on NeuroImmune Pharmacology, April 9, 2011, Oral Presentation.

Zhang, P., **Siggins, R.W.**, Melvan, J.N., Welsh, D.A., Bagby, G.J., and Nelson, S. Bone Marrow: Alcohol Modulation of the Hematopoietic Stem Cell Response and Host Defense Against Bacterial Infection. Research Society on Alcoholism, June 27, 2011, Oral Presentation.

**Siggins, R.W.**, Molina, P.E., Bagby, G.J., Nelson, S., Kolls, J.K., Welsh, D.A., and Zhang, P. Alcohol Enhances Osteoclastogenesis and Inhibits Dendropoiesis from a Common Upstream Progenitor. Research Society on Alcoholism, June 28, 2011, Poster Presentation.

Melvan, J.N., **Siggins, R.W.**, Porretta, C., Bagby, G.J., Welsh, D.A., Nelson, S., and Zhang, P. Alcohol Intoxication Suppresses Sca-1-Associated Myeloid Precursor Cell Proliferation During Bacteremia. Research Society on Alcoholism, June 29, 2011, Poster Presentation.

**Siggins, R.W.**, Piet, V., Amedee, A., Bagby, G.J., Nelson, S., Welsh, D.A., and Molina, P.E. Differential Effects of Alcohol Exposure and SIV Proteins on Mesenchymal Stem Cell Adipo- and Osteogenesis. Research Society on Alcoholism, June 2012, Poster Presentation.

Shi, X., **Siggins, R.W.**, Melvan, J.N., and Zhang, P. Alcohol Impairs Marrow LKS Cell Proliferation in Response to Bacteremia. Research Society on Alcoholism, June 2012, Poster Presentation.

**Siggins, R.W.**, Welsh, D.A., Bagby, G.J., Nelson, S., Zhang, P., and Molina, P.E. Promotor Methylation in Hematopoietic Progenitor Cells; Alcohol-induced Dysregulated Differentiation. Research Society on Alcoholism, June 2012, Symposium on Epigenetics and Stem Cells; Oral Presentation.

Upchurch, G.M., Bagby, G.J., Nelson, S., Molina, P.E., and **Siggins, R.W.** Alcohol Exposure Dysregulates Hematopoietic Progenitor Cell Notch-Mediated Dendropoiesis. Research Society on Alcoholism, June 25, 2013, Poster Presentation.

Katz, P.S., Prince, A.C., Bagby, G.J., Nelson, S., Welsh, D.A., **Siggins, R.W.**, and Molina, P.E. Chronic Binge Alcohol and SIV Infection Alter Mesenchymal Stem Cell Metabolic Gene Expression. Research Society on Alcoholism, June 25, 2013, Poster Presentation.

Porretta, C.P., Katz, P.S., Welsh, D.A., Zea, A., and **Siggins, R.W.** Novel Workflow Combining FACS Analysis and qPCR for Mitochondrial DNA Quantification to Assess Intracellular Reactive Oxygen Species Production, Glutathione Content, Functional and Total Mitochondria, and Cell Phenotype in Physiological and Stress-induced Aging. CYTO, May 18, 2014; Poster Presentation.

**Siggins, R.W.**, Welsh, D.A., Zhang, P., Molina, P.E., Bagby, G.J., Nelson, S., and Porretta, C. Dysregulation of Myelopoiesis by Chronic Alcohol Administration during Early SIV Infection in Rhesus Macaques. Research Society on Alcoholism, June 22, 2014, Poster Presentation.

Katz, P.S., Porretta, C.P., Bagby, G.J., Nelson, S., Molina, P.E., **Siggins, R.W.**, Zea, A., and Welsh, D.A. Chronic Alcohol Increases CD8+ T Cell Immunosenescence in Simian Immunodeficiency Virus Infected Macaques. Research Society on Alcoholism, June 22, 2014, Poster Presentation.

Li L., Bagby, G.J., Nelson, S., Molina, P.E., Welsh, D.A., and **Siggins, R.W.**, Zea, A., and Welsh, D.A. Antiretroviral Therapy Attenuates Dysregulated Hematopoiesis Caused by Chronic Binge Alcohol and SIV Infection in Rhesus Macaques. Alcohol and Immunology Research Interest Group Meeting, November 21, 2014, Poster Presentation.

#### **Scientific Presentations:**

##### ***Regional:***

**Siggins, R.W.**, Welsh, D.A., Nelson, S., Bagby, G.J., Shellito, J.E., and Zhang, P. The Hematopoietic Stem Cell Response to Gram Negative Bacteremia. The Southern Regional Meeting of the SSCI, Feb. 2008; Oral Presentation.

##### ***National:***

**Siggins, R.W.**, Welsh, D.A., Bagby, G.J., Nelson, S., and Zhang, P. Acute alcohol intoxication inhibits the bone marrow lin-c-kit+Sca-1+VEGFR2+ cell response to septicemia. Alcohol and Immunology Research Interest Group Meeting, November 20, 2009, Oral Presentation.

**Siggins, R.W.**, Melvan, J.N., Bagby, G.J. Nelson, S., and Zhang, P. Alcohol Abuse and the Impairment of Hematopoiesis. RSA Symposium: "Biological Systems Approach to Understanding Alcohol-Induced Tissue Injury," June 27, 2010, Oral Presentation.

**Siggins, R.W.**, Welsh, D.A., Bagby, G.J., Nelson, S., Zhang, P., and Molina, P.E. Promotor Methylation in Hematopoietic Progenitor Cells; Alcohol-induced Dysregulated

Differentiation. Research Society on Alcoholism, June 2012, Symposium on Epigenetics and Stem Cells; Oral Presentation.

**Siggins, R.W.** Mechanisms of Alcohol & SIV/HIV-Induced Bone Marrow Dysfunction. NeuroHIV and Alcohol Abuse Satellite Symposium, April 22, 2015, Oral Presentation.

**Invited Presentations and Seminars:**

***Invited Lectures***

Feb. 28, 2011           Molecular Biology, Institute of Neuroimmune Pharmacology, Seton Hall University  
“PCR and RT-qPCR”

***Invited Seminars***

May 2, 2013           Alcohol Research Group, Stritch School of Medicine, Loyola University  
“Mechanisms of Alcohol Disrupted Myelopoiesis”

Aug. 20, 2015       North America Sales eBiosciences Team Meeting  
“Mitohormesis and RedOx Status in T Lymphocytes: FACS Phenotyping, Sorting & Gene Expression Analysis”

**Editorial Posts and Activities:**

2010-current	PLoS One
2011-current	Alcoholism: Clinical and Experimental Therapeutics
2013-current	Alcohol
2013-current	Cellular and Molecular Neurobiology
2015-current	Journal of Visualized Experiments

**SERVICE ACTIVITIES**

**University/Institutional Service**

**LSUHSC (campus) committees:**

2014-current           Research Advisory Committee