**CURRICULUM VITAE**



Robert Wade Siggins II, Ph.D.

**Current Title:** Assistant Professor

**Business Address:** 533 Bolivar St.

CSRB 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 Magna Cum Laude, 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-current Nursing Physiology (Lecturer)

2010-current Physiology for Dental Hygiene (Lecturer)

2011-current Nursing Pathophysiology (Lecturer)

2015-current Physiology for Dental Hygiene (Course Director)

2015-current Dental Physiology (Lecturer)

2016-current Dental Physiology (Co-Course Director)

***Graduate Lectures***

Extremes in Physiology

“Altitude and Hematopoiesis”

Perspectives in Alcohol Research

“Alcohol, Wnt Signaling, and Dendropoiesis”

“Alcohol, Aging and Stem Cells”

“Biomarkers of Alcohol Consumption: Uses & Limitations”

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”

“Microbiota”

“GALT”

“Pathophysiology of the GI System”

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***

Medical Physiology

“GI Histology Review”

“Overview of GI Physiology”

“Intestinal Motility”

“Gastric Secretions”

“Intestinal Secretions”

“Digestion/Absorption: Carbohydrates, Proteins”

“Digestion and Absorption of Lipids”

“The Microbiome”

Nursing Physiology

“Membranes and Compartments”

“Transmembrane Potential”

“Proteins and Mediated Transport”

“Motility”

“Cephalic Phase of Digestion”

“Gastric Phase of Digestion”

“Intestinal Phase of Digestion”

“Exocrine Secretions”

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”

“Neoplasia”

“Disorders of the Blood”

Dental Physiology

“Membranes: Molecular Structure”

“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”

February 4, 2016 “Alcohol, Mitohormesis & T cell Immunosenescence”

May 4, 2017 “Alcohol & Immunosenescence”

***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”

January 20, 2016 “Mitohormesis & RedOx Status in T Lymphocytes”

September 18, 2018 “qPCR: Methodologies, Pitfalls, & Analyses”

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

2015-2017 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:**

2014-2017 Stephen Ford, M.D., Ph.D. Candidate

2015-1018 Matthew Dean, Ph.D. Candidate

2015-2018 Alan Mouton, Ph.D. Candidate

2016-2018 Rafiq Nabi, Ph.D. Candidate

2016-2018 Domonique Smith, Master’s Candidate

2018-2018 Kyle Meredith Pharmacology/Biological Studies Masters2018

2017-2018 Katie Adler Physiology/Biological Studies Masters

2019-current Krystal Belmonte Physiology PhD 2022

2019-current Jonquil Poret Physiology PhD 2022

2019-current Caleb Ardizzone MIP PhD 2022

**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. 09/01/13-08/31/17 (no cost extension)

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

UH2AA026226 Molina, P.E.; Welsh, D.A. 09/15/17-08/31/19

NIH/NIAAA

***“Precision Medicine Approaches for Alcohol- and HIV-Associated Dysbiosis, Immune Activation, and Cardiometabolic Syndrome”***

The goal of the UH2 component is to test the hypothesis that gastrointestinal microbiota phylogenetic profiles in people living with HIV (PLWH) with cardiometabolic syndrome with active alcohol use correlate with the capacity of specific combinations of prebiotics and probiotics to reduce immune activation and biomarkers of intestinal translocation. The UH3 component will test the hypothesis that personalized administration of probiotics/prebiotics/combinations will reduce immune activation, biomarkers of microbial translocation, and improve cardiometabolic biomarkers in PLWH with active alcohol use.

Role: Co-I

LA CaTS Pilot Grant Siggins, R.W. 12/04/18-06/30/20

NIH/NIAAA

***“Alcohol Use in People Living with HIV: Impact on Mitochondrial DNA Damage and T-cell Immunosenescence”***

The goal of the pilot is to examine the mechanistic role of mitochondrial dysfunction as it pertains to alcohol- and HIV-induced CD8 T cell immunosenescence.

Role: PI

R21 AA027199-01A1 Shellito, J.E., Taylor, C.M.; Welsh, D.A. 09/01/18-08/31/20

NIH/NIAAA

“Alcohol-induced Dysbiosis and HIV-associated Pneumonia”

The goal of this project is to uncover mechanisms through which changes in gut microflora influence host responses to pulmonary infection (the gut-lung axis) and will lead to new knowledge as to how alcohol and HIV infection impair immunity in the lung.

Role: Co-I

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

Pennington Biomedical Research Center, Botanical Dietary Supplements Research Center Molina, P.E. 09/01/16-08/31/17

**"Cannabinoid and Metabolic Resiliency: Role of Microbiota and Immune Regulation"**

The proposed study was designed to examine the ability of CBD to alter the intestinal microbiome,thereby promoting immune resiliency.

Role: Co-I

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

R21 AA027199-01A1 Shellito, J.E., Taylor, C.M.; Welsh, D.A. 09/01/18-08/31/20

NIH/NIAAA

***“Alcohol-induced Dysbiosis and HIV-associated Pneumonia”***

The goal of this project is to uncover mechanisms through which changes in gut microflora influence host responses to pulmonary infection (the gut-lung axis) and will lead to new knowledge as to how alcohol and HIV infection impair immunity in the lung.

Role: Co-I

**Journal Publications:**

**Refereed:**

1. Bearzi C, Rota M, Hosoda T, Tillmanns J, Nascimbene A, DeAngelis A,Yasuzawa-Amano S, Trofimova I, **Siggins RW**, LeCapitaine N, Cascapera S, Beltrami AP, D’Alessandro DA, Zias E, Quaini F, Urbanek K, Michler RE, Bolli R, Kajstura J, Leri A, Anversa P. Human Cardiac Stem Cells. *Proceedings of the National Academy of Sciences*, 2007, 104(35): 14068-14073.
2. 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 RW**, Loredo M, Bearzi C, Bolli R, Urbanek K, Leri A, Kajstura J, Anversa P. Formation of Large Coronary Arteries by Cardiac Progenitor Cells. *Proceedings of the National Academy of Sciences*, 2008, 105(5):1668-1673.
3. **Siggins RW**, Zhang P, Welsh DA, LeCapitaine NJ, Nelson S. Stem Cells, Phenotypic Inversion, and Differentiation. *International Journal of Clinical and Experimental Medicine*. 2008, 1(1): 2-21.
4. Zhang P, Nelson S, Bagby GJ, **Siggins RW**, Shellito JE, Welsh DA. Lineage-c-kit+Sca-1+ Cell Response to Escherichia Coli Bacteremia in Balb/c Mice. *Stem Cells*. 2008, 26(7):1778-1786.
5. Zhang P, Welsh DA, **Siggins RW**, Bagby GJ, Raasch CE, Happel KI, 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.
6. **Siggins RW**, Bagby GJ, Molina PE, Dufour J, Nelson S, Zhang P. Alcohol Exposure Impairs Myeloid Dendritic Cell Function in Rhesus Macaques. *Alcoholism: Clinical and Experimental Research*. 2009, 33(9):1524-1531.
7. Raasch CE, Zhang P, **Siggins RW**, LaMotte L, Bagby GJ, Nelson S. Acute Alcohol Intoxication Impairs the Hematopoietic Precursor Cell Response to Pneumococcal Pneumonia. *Alcoholism: Clinical and Experimental Research*. 2010, 34(12):2035-2043.
8. **Siggins RW**, Melvan JN, Welsh DA, Bagby GJ, Nelson S, 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.
9. Melvan JN, **Siggins RW**, Bagby GJ, Stanford WL, Welsh DA, Nelson S, 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.
10. Melvan JN, **Siggins RW**, Stanford WL, Porretta C, Nelson S, Bagby GJ, 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.
11. Shi X, **Siggins RW**, Stanford WL, Melvan JN, Basson MD, 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.
12. **Siggins RW,** Hossain F, Rehman T, Melvan JN, Zhang P, Welsh DA. 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).
13. **Siggins RW**, Molina P, Zhang P, Bagby GJ, Nelson S, Dufour J, LeCapitaine NJ, Walsh C, 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.
14. Bagby GJ, Amedee AM, **Siggins RW**, Molina PE, Nelson S, Veazey R. Alcohol and HIV Effects on the Immune System. *Alcohol Research: Current Reviews*. 2015; 37(2):287-297.
15. Souza-Smith F, **Siggins RW**, Molina PE. Mesenteric lymphatic-perilymphatic adipose crosstalk; role in alcohol-induced perilyphatic adipose tissue inflammation. *Alcoholism: Clinical and Experimental Research*. 2015; 39(8):1380-1387.
16. Katz PS**\***, **Siggins RW\***, Porretta C, Armstrong ML, Zea AH, Mercante DE, Parsons C, Veazey RS, Bagby GJ, Nelson S, Molina PE, Welsh, DA. Chronic alcohol increases CD8+ T-cell immunosenescence in simian immunodeficiency virus-infected rhesus macaques. *Alcohol*. 2015; 49(8):759-765. **\* indicates co-first authorship**
17. Simon L, **Siggins R**, Winsauer P, Brashear M, Ferguson T, Mercante D., Song K, Vande Stouwe C, Nelson S, Bagby G, Amedee A, Molina PE. Simian Immunodeficiency Virus Infection Increases Blood Ethanol Concentration Duration After Both Acute and Chronic Administration. *AIDS Res Hum Retroviruses.* 2018; 34(2):178-184.
18. Duplanty AA, **Siggins RW**, Allerton T, Simon L, Molina PE. Myoblast mitochondrial respiration is decreased in chronic binge alcohol administered simian immunodeficiency virus-infected antiretroviral-treated rhesus macaques. *Physiol Rep.* 2018 ; 6(5): doi: 10.14814/phy2.13625.
19. Welsh DA, Ferguson T, Theall KP, Simon L, Amedee A, **Siggins RW**, Nelson S, Brashear M, Mercante D, Molina PE. The New Orleans Alcohol Use in HIV Study: Launching a Translational Investigation of the Interaction of Alcohol Use with Biological and Socioenvironmental Risk Factors for Multimorbidity in People Living with HIV. Alcohol Clin Exp Res. 2019 Apr;43(4):704-709. doi: 10.1111/acer.13980. Epub 2019 Mar 10.
20. Souza-Smith FM, Simon L, **Siggins RW**, Molina, PE Alcohol-Induced Mesenteric Lymphatic Permeability: Link to Immunometabolic Modulation of Perilymphatic Adipose Tissue. Int J Mol Sci. 2019 Aug 22;20(17). pii: E4097. doi: 10.3390/ijms20174097.
21. Samuelson DR, **Siggins RW**, Ruan S, Amedee AM, Sun J, Zhu QK, Marasco WA, Taylor CM, Luo M, Welsh DA, Shellito JE. Alcohol consumption increase susceptibility to pneumococcal pneumonia in a humanized murine HIV model mediated by intestinal dysbiosis. *Alcohol.* 2019;80:33-43. doi: 10.1016/j.alcohol.2018.08.012. [Epub ahead of print]
22. Maffei VJ, Ferguson TF, Brashear MM, Mercante DE, Theall KP, **Siggins RW**, Taylor CM, Molina P, Welsh DA. Lifetime alcohol use among persons living with HIV is associated with frailty. *AIDS*. 2020 Feb 1;34(2):245-254. doi: 10.1097/QAD.0000000000002426. PMID: 31714352
23. Mouton AJ, El Hajj EC, Ninh VK, **Siggins RW**, Gardner JD. Inflammatory cardiac fibroblast phenotype underlies chronic alcohol-induced cardiac atrophy and dysfunction. *Life Sci*. 2020 Mar 15;245:117330. doi: 10.1016/j.lfs.2020.117330. Epub 2020 Jan 18. PMID: 31962130
24. Ferguson TF, Theall KP, Brashear M, Maffei V, Beauchamp A, **Siggins RW**, Simon L, Mercante D, Nelson S, Welsh DA, Molina PE. Comprehensive Assessment of Alcohol Consumption in People Living with HIV (PLWH): The New Orleans Alcohol Use in HIV Study. *Alcohol Clin Exp Res.* 2020 Jun;44(6):1261-1272. doi: 10.1111/acer.14336. Epub 2020 May 22. PMID: 32441814
25. Maffei VJ, **Siggins RW**, Luo M, Brashear MM, Mercante DE, Taylor CM, Molina P, Welsh DA. Alcohol Use Is Associated with Intestinal Dysbiosis and Dysfunctional CD8+ T-Cell Phenotypes in Persons with HIV. *J Infect Dis.* 2020 Jul 29:jiaa461. doi: 10.1093/infdis/jiaa461. Online ahead of print. PMID: 32725203

**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., Loredo, 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 Cigarrette 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 Pharmocology, 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, Symoposium 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.

Porretta, C.P., Welsh, D.A., and **Siggins, R.W.** Chronic *In Vitro* Alcohol Increases Mitochondrial DNA Deletions in T Cells. CYTO, June 13, 2016; Poster Presentation.

Porretta, C.P., Welsh, D.A., and **Siggins, R.W.** Chronic *In Vitro* Alcohol Increases Mitochondrial DNA Depletion in T Cells and Promotes Immunosenesence. Research Society on Alcoholism, June 26, 2016, Poster Presentation.

**Siggins, R.W.**, Ferguson, T.F., Porretta, C.P., Molina, P.E. and D.A. Welsh. Alcohol Consumption Differentially Affects CD8+ T cell Phenotypes in People Living With HIV/AIDS (PLWHA) that is Dependent on Viral Suppression. Research Society on Alcoholism, June 25, 2017, Poster Presentation.

**Siggins, R.W.**, Maffei, V.J., Ferguson, T.F., Porretta, C.P., Taylor, C.M., Molina, P.E., Welsh, D.A. Alcohol Use Positively Correlates with CD8+ T-cell Exhaustion in People Living with HIV. Research Society on Alcoholism, June 18, 2018, 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, Symoposium 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:**

2010-2018 PLoS One

2011-current Alcoholism: Clinical and Experimental Therapeutics

2013-current Alcohol

2013-2014 Cellular and Molecular Neurobiology

2015-2016 Journal of Visualized Experiments

**SERVICE ACTIVITIES**

**University/Institutional Service**

**LSUHSC (campus) committees:**

2014-2020 Research Advisory Committee

2020-current Admissions Committee for Graduate Studies