

## CURRICULUM VITAE

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**EDUCATION**

1995-1999 Meharry Medical College, Nashville, TN  
Ph.D. Degree in Pharmacology, May 2000

1991-1995 Benedict College, Columbia, SC  
B.S. Degree in Chemistry, May 1995

**ACADEMIC APPOINTMENT**

2008-Present Assistant Professor  
Medical University of South Carolina, Charleston  
Department of Medicine, Nephrology Division

**RESEARCH EXPERIENCE**

2004-2008 Post-Doctoral Fellow Medical University of South Carolina, Charleston  
Department of Medicine, Nephrology Division

2001-2004 Research Associate Loyola University Medical Center, Maywood, IL  
Department of Physiology

1999-2001 Research Fellow University of Michigan, Ann Arbor, MI  
Department of Pharmacology

1996 Charles Ross Fellow University of Michigan, Ann Arbor, MI  
Department of Pharmacology

1995 Charles Ross Fellow University of Michigan, Ann Arbor, MI  
Department of Pharmacology

1993-1995 MARC Research Scholar Benedict College, Columbia, SC  
Department of Chemistry

1994 Summer Internship Yale University School of Medicine  
New Haven, CT  
Department of Pharmacology  
Biomedical Research Training Program

## TEACHING EXPERIENCE

2003

Lecturer

Human Physiology  
Chicago State University  
Department of Biological Sciences

## PROFESSIONAL SOCIETIES

The American Physiological Society

## HONORS/AWARDS

Trustee Scholar, Benedict College

Alpha Chi Honors Society

American Society for Biochemistry and Molecular Biology Postdoctoral Travel Award

American Physiological Society Minority Travel Award

## PUBLICATIONS

### Peer Reviewed Journal Articles

McDuffie JE, **Coaxum SD**, Maleque MA. (1999) 5-hydroxytryptamine evokes endothelial nitric oxide synthase activation in bovine aortic endothelial cell cultures. *Proc Soc Exp Biol Med.* 221(4):386-390.

Mukherjee S, **Coaxum SD**, Maleque M, Das SK. (2001) Effects of oxidized low density lipoprotein on nitric oxide synthetase and protein kinase C activities in bovine endothelial cells. *Cell Mol Biol.* 47(6):1051-1058.

**Coaxum SD**, Martin JL, Mestril R. (2003) Overexpression of heat shock proteins differentially modulates protein kinase C expression in rat neonatal cardiomyocytes. *Cell Stress Chaperones.* 8(4):297-302.

Turner JH, Garnovskaya MN, **Coaxum SD**, Vlasova TM, Yakutovich M, Lefler DM, Raymond JR. (2007) Ca<sup>2+</sup>-calmodulin and janus kinase 2 are required for activation of sodium-proton exchange by the Gi-coupled 5-hydroxytryptamine 1A receptor. *J Pharmacol Exp Ther.* 320(1):314-322.

**Coaxum SD**, Griffin TM, Martin JL, Mestril R. (2007) Influence of PKC-alpha overexpression on HSP70 and cardioprotection. *Am J Physiol Heart Circ Physiol.* 292(5):H2220-H2226.

**Coaxum SD**, Garnovskaya MN, Gooz M, Baldys A, Raymond JR. (2009) Epidermal growth factor activates Na<sup>+</sup>/H<sup>+</sup> exchange in podocytes through a mechanism that involves janus kinase and calmodulin. *Biochim Biophys Acta.* 1793(7):1174-1181.

### Book Chapters

Raymond JR, Turner JH, Gelasco A, Ayiku H, **Coaxum S**, Arthur JM, Garnovskaya MN. (2006) 5-HT Receptor Signal Transduction Pathways. In: *The Serotonin Receptors: From Molecular Pharmacology to Human Therapeutics.* Ed. B. Roth, The Humana Press, Inc. Totowa, NJ, USA. pp 143-206.

Turner JN, **Coaxum SD**, Gelasco AK, Garnovskaya MN, and Raymond JR (2007) Calmodulin is a 5-HT Receptor-Interacting and Regulatory Protein. In: *Frontiers in Neuroscience. Serotonin Receptors in Neurobiology.* (Chattopadhyay. A. Ed.). (Nicolelis, M. and Simon, S. Series Eds.), CRC Press, Boca Raton, FL. pp 61-80.

## **PUBLISHED ABSTRACTS**

**Coaxum SD**, Raymond JR. (2008) Mutations in the i3N loop calmodulin (CaM)-binding domain of 5-HT<sub>1A</sub> receptor attenuate ERK phosphorylation in CHO-K1 cells. Experimental Biology, San Diego, CA, April 5-9, 2008. FASEB J. 2008; 22:728.8.

Griffin TM, **Coaxum S**, Martin J, Mestrlil R. (2006) PKC $\alpha$  protection against simulated ischemia/reperfusion is mediated by induction of heat shock protein 70i in neonatal rat cardiomyocytes. American Heart Association Scientific Sessions, Chicago, IL, November 12-15, 2006. Circulation. 114:II-18 (232).

**Coaxum SD**, Gooz M, Baldys A, Garnovskaya MN, Raymond JR. (2006) Epidermal growth factor activates Na<sup>+</sup>/H<sup>+</sup> exchange in podocytes through a mechanism that involves janus kinase and calmodulin. Experimental Biology, San Francisco, CA, April 1-5, 2006. FASEB J. 20: A764 (472.25).

Shatavi S, Dias J, **Coaxum S**, Luborsky J. (2004). Identification of autoantigens in women with unexplained infertility and premature ovarian failure (POF) using proteomics methodology. The Society for the Study of Reproduction 37<sup>th</sup> Annual Meeting, August 1-4, 2004, University of British Columbia, Vancouver, BC, Canada.

**Coaxum SD**, Mestrlil R. (2004). Differential expression of PKC  $\delta$  and  $\epsilon$  in adult transgenic rats overexpressing the inducible heat shock protein 70. Experimental Biology, Washington D. C., April 17-21, 2004. FASEB J. 18:A1092 (701.4).

**Coaxum SD**, Martin JL, Mestrlil R. (2002). Overexpression of heat shock protein differentially modulates protein kinase C expression in rat neonatal cardiomyocytes. American Heart Association Scientific Sessions, Chicago, IL, November 17-20, 2002. Circulation. 106:II-28.

**Coaxum SD**, Kamada Y, Washington RA, Lucchesi BR. (2001). Inhibition of nitric oxide synthesis during ischemia/reperfusion injury diminishes complement activation in the rabbit isolated heart. Experimental Biology, Orlando, FL, March 31-April 4, 2001. FASEB J. 15:A767 (634.5).

**Coaxum S**, Maleque MA. (1999). Increased cyclic AMP production by pertussis toxin through 5-HT<sub>1D</sub> receptor in bovine aortic endothelial cells. Experimental Biology, Washington, D.C., April 17-21, 1999. FASEB J. 13:A863 (651.13).

## **RESEARCH SUPPORT (Active Funding):**

1 K01 HL092606-01 Coaxum (PI) 09/20/2008-06/30/2013  
NHLBI  
Regulation of 5-HT<sub>1A</sub> Receptor by Calmodulin

C-3053 Coaxum (PI) 03/01/2009-02/28/2011  
DCI  
Targeting of G Protein Coupled 5-HT<sub>1A</sub> Receptors