

Candice N. Baker

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Education

BS	Biology, College of Sciences, University of Central Florida, Orlando, FL	August 2007
MS	Molecular and Microbiology, College of Medicine, University of Central Florida Orlando, FL	August 2012
PhD	Interdisciplinary Biomedical Sciences Program, College of Graduate Studies University of Central Florida, Orlando, FL Dissertation Title: <i>Role of Cardiac Catecholamines in Embryos and Adults Under Stress</i>	December 2014

Publications

Osuala K, Telusma K, Khan S, Wu S, Shah M, **Baker CN**, Alam S, Abukenda I, Fuentes A, Seifen H, and Ebert SN. Distinctive left-sided distribution of adrenergic-derived cells in the adult mouse heart. PLoS One. 2011 6(7): p. e22811.

Baker CN*, Taylor D*, Osuala K, Natarajan A, Molnar P, Hickman J, Alam S, Brittany M, Weinshenker D, and Ebert SN. Adrenergic Deficiency Leads to Impaired Electrical Conduction and Increased Arrhythmic Potential in the Embryonic Mouse Heart. Biochemical Biophysical Research Communications. 2012 423(3):536-41. (*Equal Contribution)

Osuala K, **Baker CN**, Nguyen HL, Martinez C, Weinshenker D, and Ebert SN. Physiological and genomic consequences of adrenergic deficiency during embryonic/fetal development in mice: impact on retinoic acid metabolism. Physiological Genomics 2012 44(19):934-47.

Xia J, Varudkar N, **Baker CN**, Abukenda I, Martinez C, Natarajan A, Grinberg A, Pfeifer K, and Ebert SN. Targeting of the enhanced green fluorescent protein reporter to adrenergic cells in mice. Molecular Biotechnology 2013 54(2):350-60.

Baker CN and Ebert SN. Development of Aerobic Metabolism In Utero: Requirement for Mitochondrial Function During Embryonic and Fetal Period. Open Access Biotechnology 2013 2(2):16. (Review)

Baker CN, Katsandris R, Van C, and Ebert SN. "Adrenaline and Stress-Induced Cardiomyopathies: Three competing hypotheses for mechanism(s) of action." Adrenaline: Production, Role in Disease and Stress, Effects on the Mind and Body. 1st ed. Alfred Bennun. New York: Nova Science Publishers, 2014. 81-116. Print

Baker CN, Gidus S, Price G, and Ebert SN. Impaired Cardiac Energy Metabolism in Embryos Lacking Adrenergic Stimulation. *American Journal of Physiology- Endocrinology and Metabolism*. Submitted (In Revision)

Baker CN, Katsandris R, Goldblatt G, Van C, and Ebert SN. Echocardiographic and Histological Analysis of Left Ventricular Function in Stress-Challenged Aged Mice: Effects of Gender and Menopause. (Manuscript in Preparation).

Van C*, **Baker CN***, Katsandris R, and Ebert SN. Left Ventricular Functional Analysis in Menopausal Mice in Response to Isoproterenol. (Manuscript in Preparation). (*Equal Contribution)

Laboratory Skills and Techniques

- Molecular and Cellular: PCR, enzyme assays, microscopy (light, fluorescence, confocal, and electron), ELISA, aseptic cell culture, spectrophotometry, luciferase based assays, maxi/mini prep, cryosection, staining (immuno and histological), RT-PCR, qPCR
- Murine Based: Husbandry, Back-crossing, Tail snips, cross-fostering, timed pregnancies, ultrasonography (Cardiac and Embryonic), tail vein and intraperitoneal injections, oral gavage, water bottle dosing, microdissection of embryos

Awards & Honors

- Weinstein Cardiovascular Conference Travel Award (2014)
- Graduate Research Excellence Award (2013)
- Graduate Travel Fellowship Recipient (2013)
- First Place Graduate Research Forum (2012)
- Graduate Provost Fellowship Recipient (2010-2011)
- Graduate Travel Fellowship Recipient (2012)

Academic and Teaching Experience

- Human Anatomy Laboratory, University of Central Florida
- Physiology Laboratory, University of Central Florida
- Infectious Processes, University of Central Florida
- Cellular Microbiology, University of Central Florida
- Foundations of Bio-imaging Science, University of Central Florida

Certifications

- Pharmacy Technician
- Institutional Animal Care and Use Committee
- Radiation Safety Training
- Chemical Safety Training
- Biological Safety Training
- IACUC and AAALAC Training

Extracurricular Activities and Memberships

- Student Affairs Committee member, University of Central Florida (2010-2012)
- Biomedical Sciences Graduate Student Association, Treasurer, University of Central Florida (2010-2011)

Student Trainees

- Sharannah Ridore, Current Status: 4th Yr. Undergraduate, University of Central Florida
- Sarah Gidus, Current Status: 4th Yr. Undergraduate, University of Central Florida
- Rebekah Katsandris, Current Status: 4th Yr. Undergraduate, University of Central Florida
- Chaunhi Van, Current Status: 3rd Yr. Medical Student, University of Central Florida

Presentations at scientific conferences

Three-dimensional computer imaging of adrenergic cell-derived myocardium in the adult mouse heart reveals predominantly left-sided distribution (2010) Osuala K, Telusma K, Kahn S, Wu S, Shah M, **Baker CN**, Ebert SN. Weinstein Cardiovascular Development Conference. Amsterdam, Netherlands.

Adrenergic deficiency leads to impaired energy metabolism co-incident with mid-gestational heart failure. (2011) **Baker CN**, Osuala K, Ebert S. Weinstein Cardiovascular Development Conference. Cincinnati, OH

Exploring sex differences in stress-induced cardiomyopathies: Role of underlying adrenergic-derived myocardium. (2012) **Baker CN**, Goldblatt G, Abukenda I, Van C, Osuala K, Ebert SN. The Organization for the Study of Sex Differences (OSSD) and International Society for Gender Medicine. Baltimore MD

Adrenergic Hormones Regulate Cardiac Metabolic Health during Embryogenesis (2012) **Baker CN**, Osuala K, Ebert S. American Heart Association, Basic Scientific Sessions Conference. New Orleans, LA

Stress, Energy, and the Embryo: Adrenergic Hormones Facilitate Cardiac Mitochondrial Maturation During Embryogenesis (2013) **Baker CN**, Gidus S, Ebert SN. Weinstein Cardiovascular Development Conference. Tucson, AZ

Echocardiographic Analysis of Left Ventricular Function in Stress-Challenged Aged Mice: Effects of Gender (Sex) and Menopause (2013) **Baker CN**, Katsandris R, Van C, Ebert SN. American Heart Association Conference. Dallas, TX

Impaired Cardiac Energy Metabolism in Adrenergic-Deficient Embryos (2014) **Baker CN**, Gidus SA, Price GF, Ebert SN. Weinstein Cardiovascular Development Conference. Madrid, Spain