

Korin E. Leffler, MSEH, PhD

CURRICULUM VITAE



PERSONAL INFORMATION

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EDUCATION

PhD in Pharmacology and Toxicology

Brody School of Medicine, East Carolina University
Dissertation Title: Disrupted adiponectin-connexin43 signaling underlies exacerbated myocardial dysfunction in diabetic female rats
May 2019, GPA 4.0

Master of Science in Environmental Health

Department of Health and Human Performance, East Carolina University
May 2008, GPA 4.0

Bachelor of Science in Biological Sciences with Minor in Genetics

College of Agriculture and Life Sciences, North Carolina State University
May 2002, GPA 3.87 *Summa Cum Laude*

PROFESSIONAL EXPERIENCE

Assistant Professor of Pharmacology and Toxicology

Department of Pharmacology and Toxicology, Brody School of Medicine, East Carolina University, Greenville NC
September 2019-Present

Clinical Professor of Advanced Nursing Practice and Education

Department of Advanced Nursing Practice and Education, College of Nursing, East Carolina University, Greenville NC
August 2021-Present

Pharmacology Liaison to the School of Dental Medicine

School of Dental Medicine, East Carolina University, Greenville, NC
September 2019-Present

Online Teaching Faculty Mentor and Hyflex Consultant, Office of Faculty Excellence

Brody School of Medicine Representative, East Carolina University, Greenville, NC
September 2021-Present

Graduate Research Assistant in Pharmacology

Department of Pharmacology and Toxicology, Brody School of Medicine, East Carolina University, Greenville, NC
August 2015-May 2019

Graduate Research Assistant in Environmental Health

Department of Health and Human Performance, East Carolina University, Greenville, NC
August 2006-May 2008

Research Laboratory Technician in Neurological Disorders

National Institute of Neurological Disorders and Stroke, National Institutes of Health, Bethesda, MD
2003

Research Laboratory Technician and Manager in Developmental Biology

Developmental Biology Branch, National Health and Environmental Effects Research Laboratory, Office of Research and Development, U. S. Environmental Protection Agency, Research Triangle Park, NC
2001-2002

Research Laboratory Intern in Reproductive Biology

Developmental Biology Branch, National Health and Environmental Effects Research Laboratory, Office of Research and Development, U. S. Environmental Protection Agency, Research Triangle Park, NC
2000

PUBLICATIONS AND ABSTRACTS

Parekh RU, White A, **Leffler KE**, Biancardi VC, Eells JB, Abdel-Rahman A and Sriramula S (2021-accepted) Hypothalamic Kinin B1 Receptor Mediates Orexin System Hyperactivity in Salt-sensitive Hypertension. *Scientific Reports*.

Leffler KE and Abdel-Rahman A (2019) Restoration of Adiponectin-Connexin43 Signaling Axis Mitigates Myocardial Inflammation and Dysfunction in Diabetic Female Rats. *The Journal of Cardiovascular Pharmacology*.

Leffler KE and Abdel-Rahman A (2019) Estrogen-Dependent Disruption of Adiponectin-Connexin43 Signaling Underlies Exacerbated Myocardial Dysfunction in Diabetic Female Rats. *The Journal of pharmacology and experimental therapeutics* 368:208-217.

Fouda MA, **Leffler KE** and Abdel-Rahman A (2020) Estrogen-Dependent hypersensitivity to diabetes-evoked cardiac autonomic dysregulation: Role of hypothalamic neuroinflammation.

Leffler KE and Abdel-Rahman A (2018) Disrupted Adiponectin-Connexin43 Signaling Underlies the Exacerbated Myocardial Dysfunction in Diabetic Female Rats. *The FASEB Journal* 32:838.811-838.811.

Leffler KE and Abdel-Rahman Abdel A (2018) Abstract 15846: Connexin43, but Not Caveolin-3 Underlies Estrogen Exacerbation of Diabetic Female Myocardial Dysfunction. *Circulation* 138:A15846-A15846.

Anderson, A. and **Leffler, KE** (2008) Bedbug Infestations in the News: A Picture of an Emerging Public Health Problem in the United States. *Journal of Environmental Health*. 70 (9): 24-27 (May 2008).

Abbott BD, Buckalew AR and **Leffler KE**. (2005) Effects of Epidermal Growth Factor (EGF), Transforming Growth Factor- α (TGF α), and 2,3,7,8-Tetrachlorodibenzo-p-dioxin on Fusion of Embryonic Palates in Serum-Free Organ Culture Using Wild-Type, EGF Knockout, and TGF α Knockout Mouse Strains. *Birth Defects Research (Part A)* 73:447-454.

PRESENTATIONS, AWARDS AND ACHIEVEMENTS

Updates and Advances in Prescribing Neuropharmacotherapeutics – Invited Speaker for Adult Mental Health Conference; Advancing Knowledge and Skills, Eastern Area Health Education Center (Greenville, NC, April 2022)

Brody School of Medicine Faculty Teaching Workshop Administrator and Presenter East Carolina University (Greenville, NC, March 2022)

Hyflex Instruction at East Carolina University: 6 Series Workshop Co-Director and Presenter (virtual; Greenville, NC February-April 2022)

Department of Pharmacology and Toxicology Faculty Retreat Administrator, Organizer and Presenter East Carolina University (Greenville, NC, June 2021)

Attention Deficit and Hyperactivity Disorder Pharmacological Therapeutics Presentation Department of Advanced Nursing Practice and Education, Psychiatric Mental Health Nurse Practitioner Program Fall Intensives (Greenville, NC, September 2021)

AHA Scientific Sessions (Women's Health and Sex Differences) -- Poster Abstract 15846: *Connexin43, but Not Caveolin-3 Underlies Estrogen Exacerbation of Diabetic Female Myocardial Dysfunction* (Chicago, IL, Nov. 2018)

Finalist for 3 Minute Thesis -- Diabetes: Sugar that Sours Women's Hearts East Carolina University (October 2018)

Experimental Biology – ASPET Oral Presentation for Abstract 1722: *Disrupted Adiponectin-Connexin43 Signaling Underlies the Exacerbated Myocardial Dysfunction in Diabetic Female Rats*; **Cardiovascular Consequences of Metabolic Targeting in Obesity Session** (#3720) (San Diego, CA, Apr 2018)

Third Place Graduate Student Poster Award -- Experimental Biology ASPET; Division of Cardiovascular Pharmacology (San Diego, CA, Apr 2018)

PROFESSIONAL ORGANIZATIONS / APPOINTMENTS / ACTIVITIES

Duke University Master's of Biomedical Sciences Early Assurance to Brody Medical School Reviewer (April 2022)

Faculty Senator, Brody School of Medicine Representative, East Carolina University (May 2022-present)

Travel Award Reviewer, American Society of Pharmacology and Experimental Therapeutics, Experimental Biology Meeting 2022

Office of Diversity and Inclusion, Faculty Affairs and Leadership Development Book Studies: *Caste: The Origins of our Discontents*, by Isabel Wilkerson (Spring 2022), *Small Teaching Online*, by Flower Darby (Fall 2021), *The Privileged Poor*, by Anthony Abraham Jack (Fall 2020)

Pharmacology and Toxicology Department Resources Committee; Brody School of Medicine (2022-present)

Faculty Tenure-Tract Recruitment Committee, Department of Pharmacology and Toxicology, Brody School of Medicine (February 2022-present)

Academic Strive: Online Publishing. Associate Editor (2021-present)

Ethical Standards and Professionalism Workgroup for Medical Students, Brody School of Medicine (February 2022-present)

Brody School of Medicine Early Assurance Interviewer; Selection Committee (February 2022)

Executive Curriculum Committee Basic Sciences Representative, Brody School of Medicine, (July 2021-present)

Medicine and Therapeutics Subcommittee, School of Dental Medicine, ECU (July 2021-present)

Executive and Leadership Board (Program Chair), Brody Women Faculty Committee, (2021-Present)

Brody School of Medicine Admissions Interviews Committee (2021-present)

Faculty Mentor for Online Instruction, East Carolina University; 4 mentees (2021-present)

Curricular Redesign Committee, School of Dental Medicine, East Carolina University (2020)

International Association of Medical Science Educators Member (2020-present)

Faculty Advisor on Doctoral Thesis Committee (Mary Katherine Donovan; 2020-present)

Graduate Studies Committee, Department of Pharmacology and Toxicology (2019-present)

Invited Speaker for the College of Nursing, Psychiatric Mental Health Nurse Practitioner Fall Intensives, topic: Attention Deficit and Hyperactivity Disorder Pharmacotherapeutics (2021)

Research Instructor in the Department of Pharmacology and Toxicology Hiring Committee
(Fall of 2020)

Reviewer for Early Career Awards at Experimental Biology for the Cardiovascular
Pharmacology Division of American Society for Pharmacology and Experimental Therapeutics
(2019-2020)

Reviewer of poster abstracts for Travel Awards to Undergraduate and Graduate Students at
Experimental Biology for the Cardiovascular Pharmacology Division of American Society for
Pharmacology and Experimental Therapeutics (2019-2020; 2022)

Guest presenter for STEM outreach in Middle Schools (2019-2020)

Admissions Reviewer for Summer Biomedical Research Program, Brody School of Medicine,
East Carolina University (2019; 2022)

American Society for Women in Science Member (2019-present)

ASPET Cardiovascular Pharmacology Division Executive Committee Representative
(2018-2020)

American Society for Pharmacology and Experimental Therapeutics (ASPET) Member;
Cardiovascular Pharmacology (2016-present)

American Heart Association Professional Member (2017-present)

Brody School of Medicine Graduate Association (member: 2015-2019)
Philanthropy Committee Chair (2017-2018)

TEACHING EXPERIENCE

Faculty Development Workshops, Brody School of Medicine, improvement of medical
education with faculty development at both the departmental and Medical school wide level.
These workshops are presented annually (2021-present)

Online Teaching Mentor and Hyflex Instructional Consultant, Office for Faculty Excellence,
East Carolina University, private mentor for grant awardee and online forums University-wide
and at the Brody School of Medicine (2021-present)

Foundations of Biological Sciences I (SODM 8110, 8210, 8310), D1 curriculum, School of
Dental Medicine, liaison for the department and lectures include Foundational Principles,
Pharmacodynamics, Pharmacology for Special Patient Populations, Drug-Drug Interactions,
Antiviral and Antiretrovirals, Applied Dental Pharmacotherapeutics, Antihistamines and
Antirheumatics, Anti-inflammatories, Centrally Acting Analgesics (Opioids), Central Nervous
System Stimulants, Drugs for Chronic Orofacial Pain, Drugs for Movement Disorders and
Spasticity, Pharmacologic treatment of Neurodegenerative Disorders, Antidepressants and
Drugs for Mood Disorders, Antiepileptic Drugs, Antiarrhythmic Therapeutics, Antihypertensive
Therapeutics, Disorders of Calcium, Bone and Joint Pharmacology and Clinical Medicine of
Pregnancy (2019-present)

Foundations of Disease and Therapeutics (FDND 8000), Block 3, BSOM M1 curriculum, lectures include Antiviral and Antiretroviral Therapeutics and have given Nonsteroidal anti-inflammatory (NSAID) drugs (2020-present)

Organ Systems Courses (SYST9100-9600), Block 4, BSOM M2 curriculum, lectures include Antiarrhythmic Drugs, Pulmonary Pharmacology, Central Nervous System Stimulants and Attention Deficit and Hyperactivity Disorder (ADHD) Therapeutics, and Local Anesthetics (2020-present)

Medical Pharmacology for Health Sciences I and II (PHAR 7601, 7602), Fall/Spring Graduate Program, Course Director and lectures are same from FND 8000 and SYST9100-9600 (2020-present)

Advanced Pharmacology for Nurse Anesthesia (NURS 8805, 8806), Spring/Fall CRNA Program, lectures are same from FND 8000 and SYST9100-9600 (2020-present)

Clinical Pharmacology for Advanced Nursing Practice (NURS 6611), Fall/Spring Graduate Nursing Program, Course Director, online delivery of all lectures across all topics (2019-present)

Neurobiology and Psychopharmacology for Advanced Nursing Practice (NURS 7501), Fall Graduate Nursing Psychiatric Mental Health Nurse Practitioner Program, Course director, online delivery of all lectures across all topics (2021-present)

Pharmacotherapeutics in Nursing (NURS 3380), Fall/Spring Undergraduate Nursing Program, developed online recorded lectures in response to the COVID pandemic, substitute lecturer as needed (2019-present)

Introduction to Pharmacology (PHAR 7609), Fall Graduate Program, lectures include serotonin receptors and anti-inflammatories (2020-present)

Foundations of Biomedical Sciences I and II (BMSC 7002, 7003), Fall/Spring Graduate Program, lectures included antihypertensives, cardiac glycosides and pharmacology foundations (2020-present)

Practical Problems in Biometry (PHAR 7777), Spring Graduate Program, Course co-director and delivered lectures on the ANOVA unit (2020-present)

Principles of General Toxicology (PHAR 7680), Fall Graduate Program, invited lecturer on Effects of Air Pollution (2020)

Introduction to Pharmacology (PAPD 6500), Fall/Spring Physician Assistant Program, lectures included Antihypertensive Therapeutics (2017-2018)

Remediation for M2 students in the Pharmacology Thread of Organ Systems (Summer 2020)

Undergraduate Mentor for East Carolina Undergraduate in laboratory (2016-2018)

Peer Tutor – Peer tutor for graduate physiology and medical pharmacology course (2016-2018)

Summer Biomedical Research Program Graduate Assistant – Assisted and mentored undergraduate students in the development and execution of a research project (2015)

Instructor for Undergraduate Environmental Health Laboratory, East Carolina University (2007-2008)

Instructor for Undergraduate Ecology Laboratory, North Carolina State University (2001-2002)