

Erica Littlejohn Ph.D.



Personal Information

Office Address

Center for Health Equity Transformation
Department of Behavioral Science
University of Kentucky College of Medicine
464 Healthy Kentucky Research Building
760 Press Avenue, Lexington, KY 40536
Erica.littlejohn@uky.edu

Education

Doctor of Philosophy

2018

Department of Physiology
Spinal Cord and Brain Injury Research Center
College of Medicine
University of Kentucky
Dissertation: Insulin-like growth factor-1 overexpression mediates hippocampal remodeling and plasticity following TBI
Mentor: Kathryn Saatman, Ph.D.

Bachelor of Science in Microbiology

2008

Department of Microbiology
College of Medicine
University of Iowa

Postdoctoral Training

Health Disparities AAAS Fellow

2020-2022

American Association for the Advancement of Science & Technology Policy Fellow
Office of Global Health and Health Disparities
NIH National Institute of Neurological Disorders and Stroke (NINDS)
Primary project: Supported and coordinated NINDS health equity strategic planning activities and programs aimed at the elimination of health disparities/inequities in neurological disease.
Mentor: Richard T. Benson, M.D., Ph.D.

Postdoctoral Fellow

2018-2020

Cardiovascular Neurophysiology Research Fellow
Department of Physiology
College of Medicine
University of Texas Health Science Center at San Antonio
Primary project: Investigate GABA_A receptor modulation after diet-induced obesity in parasympathetic motor neurons of the vagus (DMV neurons) which innervate subdiaphragmatic organs and the heart.
Mentors: Carie Boychuk, Ph.D.; Glenn M. Toney, Ph.D., F.A.H.A., F.A.P.S

Professional Experience

Assistant Professor

2023-

Center for Health Equity Transformation
Department of Behavioral Science
University of Kentucky College of Medicine

Erica Littlejohn Ph.D.

Health Program Specialist

2022-2023

Office of Global Health and Health Disparities

Division of Clinical Research

NIH National Institute of Neurological Disorders and Stroke (NINDS)

Publications

Advancing health equity in neurological disorders and stroke: Stakeholder insights into health disparities and potential interventions. **Littlejohn EL**, Booker NE, Chambers SD, Akinsanya JA, Sankar C, Benson RT. (2023) *Neurology*. 101(7 Supplement 1):S92-S103.

Determinants of Inequities in Neurological Disease, Health, & Well-being: The NINDS Social Determinants of Health Framework. Griffith DM, Towfighi A, Manson SM, **Littlejohn EL**, Skolarus LE. (2023) *Neurology*. 101(7 Supplement 1):S75-S81.

Early central cardiovagal dysfunction after high fat diet in a murine model. Strain M, Espinoza L, Fedorchak S, **Littlejohn EL**, Andrade M, Toney GM, Boychuk CR. (2023) *Scientific Reports*. 13, 1:6550

Protein Kinase C-Dependent Effects of Neurosteroids on Synaptic GABA_A Receptor Inhibition Require the δ -Subunit. **Littlejohn EL** and Boychuk CR. (2021) *Frontiers in Physiology*. 12:742838.

#SAY HER NAME: Dr. Susan Moore's Tragic Death Gives Voice to Black Women in Science and Medicine. **Littlejohn EL**, Ighodaro ET, Akhetuamhen AI, Benson, R. (2021) *Nature Medicine*. 27, 8:1316-1317.

IGF1-Stimulated Posttraumatic Hippocampal Remodeling Is Not Dependent on mTOR. **Littlejohn EL**, DeSana AJ, Williams HC, Chapman RT, Joseph B, Juras JA, Saatman KE. (2021) *Front Cell Dev Biol*. 9:663456.

Sex-steroid-dependent plasticity of brain-stem autonomic circuits. **Littlejohn EL**, Fedorchak S, Boychuk CR. (2020) *Am J Physiol Regul Integr Comp Physiol*. 319, 1:R60-R68.

Insulin-like growth factor-1 overexpression increases long-term survival of posttrauma-born hippocampal neurons while inhibiting ectopic migration following traumatic brain injury. **Littlejohn EL**, Scott DA, Saatman KE. (2020) *Acta Neuropathologica Communications*. 8, 1:46.

GABA_A receptor currents in the dorsal motor nucleus of the vagus in females: influence of ovarian cycle and 5 α -reductase inhibition. **Littlejohn EL**, Espinoza L, Lopez M, Boychuk CR. (2019) *Journal of Neurophysiology*. 122, 122: 2130 –2141

PAX3 and SOX10 activate MET receptor expression in melanoma. Mascarenhas JB, **Littlejohn EL**, Wolsky RJ, Young KP, Nelson M, Salgia R, Lang D. (2010) *Pigment Cell & Melanoma Research*. 23, 225-237

PAX6 is expressed in pancreatic cancer and actively participates in cancer progression through activation of the MET tyrosine kinase receptor gene. Mascarenhas JB, Young KP, **Littlejohn EL**, Yoo BK, Salgia R, Lang D. (2009) *Journal of Biological Chemistry*. 284, 27524-27532

Professional and Scientific Abstracts or Talks

Combating Disparities in Access to Stroke Care. **Littlejohn EL***. Westchester Neurovascular Symposium. Valhalla, NY, USA. May 19, 2023.

Workforce Diversity. **Littlejohn EL***. University of Miami, Miller School of Medicine, Center for Translational Sleep and Circadian Sciences: Miami Sleep Festival Conference. Miami, FL, USA. April 14, 2023.

Health Equity. Benson RT* and **Littlejohn EL***. Interagency Collaborative to Accelerate Research on Epilepsy (ICARE) Meeting. Virtual. May 26, 2022.

Making Headway in Neurohealth Equity. Benson RT* and **Littlejohn EL***. American Academy of Neurology, 74th Annual Meeting. Seattle, WA, USA. April 2-7, 2022.

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- Health Disparities in Neurological Diseases: NIH Role.* Benson RT* and **Littlejohn EL***. American Association of Neuroscience Nurses meeting. Virtual. April 17-20, 2021.
- FITBIR Policy, Holdings, and Health Disparities.* Benson RT* and **Littlejohn EL***. Federal Interagency Traumatic Brain Injury Research (FITBIR), 3rd Annual FITBIR Stakeholders Meeting. Virtual. July 19, 2021.
- Health Disparities in Neurological Diseases: NIH Role.* Benson RT* and **Littlejohn EL***. American Association of Neuroscience Nurses meeting. Virtual. April 17-20, 2021.
- Addressing Equity, Diversity and Inclusion in Parkinson's research: NINDS Health Disparities and Health Equity Strategic Plan.* **Littlejohn EL***. NINDS-Parkinson's Disease Nonprofit meeting. Bethesda, MD, USA (Virtual). February 8, 2021
- NINDS Health Disparities Strategic Planning Process.* Benson RT* and **Littlejohn EL***. University of California, Los Angeles Department of Neurology Grand Rounds. Los Angeles, CA, USA (Virtual). October 21, 2020.
- Allopregnanolone potentiates and prolongs phasic inhibition of dorsal vagal motor neurons via the protein kinase c pathway.* **Littlejohn EL***, Espinoza L, and Boychuk CR. Society for Neuroscience (SFN) Annual Meeting. Chicago, IL, USA. October 19-23, 2019.
- Acute neurosteroid treatment with allopregnanolone enhances dorsal vagal motor neuron inhibition.* **Littlejohn EL*** and Boychuk CR. Experimental Biology. Orlando, FL, USA. April 6-9, 2019.
- Estrous cycle modulates inhibition of dorsal vagal neurons.* **Littlejohn EL***, Espinoza L, and Boychuk CR. Experimental Biology. Orlando, FL, USA. April 6-9, 2019.
- Insulin-like growth factor-1 overexpression activates the mTOR pathway and enhances immature neuron dendritic arborization after moderate TBI.* **Littlejohn EL***, Scott DA, DeSana AJ, Juras AJ, and Saatman KE. National Neurotrauma Society (NNS) Annual Meeting. Toronto, Canada. August 11-16, 2018.
- Insulin-like growth factor-1 overexpression enhances neurogenesis and activates the mTOR pathway after moderate TBI.* **Littlejohn EL***, Scott DA, DeSana AJ, Saatman KE. Journal of Neurotrauma (Vol. 34, No. 13, pp. A137-A137). Snowbird, UT. July 7-12, 2017.
- Insulin-like growth factor-1 overexpression mediates hippocampal remodeling and plasticity following TBI.* **Littlejohn EL***, DeSana AJ, Juras AJ, and Saatman KE. The 23rd Annual Kentucky Spinal Cord and Head Injury Research Trust Symposium (KSCHIRT). Louisville, KY. May 17-18, 2017 (Oral)
- Insulin-like growth factor-1 overexpression mediates long-term survival and migration of immature neurons in the hippocampus following TBI.* **Littlejohn EL***, DeSana AJ, Madathil SK, Stewart TM, Saatman KE. Society for Neuroscience (SFN) Annual Meeting. San Diego, CA. November 12-16, 2016
- Insulin-like growth factor-1 mediates regional alterations to the mTOR signaling pathway in the hippocampus following TBI.* **Littlejohn EL***, Madathil SK, DeSana AJ, Stewart TM, Saatman KE. Journal of Neurotrauma (vol. 33, no. 13, pp. A130-a130). Lexington, KY. June 26-29, 2016.
- Intranasal delivery of human insulin-like growth factor-1 mediates regional alterations to the mTOR signaling pathway in the hippocampus following TBI.* **Littlejohn EL***, Sama AM, Stewart TM, Saatman KE. 31st Annual BGSFN Spring Neuroscience Research Day (BGSFN) Annual Meeting. Lexington Convention Center, Lexington, KY. April 21, 2016
- Insulin-like growth factor-1 overexpression promotes survival of adult-born neurons after traumatic brain injury.* **Littlejohn EL***, Madathil SK, Stewart TM, Saatman KE. National Neurotrauma Symposium (NNS) Annual Meeting. Santa Fe Convention Center, Santa Fe, NM. June 28-2, 2015
- Rin GTPase deficiency promotes neuroprotection following traumatic brain injury.* Pannell M*, Cai W, Brelsfoard JM, Carlson SW, **Littlejohn EL**, Stewart TM, Saatman KE, Andres DA. (2015) *The FASEB Journal*. 29, 727-15

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Inhibition of PAX3 Leads to Growth Arrest and a Change in Morphology of Melanoma cells. **Littlejohn EL**, Kubic JD, Mascarenhas JB, Smithberger E, Lang D*. American Association for Cancer Research (AACR) Annual Meeting. Orange County Convention Center, Orlando, FL. April 2-6, 2011.

Pax3 Contributes to Cancer Phenotype of Melanoma. **Littlejohn EL***, Kubic JD, Ludvik AE, Sun DX and Lang D. University of Chicago Department of Medicine Research Symposium. Duchossois Center for Advanced Medicine at the University of Chicago, Chicago, IL. March 11, 2010.

Awards and Honors

NIH Special Act Award	2023
NINDS Employee Performance Award	2023
NIH Special Act Award	2022
NINDS Employee Performance Award	2021
American Association for the Advancement of Science & Technology Policy Fellowship	2020
American Physiological Society Early Career Advocacy Fellowship Award	2020
American Physiology Society Martin Frank Diversity Travel Award	2019
NIH T32 postdoctoral trainee fellowship, "Cardiac Physiology," 5T32HL007446-37	2018-
National Neurotrauma Society Diversity Grant	2018
Neuroscience Scholars Program Professional Development Award	2017
Lyman T. Johnson Fellowship Award	2017
University of Kentucky Center for Graduate and Professional Diversity Initiatives Essence Award	2016
Physiology Annual Research Retreat Data Blitz Presentation Award, 1 st place	2016
NIH T32 predoctoral trainee, "Neurobiology of CNS Injury and Repair," 5T32NS077889-04	2015-2017
Annual Central Kentucky Multicultural Opportunities, Strategies and Institutional Inclusiveness Consortium Award 2016 Shane Carlin and Annie Sit Inclusion Award	2016
University of Kentucky Graduate School Diversity Advisory Council, Graduate Student Representative	2015- 2018
Physiology College of Medicine, Graduate Student Representative	2015-2016
Thomas V. Getchell, Ph.D. Memorial Award	2015
National Neurotrauma Society Symposium Travel Award	2015
NIH Research Supplement Award (R01NS072302); predoctoral support	2012
National Science Foundation Undergraduate Research Fellowship (REU)	2007
Society for Advancement of Chicanos & Native Americans in Science (SACNAS) travel scholarship	2007

Mentoring and Teaching Experience

Bluegrass Community and Technical College Guest Lecturer, <i>Tissue: The Living Fabric</i> (BIO 137)	2016
University of Kentucky Area Health Education Center (AHEC) Physiology Lecturer, <i>The Brain</i> (June 26 th)	2016
University of Kentucky Area Health Education Center (AHEC) Human Anatomy Lab Facilitator	2016
NIH Kentucky Bridge to a Biomedical Doctorate for Appalachian Student mentor	2015-2016
University of Kentucky Course Facilitator, <i>Case Studies in Physiology</i> (PGY 207) Physiology	2015
National GEM Consortium Statewide Kentucky GRADLAB lecturer, University of Kentucky	2013-2014
Mentor for rotating Physiology graduate students, University of Kentucky	2013-2016

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Mathematics and Science Academy-Student Inquiry and Research (SIR) Student mentor, UChicago	2011
Mentor for cancer biology rotating graduate student, University of Chicago	2010
Mentor for Pritzker Summer Research Program medical student, University of Chicago	2009
Mentor for Summer Undergraduate Research Fellow, University of Chicago	2009

Memberships

American Academy of Neurology	2020-
American Physiological Society	2018-2020
Society for Neuroscience	2015-2019
National Neurotrauma Society	2014-2018
University of Kentucky Black Graduate and Professional Student Association President	2014-2017
University of Kentucky Black Graduate and Professional Student Association member	2013-2018

Editorial Review (ad hoc)

American Physiological Society
Acta Neuropathologica Communications

Community Engagement: Invited Talks and Related Articles

*Editorial pieces by early-career scientist about the impact of COVID. Littlejohn EL**. The Physiologist Magazine. American Physiological Society, Rockville, MD. July 2020 (In Press)

*The need for student-led activism: The model, tools, and a modern approach. Littlejohn EL** and Ighodaro E. Inaugural Sister Circle Forum: The Power of Your Reach. University of Kentucky Gatton Business and Economics, Lexington, KY. February 17, 2017 (Speaker)

*UK Call to Action. Littlejohn EL** and Ighodaro E. Inaugural Town Hall on Inclusion and Diversity. Singletary Center, Lexington, KY. February 29th, 2016 (Speaker)

Simon, Mashaun D. "Student Leaders Mobilize 'Day of Action' Demonstrations." **NBC News** [Universal] April 13th, 2016: (online).

Blackford, Linda. "Black students at UK tell of harassment, feeling isolated on campus." **Herald Leader** [Lexington] February 29th 2016: (online).