LaDonya Jackson
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Education

Doctor of Philosophy student, Neuroscience, University of Georgia (In Progress)
Master of Science, Biomedical Engineering, Ohio University (2013-2015)
Bachelor of Science, Biotechnology with Minor in Biology and Chemistry, Utah State University (2010-2013)

Research Experience

Regenerative Bioscience Center, University of Georgia

Athens GA, 2016- Present

- Doctoral research under faculty advisor Dr. Lohitash Karumbaiah
  - The electrophysiological evaluation of neural networks
  - The application of Functional Electrical Stimulation (FES) to repair damaged neural networks and the development of brain machine interfaces for Traumatic Brain Injuries (TBI)

Ohio University Heritage College of Medicine, Ohio University

Athens OH, 2013- 2015

- Master's research under faculty advisor Dr. Kelly McCall
  - The development of a diagnostic assay for the prediction & early detection of Type 1 Diabetes
  - The role of epigenetics in T1DM

Center for Integrated Biosystems, Utah State University

Logan UT, 2012- 2013

- Independent undergraduate research under faculty advisor Dr. Kamal Rashid
  - The growth and protein production of various cell lines utilizing a novel antibody-free serum

Cloning and Reproduction Lab, Utah State University

Logan UT, 2010- 2011

- Undergraduate research under faculty advisor Dr. Ken White
  - The cloning of bucking bulls and stallions using somatic cell nuclear transfer
  - The role of *in vitro* fertilization in embryo development

Teaching Experience

BARDA/HHS (Biomedical Advancement Research & Development Authority/ Health & Human Services) Assistant Instructor, Center for Integrated BioSystems, Utah State University *January 2012- May 2013*

- Train sixteen individuals from eight different developing countries each year in biomedical procedures in efforts to counter CBRN threats.

Biotechnology & Bioprocessing Training Program Assistant Instructor, Utah State University *January 2012- May 2013*

- Train industry professionals in mammalian cell culture, microbial fermentation and downstream processing

Mammalian Culture Course, Teaching Assistant, Utah State University *January 2012- May 2013*

- Instruct the laboratory portion teaching mammalian cell culture techniques from aseptic techniques to plasmid transfections

Publications

In process: **Jackson L**, Sendi M, Tehrani K, Mortensen L, Stice S, Ghovanloo M, Karumbaiah L. "Functional Electrical Stimulation Induces Recovery of Neural Network Activity After Glutamate Induced Excitotoxicity *In Vitro*" Journal of Neural Engineering, 2017

In process: **Jackson L**, Sendi M, Ghovanloo M, Karumbaiah L. "The Application of Functional Electrical Stimulation for Traumatic Brain Injury" Brain Stimulation, 2017

On hold for patent: **Jackson L,** Schwartz F, McCall K. "The development of an epigenetic biomarker assay for the detection of Type 1 Diabetes (T1DM)"

Presentations

"Low Frequency Direct Current Stimulation Induces Neural Network Recovery after Acute Neurotoxic Exposure to L-Glutamate" Regenerative Bioscience Center Conference 2017

"Evaluating the Therapeutic Potential of Electrical Stimulation for Traumatic Brain Injuries" Suddath Conference 2017

"The Potential of Direct Current Stimulation as a Treatment Option After a Moderate-to-severe Traumatic Brain Injury" Regenerative Rehabilitation Symposium 2016

"Evaluating the Therapeutic Potential of Direct Current Stimulation For Traumatic Brain Injuries" Regenerative Engineering and Medicine Conference 2016

"Growth & protein production of recombinant CHO, MDCK, & Vero cell lines utilizing a novel Antibody-Free Fetal Bovine Serum" International Society for Bioprocess Technology (IsoBioTech) conference 2013

"Growth & protein production of recombinant CHO, MDCK, & Vero cell lines utilizing a novel Antibody-Free Fetal Bovine Serum" National Conference on Undergraduate Research (NCUR) 2013

Graduate Coursework

Neuroanatomy, Histology (Microanatomy) I & II, Immunology, Physiology, Biomechanics, Biophysics, Current Literature in Stem Cell Research, Current Literature in Neuroscience

Laboratory/ Computer Skill Set

- Cell culture
- Immunohistochemistry, DNA/RNA/protein extraction and qRT- PCR, bisulfite conversion for methylation profile
- Electrophysiology: multiple electrode arrays, brain machine interfaces
- Somatic cell nuclear transfer
- *In vitro* fertilization
- Traumatic Brain Injury induction using a Controlled Cortical Impactor (CCI)
- Animal Work: *in vivo* experiments with mice and rats, surgeries, handling and executing behavioral/observational studies.
- Wide-field Epifluorescence Microscopy: Leica DM IRB series microscope with Hamamatsu Life Science Camera, Lumen Dynamics X-Cite controls
- Software experience in: Volocity image analysis, ImageJ analysis, SigmaPlot analysis, Photoshop CS6, MS PowerPoint and Excel

University and Community Involvement

Big Brother & Big Sisters Organization 2014- Present
Representative for First Generation Scholarship Foundation 2010-2013
Liaison for alumni-student relations in scholarship campaign that raised $512,856, 410 2010-2013
Vice President & President of Black Student Union 2009-2013
Founder of Sister-to-Sister organization 2009- Present
Juvenile Hall Youth Mentor 2009-2010
Co-chair of Black history month, Latino history month, Women history month, Indian history month & Native American history month committees 2008-2010