

EVANGELINE DEER, PH.D.

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EDUCATION

Jackson State University

Ph.D. in Environmental Science

2018

Dissertation: *Vernonia Amygdalina* Extracts Inhibit Leptin Expression and Modulate Specific Transcription Factors in Adipocytes: Evidence for *Vernonia Amygdalina* Extracts As Therapeutic Agents for the Treatment of Obesity

Mississippi College

M.S. in Biology

2009

Thesis: The Effect of the Antimitotic Drug Vinblastine on Different Cancer Cell Lines

Tougaloo College

B.S. in Biology

2008

GRANTS AND AWARDS

Trainee to Hypertension and Cardiorenal Diseases Research Training Program (T32 Grant)

since 2018

Bill Gates Millennium Scholar

since 2002

Mississippi Science and Engineering Region II (MSEF) Fair Judge

since 2012

REO Fellow

2003-2005

Tougaloo Presidential Scholar

2002

RESEARCH EXPERIENCE

Jackson, MS

University of Mississippi Medical Center (Post-doctoral Research Fellowship)

2018-present

Department of Neurobiology and Anatomical Sciences

Contribute to team investigations involving Metabolic Syndrome (MetS), a collection of disorders which includes obesity, diabetes, dyslipidemia and hypertension, with the use of animal models and clinical studies. (Techniques include: animal handling/surgery, Western blotting, immunoblotting, ELISAs, RT-PCR, tissue culturing, cytotoxicity and genotoxicity testing, and confocal and electron microscopy).

Jackson, MS

Jackson State University, Graduate Research Assistant

2012-2018

Ensured research projects align with processes, planning, and strategic vision by implementing process improvements. Performed qualitative and quantitative analysis of samples to ascertain molecular mechanism and genetics of obesity and breast cancer cells. Systematically developed analytical techniques that reduce time and achieve superior results to increase overall research methodology. Managed risks related to research procedures, and trained new graduate and undergraduate research students in laboratory techniques. (Techniques include: radioactive labeling of DNA, immunoblotting, Western blotting, ELISAs, RT-PCR, tissue culturing, cytotoxicity and genotoxicity testing, and confocal and electron microscopy).

Tougaloo, MS

Tougaloo College, Research Investigator

2008-2009

Explored and identified principle problems surrounding COPD drugs, and their increased risk of strokes, heart attacks, and other systemic effects.

Memphis, TN

Rhodes College, Research Fellow

2006

Identified and classified genes in the fungus *Aspergillus nidulans*. (Laboratory methods included: PCR, gene cloning, cell transformation, agarose gel electrophoresis, and usage of genomic databases).

Jackson, MS

University of Mississippi Medical Center, MFGN Research Fellow

2004

Conducted cancer research. (Laboratory methods included: cell culturing, protein assays, and cell viability assays).

TEACHING EXPERIENCE

Madison, MS

Holmes Community College, Instructor of Principles of Biology I

2017-2018

Designed and implemented science board-approved curriculum. Developed syllabus and overall course structure needed to educate incoming students on the principles of college biology. Assisted students and faculty members by counseling them on tasks, reports, and other coursework. Collaborated with departmental leaders and colleagues to determine the future direction of the department. Also, lectured and administered examinations, and reviewed and evaluated student progress through advising. Also, designed and demonstrated biological lab techniques in Principles of Biology Labs.

Jackson, MS

Jackson State University, Instructor of General Biology Lab

2014-2016

Developed syllabus and overall course structure needed to educate incoming freshmen on the principles of General College Biology, and administered all grades. Designed and demonstrated biological lab techniques in General College Biology Labs.

Jackson, MS

Kelly Services, Substitute Teacher

2015-2016

In the absence of the full-time teacher: provided instruction, encouraged student progress, and managed the learning environment. Implemented existing lesson plans in a manner that ensured integrity of academic time and motivated students to learn and participate.

Scientific Research (SR1), Trainer/Facilitator

2011-2012

Increased academic achievement and reduced the drop-out rate by facilitating educational hands-on activities and experiences utilizing science, technology, engineering, and math activities. Managed case files, mentored, collected data, and supported all program efforts including grant writing for future sustainment of the organization.

Tougaloo, MS

Upward Bound, Chemistry Tutor

2003-2005

Tutored chemistry to high school students and performed duties as the teacher's assistant.

TRAININGS AND WORKSHOPS

Suture Skills Lab

University of Mississippi Medical Center, Jackson, MS

2018

Hazard Use in the CCR

University of Mississippi Medical Center, Jackson, MS

2018

Laser Capture Microdissection Instrument

Jackson State University, Jackson, MS

2015

Beyond Graduation-What's Next

Panel Discussion at Jackson State University, Jackson, MS

2015

Meeting with the Dean

Guest for Panel Discussion at Jackson State University, Jackson, MS

2015

How to Get Your Research Published

Jackson State University, Jackson, MS

2014

Guidelines for Writing Dissertation and Thesis Research Proposals

Jackson State University, Jackson, MS

2013

The Master Home Environmentalist/Healthy Homes Program

American Lung Association, Jackson State University, Jackson, MS

2013

National Library of Medicine Specialized Training Course
Jackson State University, Jackson, MS

2012

PROFESSIONAL ASSOCIATIONS

Group on Women in Medicine and Science (GWIMS)
American Association for the Advancement of Science (AAAS)
Association of Southeastern Biologists
Beta Kappa Chi Scientific Honor Society
Alpha Epsilon Lambda National Honor Society
National Collegiate Honor Society
Alpha Lambda Delta Honor Society

PRESENTATIONS

Deer, E. (2018, September) Mechanisms of altered androgen processing following surgical weight loss. (Invited). Oral presentation in the Cardiovascular-Renal Research Center at the University of Mississippi Medical Center in Jackson, MS. 09/2018

Deer, E. (2017, September) Inhibition of Leptin Secretion by *Vernonia amygdalina* Extract. Poster presentation and publication in the 14th International Symposium on Recent Advancements in Environmental Health Research and Metal Ions in Biology and Medicine in Jackson, MS. Published in Conference Book. 09/2017

Deer, E. (2016, September) Inhibition of Leptin Secretion in Adipocytes by *Vernonia amygdalina* Extract. Poster presentation and publication in the 13th International Symposium on Recent Advancements in Environmental Health Research and Metal Ions in Biology and Medicine in Jackson, MS. Published in Conference Book. 09/2016

Deer, E. (2015, September) Inhibition of Adipocyte Proliferation by *Vernonia amygdalina* Extract. Poster presentation and publication in the 12th International Symposium on Recent Advancements in Environmental Health Research and Metal Ions in Biology and Medicine in Jackson, MS. Published in Conference Book. 09/2015

Deer, E. (2015, March) Inhibition of Adipocyte Proliferation by *Vernonia amygdalina* Extract. Poster presentation and publication in the Beta Kappa Chi Scientific Honor Society and National Institute of Science 72nd Joint Annual Meeting in Jackson, MS. Published in Conference Book. 03/2015

Deer, E. (2015, February) Inhibition of Leptin Secretion in Adipocytes by *Vernonia amygdalina* Extract. Oral presentation and publication in the 2015 CSET/LSMAP Research Symposium in Jackson, MS. Published in Conference Book. 02/2015

Deer, E. (2014, September) Inhibition of Adipocyte Proliferation by *Vernonia amygdalina* Extract. Poster presentation and publication in the 11th International Symposium on Recent Advancements in Environmental Health Research and Metal Ions in Biology and Medicine in Jackson, MS. Published in Conference Book. 09/2014

Deer, E. (2014, February) Inhibition of Adipocyte Proliferation by *Vernonia amygdalina* Extract. Poster presentation and publication in the 2014 CSET/LSMAP Research Symposium in Jackson, MS. Published in Conference Book. 02/2014

PUBLICATIONS AND PAPERS

Current Submission: Deer, E., Howard, C. B., & Tchounwou, P. (2018). Current Review of Health Perspectives, Genetics, and Recent Developments in Obesity. Therapeutics and Clinical Risk Management.

Current Submission: Deer, E., Howard, C. B., & Tchounwou, P. (2018). *Vernonia Amygdalina* Extracts Inhibit Leptin Expression and Modulate Specific Transcription Factors in Adipocytes. Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy.

Howard, C. B., Mcdowell, R., Feleke, K., Deer, E., Stamps, S., Thames, E., ... & Pervin, S. (2016). Chemotherapeutic Vulnerability of Triple-negative Breast Cancer Cell-derived Tumors to Pretreatment with *Vernonia amygdalina* Aqueous Extracts. *Anticancer Research*, 36(8), 3933-3943.

REFERENCES

Dr. Bernadette Grayson, Ph.D.

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