

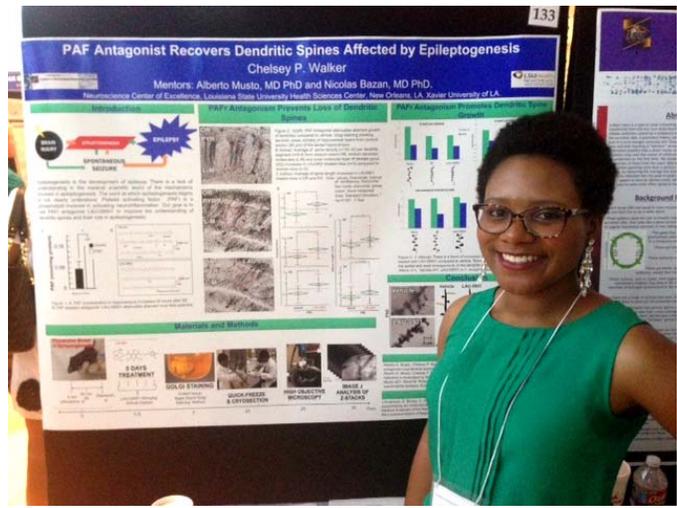
## Chelsey P. Walker

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## PROFESSIONAL EXPERIENCE

### **Undergraduate Research, June 2011-August 2014**

Neuroscience Center of Excellence

Louisiana State University Health Sciences Center

New Orleans, LA

1. Researched epileptogenesis, the development of epilepsy, using male C57BL/6 mice
2. Induced epileptogenesis in mice using the pilocarpine model
3. Injected mice intraperitoneally using standardized protocols of animal care and usage
4. Calculated dosages and prepared compounds for testing including Neuroprotectin D1, minocycline, pilocarpine, scopolamine, diazepam, pentylentetrazol, and various the platelet activating factor receptor antagonist compounds
5. Tested the effects of PAFr antagonism on seizure susceptibility and growth of dendritic spines
6. Measured intensity of spontaneous seizures using the Racine scale
7. Aided in the development of a behavioral score to standardize the observations of mice that show epileptogenic symptoms
8. Performed mouse perfusion under minor supervision of expert
9. Dissected mouse brain tissue and placed in fixative or Rapid Golgi solution
10. Used Rapid Golgi Stain histological procedure to stain dendrites of mouse hippocampus and coverslip slides
11. Performed quick-freezing procedure using isopentane in liquid nitrogen to freeze brains
12. Sectioned brains onto slides using cryostat
13. Imaged mouse hippocampal cells in Z-stacks using Zeiss Deconvolution Microscope at 100x objective magnification
14. Analyzed dendritic spine length, density, area, and interval using ImageJ
15. Aided in the implantation of silicon probes into mouse hippocampus and conducted live recordings of local field potential
16. Separate d frequency thresholds and analyzed the power spectral density of local field potential using NeuroExplorer.
17. Conducted cognitive behavioral testing of animals with epilepsy and genetic strains of Alzheimers disease
18. Stained brain tissue of mice with transgenic strains of Alzheimer's disease with thioflavin
19. Quantified number of amyloid plaques using Axioplan software

20. Performed xenograph of glioblastoma cells into the striatum of the brains of nude mice
21. Collected and homogenized organs of nude mice in preparation for high performance liquid chromatography (HPLC)
22. Maintained records of all experiments and protocols in lab notebook
23. Organized data into databases using Excel
24. Mentored summer students and instructed them in several neuroscience research techniques

## **PUBLICATIONS**

Musto, A.E., T.M., Quebedaux, C.P. Walker and N.G. Bazan. Hippocampal hyperexcitability and neuronal network dysfunction in epileptogenesis. 2014 (to be submitted).

Musto, A.E., O. Prakash, C.P. Walker. Hippocampal peritumoral epileptiform activity in vivo model of glioblastoma multiforme. 2014 (Submitted).

Musto, A.E., C.P. Walker, C. Raulji, N.G. Bazan. PAF antagonism counteracts epileptic hippocampal neuronal network impairments. 2014 (to be submitted).

Musto, A.E., C.P., Walker, and N.G., Bazan. Epileptogenic hippocampal neuronal networks is attenuated by Neuroprotectin D1. 2014 (to be submitted).

## **ABSTRACTS**

Therapeutic efficacy of a novel anthracycline derivative aldorubicin in an orthotopic xenograft model of human glioblastoma. O. Prakash, A. E. Musto, D. Wyczechowska, L. Marrero, A. Zapata, C. P. Walker, C. Parsons, S. Wieland, D. Levitt, K. Reiss. LCRC meeting, New Orleans 2014.

Musto, A.E., C. P. Walker and N.G. Bazan. Platelet activating factor antagonism attenuates epileptogenesis. 5th International Conference on Phospholipase A2 Mediated Signaling in Translational Medicine, New Orleans, LA 2013.

Musto, A.E., C.P. Walker, N.G. Bazan. Neuroprotectin D1 Attenuates aberrant neuronal networks in epileptogenesis. 5th International Conference on Phospholipase A2 Mediated Signaling in Translational Medicine, New Orleans, LA 2013.

Musto, A.E., T.M. Quebedaux; D. Khoobehi, C. P. Walker, and N.G. Bazan. Neuroprotectin D1 attenuates epileptogenesis. Society for Neuroscience, New Orleans, LA 2012. Peer-reviewer abstract.

Musto, A.E., F.Tsien, C.P.Walker, and H. Farris. Neuroscience translational research program for underrepresented minority students in Louisiana. Society for Neuroscience, New Orleans, LA 2012. Peer-reviewer abstract.

Musto, A.E. K. D. Khoobei, C. P. Walker, and N.G.Bazan. Neuroprotectin D1 attenuates epileptogenesis. American Academy of Neurology, New Orleans, LA 2012. Peer-reviewer abstract. The abstract was selected as one of the 5% top of the program and presented in the “Scientific Program Highlights Plenary Section”, April 2012.

## **PRESENTATIONS**

Xavier University Research Symposium, August 2012

Xavier University of Louisiana

Summer in Undergraduate Neuroscience Research Presentations, July 2011-2014  
Neuroscience Center of Excellence, LSU Health Sciences Center

Research Experience for Undergraduates, March 2014  
Southern University of New Orleans (SUNO)

## **AWARDS AND HONORS**

Summer Research Internship in Genetics, June 2011 and June 2012

Student Undergraduate Research Experience (SURE) Grant, June 2013  
Louisiana Board of Regents

Louisiana Biomedical Research Network Program (LBRN), June 2014

## **SKILLS**

Image J, Neuroexplorer, Zeiss Deconvolution Microscope, Slidebook

Rapid GolgiStain Protocol, Quick freezing protocol, Perfusions, Xenograph of cells  
Microsoft Office Word, Powerpoint, Excel, Outlook, and Publisher

## **EDUCATION**

**Haynes Academy for Advanced Studies**, August 2007 – May 2011  
High School, Metairie, Louisiana

**Xavier University of Louisiana**, August 2011-Present  
New Orleans, Louisiana  
Bachelor's of Science in Biology, Minor in Chemistry

## **REFERENCES**

Alberto Musto, MD, PhD  
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Neuroscience Center of Excellence  
LSU Health Sciences Center  
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Om Prakash, PhD  
Research Mentor  
Stanley C. Scott Cancer Center  
LSU Health Sciences Center  
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