

Laura Segura Moye

Qualifications Summary

Detail-oriented, well-organized, and collaborative scientist specializing in opioids and chronic pain. Solid adeptness in designing experiments, conducting scientific studies, analyzing data and interpreting results.

Areas of Expertise

Researching current literature on public health issues and proposing novel solutions.

Analyzing collected data, interpreting results, and putting conclusions in context with what is currently known on public health issue of interest.

Designing scientific experiments to effectively determine variables regulating public health issues of interest.

Compiling research findings into written manuscripts for publication, poster presentations, and oral presentations.

Implementing and successfully executing scientific projects by delivering quantitative and qualitative results.

Professional Scientific Experience

Graduate Research Specialist | *University of Illinois at Chicago* June 2014-January 2019

- Designed, implemented, and executed the development, behavioral characterization, and pharmacological validation of a novel preclinical mouse model of migraine induced by mild traumatic brain injury.
 - Analyzed and interpreted results using statistical methods, compiled research findings and prepared 4 oral presentations, 5 poster presentations, 1 published review, and 1 peer-reviewed scientific journal article.
 - Used interpersonal skills to mentor 3 undergraduate students, 1 medical student, and 1 research technician on behavioral and immunohistological techniques.
 - Collaborated with departmental labs to learn gene expression techniques.
- Characterized the effect of delta opioid receptor activation on peripheral and cephalic pain in multiple animal models of headache.
 - Executed behavioral experiments, analyzed and interpreted results using statistical methods, compiled findings and prepared 1 oral presentation, 1 poster presentation, 1 published review, and 1 manuscript for publication.
 - Developed in-depth protocols on pain testing to teach current lab members how to assess pain, which led to 1 scientific publication.
- Extensively characterized the effect of migraine-associated pain on the expression of the delta opioid receptor and migraine-associated proteins using immunohistochemistry, RT-qPCR, and RNAscope *in situ* hybridization.
 - Established strong rapport with new lab members by teaching *ex vivo* methods to 1 rotation student, 1 research technician, and 1 postdoctoral fellow.
 - Collaborated with 2 labs (Stanford University, Washington State University) to learn craniotomy surgeries and confocal microscopy.

- Proactively sought grant opportunities to better supplement thesis research, which led to independent funding from:
 - Diversity Research Supplement, (up to \$43, 931/year) to fund student stipend.
 - Provost Deiss research award (\$1,252) to fund travel and lodging to learn craniotomy surgery at Washington State University.
 - Promoting Success in STEM Graduate Education scholarship, to fund lodging and summer stipend to start graduate school early.

Biotechnology Research Analyst Intern | *Aspire Capital, LLC*

Aug 2017-Apr 2018

- One of 3 scientists selected to research top drug candidates from 5 microcap pharmaceutical companies, evaluate companies' stock market performances, and consult on overall investment potential.
 - Collected publicly available information on microcap companies, evaluated drug candidates within each company and across the biotechnology space, and determined the highlights and shortcomings of each drug candidate. Provided 5 slide decks of in-depth information on each microcap company, which was used by the team at Aspire Capital to determine future investments.

BP-ENDURE Research Fellow | *National Institute of Health*

May 2012-May 2014

- Selected as one of 40 participants nationwide for a funded 2-year research fellowship for high-achieving diverse talent based on leadership, academic success, and scientific potential.
 - Collaborated with graduate students to conduct scientific experiments related to neuroscience and prepared research findings for presentations at 2 conferences.

Education

Doctor of Philosophy in Neuroscience

June 2014-May 2019

University of Illinois at Chicago

Relevant Coursework	Description
Drug Discovery	Surveyed epidemiology of public health issues and explored multiple ways of discovering novel pharmacotherapies.
Statistics	Studied statistical methods commonly used in biomedical sciences.
SAS Workshops	Reviewed basic SAS coding for exploring large datasets.
Biostatistics	Analyzed public health databases using statistical methods in SAS.
Bioinformatics Workshop	Introduction to Linux and R computing systems, analyzing next generation sequencing data, specifically RNA-seq and metagenomics.

Bachelor of Science in Neuroscience and Spanish

Aug 2011-May 2014

Agnes Scott College

Peer-Reviewed Scientific Publications

1. **Moye, L. S.**, Novack, M. L., Tipton, A. F., Krishnan, H., Pandey, S. C., & Pradhan, A. A. (2018). The development of a mouse model of mTBI-induced post-traumatic migraine, and identification of the delta opioid receptor as a novel therapeutic target. *Cephalalgia*, 333102418777507. doi:10.1177/0333102418777507
2. Ben Aissa, M., Tipton, A. F., Bertels, Z., Gandhi, R., **Moye, L. S.**, Novack, M., . . . Pradhan, A. A. (2017). Soluble guanylyl cyclase is a critical regulator of migraine-associated pain. *Cephalalgia*, 333102417737778. doi:10.1177/0333102417737778
3. **Moye, L. S.**, & Pradhan, A. A. A. (2017). Animal Model of Chronic Migraine-Associated Pain. *Curr Protoc Neurosci*, 80, 9.60.61-69.60.69. doi:10.1002/cpns.33
4. **Moye, L. S.**, & Pradhan, A. A. (2017). From blast to bench: A translational mini-review of posttraumatic headache. *J Neurosci Res*, 95(6), 1347-1354. doi:10.1002/jnr.24001
5. Vicente-Sanchez, A., **Segura, L.**, & Pradhan, A. A. (2016). The delta opioid receptor tool box. *Neuroscience*, 338, 145-159. doi:10.1016/j.neuroscience.2016.06.028
6. Pradhan, A. A., Perroy, J., Walwyn, W. M., Smith, M. L., Vicente-Sanchez, A., **Segura, L.**, . . . Evans, C. J. (2016). Agonist-Specific Recruitment of Arrestin Isoforms Differentially Modify Delta Opioid Receptor Function. *J Neurosci*, 36(12), 3541-3551. doi:10.1523/jneurosci.4124-15.2016
7. Bartolotti, N., **Segura, L.**, & Lazarov, O. (2016). Diminished CRE-Induced Plasticity is Linked to Memory Deficits in Familial Alzheimer's Disease Mice. *J Alzheimers Dis*, 50(2), 477-489. doi:10.3233/jad-150650

Selected Presentations

Oral Presentations

Delta opioid receptor activation regulates headache-associated pain.

Neuroscience Institute Seminar, University of Illinois at Chicago. June 2018.

Identifying the role of peripheral delta opioid receptors in chronic migraine*.

International Narcotics Research Conference, Chicago, IL. July 2017.

*Invited to speak.

Characterization of a novel mouse model of post-traumatic headache*.

Headache Trainees Excellence Tournament. European Headache and Migraine Trust International Congress in Glasgow, UK. September 2016.

*One of 3 basic scientists invited to speak.

Poster Presentations

Delta opioid receptor activation inhibits cephalic allodynia in multiple models of headache.

Society for Neuroscience, San Diego, CA. November 2018.

The delta opioid receptor as an emerging therapy for mTBI-induced headaches.

Chicago Chapter of Society for Neuroscience. Chicago, IL. March 2017.

Delta opioid receptor as a target for migraine: CGRP co-expression and inhibition of medication overuse headache.

G-protein Coupled Receptor Retreat, Chicago, IL. October 2016.

Stimulation of soluble guanylate cyclase triggers migraine-associated pain*.

National Enhancement of Underrepresented Academic Leaders Conference. University of Alabama-Birmingham. June 2015.

*Invited to speak.

Characterization of a novel model of post-traumatic headache.

Chicago Chapter of Society for Neuroscience. Chicago, IL. April 2016.

Functional activity of the delta opioid receptor in β -arrestin 1 KO mice.

PASSAGE Scholars Program Symposium. University of Illinois at Chicago. 2014.

Stimulation of soluble guanylate cycle triggers migraine-associated pain.

Society for Neuroscience. Chicago, IL. October 2015.

Selected Awards and Accomplishments

- Pat Tillman Foundation Scholar 2017-2019
- Diversity Research Supplement 2017-2019
- Provost Deiss Research Award 2017-2018
- International Headache Academy 2017
- Headache Trainees Tournament Nominee 2016
- National Enhancement of Underrepresented Academic Leaders Conference 2015
- Promoting Success in STEM Graduate Education (PASSAGE) Scholar 2014
- Annual Biomedical Research Conference for Minority Students 2013
- Dana Leadership Scholar 2013
- Bridge to Business Scholar 2013

Leadership and Public Service

Marketing and Grants Consultant | Project Fierce Chicago June 2017-Present

- Collectively fundraised over \$160,000 in FY2017 (124% increase from FY2016) to open transitional housing for Chicago-based LGBTQ+ homeless youth.
- Actively participated on the stewardship committee, where I assisted with grant writing; and on the marketing committee, where I managed social media accounts for ongoing fundraising events.

Professional Affiliations

- Student Member, Society for Neuroscience
- Lifelong Member, Nu Rho Psi Neuroscience Honors Society