Aaron D. Mickle, Ph.D.

Department of Physiologic Sciences
College of Veterinary Medicine
University of Florida
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Gainesville, FL, 32610

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EDUCATION

University of Iowa – Iowa City, Iowa — 8/2010 – 12/2014
Ph.D., Pharmacology with a focus on Neuroscience.

University of Wisconsin La Crosse – La Crosse, WI — 9/2003 - 5/2007
B.S., Biology with a minor in Chemistry

POSITIONS AND APPOINTMENTS

Department of Physiological Sciences, University of Florida — 8/2019 – Present
Assistant Professor

Department of Biomedical Engineering, University of Florida — 11/2019 – Present
Affiliate Faculty

Department of Neuroscience, University of Florida — 10/2020 - Present
Affiliate Faculty

Department of Anesthesiology Washington University in Saint Louis — 1/2015 – 7/2019
Post-Doctoral Research Associate
Laboratory of Robert Gereau, Ph.D.

Department of Pharmacology, University of Iowa — 8/2010 – 12/2014
Graduate Research Associate
Laboratory of Durga P. Mohapatra, Ph.D.

Department of Pediatric Gastroenterology, Medical College Wisconsin — 8/2007 – 8/2010
Research Technologist
Laboratory of Adrian Miranda, M.D and Joyti Sengupta, Ph.D.

PUBLICATIONS

In reverse chronological order

1. Patel T, Hendren J, Lee N, **Mickle AD**. Open source timed pressure control hardware and software for delivery of air mediated distensions in animal models. *Hardware X*. 2022, April 1. doi 10.1016/j.ohx.2022.e00271

2. Srivastava P, Lai HH, **Mickle AD**. Characterization of a method to study urodynamics and bladder nociception in male and female mice. *Low Urin Tract Symptoms*. 2020 Nov 17. doi: 10.1111/luts.12365. PMID: 33202486.

3. Zhang Y*, **Mickle AD*,** Gutruf P*, McIlvried LA*, Guo H, Wu Y, Golden JP, Xue Y, Grajales-Reyes JG, Wang X, Krishnan S, Xie Y, Peng D, Su C, Zhang F, Reeder JT, Vogt SK, Huang Y, Rogers JA, Gereau RW. Soft, fully implantable optofluidic cuff systems for wireless optogenetic and pharmacological neuromodulation of peripheral nerves. *Scientific Advances.* 2019. Vol. 5, no. 7, eaaw5296. DOI: 10.1126/sciadv.aaw5296 *Equal contribution.

4. **Mickle AD*,** SM Won*, KN Noh*, J Yoon*, KW Meacham, Y Xue, LA McIlvried, BA Copits, VK Samineni, KE Crawford, DH Kim, P Srivastava, BH Kim, S Min, Y Shiuan, Y Yun, MA Payne, K Zhang, H Jang, Y Li, HH Lai, Y Huang, S Park, RW Gereau IV, and JA Rogers. A Wireless Closed-Loop Optogenetics-Based System for Peripheral Neuromodulation. *Nature.* 2019. 565(7739): 361-365. * indicates equal contribution.

5. **Mickle AD** and Gereau RW. The future is bright: Optogenetics in the periphery for pain research and therapy. *Pain*. 2018 Sep;159 Suppl 1:S65-S73. doi: 10.1097/j.pain.0000000000001329. PubMed PMID: 30113949

6. Shepherd AJ, **Mickle AD*,** Golden JP*, Mack MR, Halabi CM, de Kloet AD, Samineni VK, Kim BS, Krause EG, Gereau RW, Mohapatra DP. Macrophage Angiotensin II type-2 Receptor Triggers Neuropathic Pain. *Proceedings of National Academy of Sciences*. 2018 Aug 21;115(34):E8057-E8066. doi: 10.1073/pnas.1721815115. Pubmed PMID 30082378. * - indicates equal contribution

7. Won SM*, Koo J*, Crawford KE*, **Mickle AD**, Xue Y, Min S, McIlvried LA, Yan Y, Kim SB, Lee SM, MacEwan MR, Huang Y, Gereau RW, Rogers JA. Natural Wax for Transient Electronics. *Advanced Functional Materials*. 2018. doi: 10.1002/adfm.201801819. * - indicates equal contribution

8. Shepherd AJ, Copits BA*, **Mickle AD***, Karlsson P*, Kadunganattil S*, Haroutounian S, Tadinada SM, de Kloet AD, Valtcheva MV, McIlvried LA, Sheahan TD, Jain S, Ray PR, Usachev YM, Dussor G, Krause EG, Price TJ, Gereau RW, Mohapatra DP. Angiotensin II triggers painful macrophage-to-sensory neuron redox crosstalk. *Journal of Neuroscience*. 2018 Aug 8;38(32):7032-7057. doi: 10.1523/JNEUROSCI.3542-17.2018. PubMed PMID: 29976627 * - indicates equal contribution

9. Shepherd AJ, **Mickle AD**, McIlvried LA, Gereau RW, Mohapatra DP. Parathyroid Hormone-related Peptide Activates and Modulates TRPV1 Channel in Human DRG Neurons. *European Journal of Pain*. 2018 doi: 10.1002/ejp.1251. PubMed PMID:29797679.

10. Shepherd AJ*, **Mickle AD***, Kadunganattil S*, Hu H, Mohapatra DP. Parathyroid Hormone-related Peptide Elicits Peripheral TRPV1-dependent Mechanical Hypersensitivity. *Frontiers in Cellular Neuroscience*. 2018. Frontiers in Cellular Neuroscience. doi: 10.3389/fncel.2018.00038. PubMed PMID:29497363 * - indicates equal contribution.

11. Noh KN, Park SI, Qazi R, Zou Z, **Mickle AD**, Grajales-Reyes JG, Jang KI, Gereau RW, Xiao J, Rogers JA, Jeong JW. Miniaturized, Battery-Free Optofluidic Systems with Potential for Wireless Pharmacology and Optogenetics. *Small*. 2018. doi: 10.1002/smll.201702479. PubMed PMID: 29215787.

12. Samineni VK*, **Mickle AD***, Yoon J, Grajales-Reyes JG, Pullen MY, Crawford KE, Noh KN, Gereau GB, Vogt SK, Lai HH, Rogers JA, Gereau RW. Optogenetic silencing of nociceptive primary afferents reduces evoked and ongoing bladder pain. *Scientific Reports*. 2017;7(1):15865. doi: 10.1038/s41598-017-16129-3. PubMed PMID: 29158567; * - indicates equal contribution

13. Samineni VK, Yoon J, Crawford KE, Jeong YR, McKenzie KC, Shin G, Xie Z, Sundaram SS, Li Y, Yang MY, Kim J, Wu D, Xue Y, Feng X, Huang Y, **Mickle AD**, Banks A, Ha JS, Golden JP, Rogers JA, Gereau RWt. Fully implantable, battery-free wireless optoelectronic devices for spinal optogenetics. *Pain*. 2017. doi: 10.1097/j.pain.0000000000000968. PubMed PMID: 28700536.

14. Shin G, Gomez AM, Al-Hasani R, Jeong YR, Kim J, Xie Z, Banks A, Lee SM, Han SY, Yoo CJ, Lee JL, Lee SH, Kurniawan J, Tureb J, Guo Z, Yoon J, Park SI, Bang SY, Nam Y, Walicki MC, Samineni VK, **Mickle AD**, Lee K, Heo SY, McCall JG, Pan T, Wang L, Feng X, Kim TI, Kim JK, Li Y, Huang Y, Gereau RWt, Ha JS, Bruchas MR, Rogers JA. Flexible Near-Field Wireless Optoelectronics as Subdermal Implants for Broad Applications in Optogenetics. *Neuron*. 2017;93(3):509-21 e3. doi: 10.1016/j.neuron.2016.12.031. PubMed PMID: 28132830.

15. **Mickle AD**, Shepherd AJ, Mohapatra DP. Nociceptive Trp Channels: Sensory Detectors and Transducers in Multiple Pain Pathologies. *Pharmaceuticals.* 2016;9(4). doi: 10.3390/ph9040072. PubMed PMID: 27854251.

16. Park SI, Shin G, McCall JG, Al-Hasani R, Norris A, Xia L, Brenner DS, Noh KN, Bang SY, Bhatti DL, Jang KI, Kang SK, **Mickle AD**, Dussor G, Price TJ, Gereau RWt, Bruchas MR, Rogers JA. Stretchable Multichannel Antennas in Soft Wireless Optoelectronic Implants for Optogenetics. *Proceedings of the National Academy of Sciences of the United States of America.* 2016. doi: 10.1073/pnas.1611769113. PubMed PMID: 27911798.

17. **Mickle AD***, Shepherd AJ*, and Mohapatra DP. Sensory TRP Channels: The Key Transducers of Nociception. Molecular and Cell Biology of Pain. *Progress in Molecular Biology and Translational Science*. Elsevier Science. 2015;131:73-118. PubMed PMID: 25744671 doi: 10.1016/bs.pmbts.2015.01.002. *Equal contribution.

18. **Mickle AD**, Shepherd AJ, Loo L, Mohapatra DP. Induction of Thermal and Mechanical Hypersensitivity by Parathyroid Hormone-Related Peptide through Upregulation of Trpv1 Function and Trafficking. *Pain.* 2015;156(9):1620-36. doi: 10.1097/j.pain.0000000000000224. PubMed PMID: 25970319

19. Borges GR, Morgan DA, Ketsawatsomkron P, **Mickle AD**, Thompson AP, Cassell MD, Mohapatra DP, Rahmouni K, Sigmund CD. Interference with Peroxisome Proliferator-Activated Receptor-Gamma in Vascular Smooth Muscle Causes Baroreflex Impairment and Autonomic Dysfunction. *Hypertension.* 2014;64(3):590-6. doi: 10.1161/HYPERTENSIONAHA.114.03553. PubMed PMID: 24914194.

20. Miranda A, **Mickle AD**, Bruckert M, Kannampalli P, Banerjee B, Sengupta JN. NMDA Receptor Mediates Chronic Visceral Pain Induced by Neonatal Noxious Somatic Stimulation. *European Journal of Pharmacology.* 2014;744:28-35. doi: 10.1016/j.ejphar.2014.09.034. PubMed PMID: 25281204.

21. Sengupta JN, **Mickle AD**, Kannampalli P, Spruell R, McRorie J, Shaker R, Miranda A. Visceral Analgesic Effect of 5-HT(4) Receptor Agonist in Rats Involves the Rostroventral Medulla (Rvm). *Neuropharmacology.* 2014;79:345-58. doi: 10.1016/j.neuropharm.2013.12.006. PubMed PMID: 24334068.

22. Loo L, Shepherd AJ, **Mickle AD**, Lorca RA, Shutov LP, Usachev YM, Mohapatra DP. The C-Type Natriuretic Peptide Induces Thermal Hyperalgesia through a Noncanonical Gbetagamma-Dependent Modulation of Trpv1 Channel. *Journal of Neuroscience.* 2012;32(35):11942-55. doi: 10.1523/JNEUROSCI.1330-12.2012. PubMed PMID: 22933780.

23. **Mickle AD**, Kannampalli P, Bruckert M, Miranda A, Banerjee B, Sengupta JN. Pronociceptive Effect of 5-Ht(1a) Receptor Agonist on Visceral Pain Involves Spinal N-Methyl-D-Aspartate (Nmda) Receptor. *Neuroscience.* 2012;219:243-54. doi: 10.1016/j.neuroscience.2012.05.030. PubMed PMID: 22626644.

24. Shepherd AJ, Loo L, Gupte RP, **Mickle AD**, Mohapatra DP. Distinct Modifications in Kv2.1 Channel Via Chemokine Receptor Cxcr4 Regulate Neuronal Survival-Death Dynamics. *Journal of Neuroscience.* 2012;32(49):17725-39. doi: 10.1523/JNEUROSCI.3029-12.2012. PubMed PMID: 23223293.

25. Miranda A, **Mickle AD**, Schmidt J, Zhang Z, Shaker R, Banerjee B, Sengupta JN. Neonatal Cystitis-Induced Colonic Hypersensitivity in Adult Rats: A Model of Viscero-Visceral Convergence. *Neurogastroenterology and Motility.* 2011;23(7):683-e281. doi: 10.1111/j.1365-2982.2011.01724.x. PubMed PMID: 21592255.

26. **Mickle AD**, Sood M, Zhang Z, Shahmohammadi G, Sengupta JN, Miranda A. Antinociceptive Effects of Melatonin in a Rat Model of Post-Inflammatory Visceral Hyperalgesia: A Centrally Mediated Process. *Pain.* 2010;149(3):555-64. doi: 10.1016/j.pain.2010.03.030. PubMed PMID: 20413219.

27. Miranda A, **Mickle AD**, Medda B, Zhang Z, Phillips RJ, Tipnis N, Powley TL, Shaker R, Sengupta JN. Altered Mechanosensitive Properties of Vagal Afferent Fibers Innervating the Stomach Following Gastric Surgery in Rats. *Neuroscience.* 2009;162(4):1299-306. doi: 10.1016/j.neuroscience.2009.05.042. PubMed PMID: 19477237.

ORAL PRESENTATION AT CONFERENCES/SYMPOSIA/MEETINGS

1. Urothelial Cells and Bladder Sensory Signaling. Pain Research Fourms: 2021 Rita Allen Foundation Award in Pain Scholars Webinars. 5/24/2022

2. Moving towards closed-loop control of bladder function. The international Online Spinal Cord Injury Research Seminar Series. 3/29/2022

3. Advancing neuromodulation and functional mapping of peripheral circuits using optogenetic approaches. 2021 North Central Florida Society for Neuroscience 11th Annual Chapter Meeting. 02/19/2021

4. Advancing closed-loop control of bladder function with optogenetic approaches. American Urological Association. Virtual. 05/2020.

5. A Wireless Closed-Loop System for Optogenetic Neuromodulation of Urinary Function. Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction (SUFU). Scottsdale, AZ. 02/2020

6. Optogenetic modulation of bladder function. American Urological Association Annual Meeting 2017. Boston MA. 5/2017

7. Nociceptor sensitization by PTHrP: a mechanism for pain associated with breast cancer bone metastasis. 33rd Annual American Pain Society Meeting. Tampa FL. 4/2014.

ABSTRACTS OF POSTER PRESENTATIONS IN CONFERENCES/SYMPOSIA/MEETINGS

Presented more than 40 abstracts in the past 12 years at local and national meetings.

Recent Abstracts:

1. Robilotto G, Yang O, Patel T, Johnson R, **Mickle AD**. Urothelial cell modulation of sensory nerve activity USASP May 2022. USASP. Cinniciati Ohio. May 18th 2022.

2. Robilotto G, De Kloet A, Krause E, and **Mickle AD**. Interstitial Cystitis and Angiotensin Signaling: Evaluation of AT1R Expression in the Murine Bladder. UF CICMD Early Career Showcase and Member Mixer Poster Presentation. May 5th 2022.

3. Yang O, Robilotto G, Patel T, Devulapally K, Ahmed Z, Johnson, R, **Mickle, AD**. A new tool to study the effects of urothelial signaling on bladder sensory neurons.Duke KURe Multidisciplinary Benign Urology Research Symposium 2022 on April 28 and 29, 1-5pm

4. Robilotto G, Yang O, Patel T, **Mickle AD**. Urothelial cell to sensory neuron signaling in bladder pain. 2022 North Central Florida Society for Neuroscience 12th Annual Chapter Meeting. Gainesville Fl. January 28 2022

5. Yang O, Robilotto G, **Mickle AD**. Evaluating the use of systemic AAV-PHP.S to transduce peripheral neurons in a rat model. 2022 North Central Florida Society for Neuroscience 12th Annual Chapter Meeting. Gainesville Fl. January 28 2022

6. Yang O, Robilotto G, **Mickle AD**. Evaluating the use of systemic AAV-PHP.S to transduce peripheral neurons in a rat model. Society for Neuroscience. Chicago Il. November 2021.

7. Yang O, Robilotto G, **Mickle AD**. Developing a co-culture system to study communication between urothelial and neuronal cells. 2021 Spring Virtual Undergraduate Research Symposium. March 2021

8. Patel T, Hendren J, Lee H, **Mickle AD**. Open source timed pressure control hardware and software for delivery of air mediated distensions in animal models. 2021 Spring Virtual Undergraduate Research Symposium. March 2021

9. **Mickle AD,** Ming SM, Noh KN, Yoon J, Meacham KM, Lai HH, Rogers JA, and Gereau, RW. Wireless Monitoring and Optogenetic Modulation of Bladder Function. Annual Meeting for the American Pain Society, Anaheim, CA. March 2018.

10. **Mickle AD,** Srivastava P**,** Samineni VK, and Gereau, RW. Optogenetic modulation of Bladder Function. Annual Meeting for the Society of Neuroscience. Washington D.C. November 2017.

RESEARCH SUPPORT

Current:

Rita Allen Foundation - Pain Scholar **Mickle (PI)** **01/2022 – 12/2024**

Urothelial Cell to Sensory Neuron Signaling in Bladder Pain

We will evaluate mechanisms of communication between urothelial cells and sensory neurons and how this signaling may be altered under inflammatory conditions. The results from this proposal will aid in furthering our understanding of urothelial sensory neuron signaling in aspects of pain associated with cystitis. This improved understanding will hopefully lead to better therapeutic targets for bladder pain associated with interstitial cystitis/bladder pain syndrome. $150,000 direct.

R21 EB031249 **Mickle (PI)** **04/2021-12/2023**

An optogenetic-based control paradigm for neuromodulation of bladder function following spinal cord injury

An estimated 250,000 Americans live with spinal cord injury, and bladder dysfunction accompanies more than 80% of these injuries. This project aims to develop a neuromodulation paradigm using optogenetic techniques to coordinate and restore bladder voiding in an animal model of spinal cord injury. The project's long-term goal is to develop targeted closed-loop therapies for the treatment of patient's bladder disorders related to spinal cord injury.

Completed:

CVM 2019-20 Spring Research Grant Competition – Seed Grant **Mickle (PI)** **06/2020 -05/2021**

Urothelial Cell to Sensory Neuron Signaling in Bladder Pain

Urothelial cells are proposed to play a critical role in aspects of the interstitial cystitis/bladder pain syndrome (IC/BPS), including directly signaling to nociceptive neurons. In attempt to unravel the direct role of urothelial cell signaling in bladder nociception, we plan to use an optogenetic approach to stimulate specific cells in awake behaving animals to determine their role in nociceptive processes. Completion of this proposal will allow for the validation of these novel techniques as well as produce preliminary data necessary to field competitive multi-year extramural grant applications.

F32 DK115122 **Mickle (PI)** **07/2017-06/2019**

Closed Loop Wireless Monitoring and Optogenetic Modulation of Bladder Function

The aim of this grant is to study of the role of bladder afferents in interstitial cystitis and further develop technology that can be used to study and treat the disease. The long-term goal of the project is to develop targeted closed loop therapies for the treatment of patients with interstitial cystitis/bladder pain syndrome.

Role: Principal Investigator

Urology Care Foundation Research Scholar Award **Mickle (PI)** **06/2017-05/2019**

This award provided support to implement viral delivery strategies and novel bladder interfacing technologies to test the ability of virally transduced Arch expressed in bladder afferents to reduce cystitis-induced increased in void frequency and related pain in awake, freely-moving rats. This award was declined due to concurrent funding.

(*Declined-Due to Concurrent Funding*)

Role: Principal Investigator

McDonnell Center for Cellular/Molecular Neurobiology Postdoctoral Fellowship **07/2016–06/2017**

Wireless Monitoring and Optogenetic Modulation of Bladder Function

The goal of this project was to develop technology for wireless monitoring of bladder function and refinement of techniques to deliver optogenetic channels to peripheral neurons innervating the bladder, with the end goal of

modulating bladder function. This grant provided the funding to collect some of the preliminary data presented in the current application.
Role: Principal Investigator

F31 CA171927 **Mickle (PI)** **09/2012-12/2015**
PTHrP Modulation of TRPV1 in Pain Associated with Breast Cancer Bone Metastasis
The goal of the project was to understand the specific modulation of the activity/expression of the key pain-transducing channel TRPV1 in sensory neurons that innervate bones, by parathyroid hormone-related peptide (PTHrP). PTHrP, which is secreted at elevated levels in bone-metastasized breast tumor microenvironment, is a potential neurobiological mechanism for chronic pain, and can be targeted for the development of pharmacotherapeutics for treating such pain.
Role: Principal Investigator

T32 NS045549 **Hammond (PI)** **07/2011-08/2012**
PTHrP Modulation of TRPV1 as a Mechanism of Breast Cancer Bone Metastasis Pain
My project was based off some preliminary data showing that PTHrP robustly sensitized TRPV1. I was awarded a position on the Interdisciplinary Training Program for Pain Research (Department of Anesthesia) grant for about 1 year before transitioning to a F31 fellowship funding my dissertation research project.
Role: Trainee

University of Wisconsin - La Crosse Undergraduate Research Grant **01/2007-05/2007**
Identification of descending neuronal circuits that control coordination of ipsilateral and contralateral motor neurons.
The overall goal of my project was to identify descending neuronal circuits that control coordination of ipsilateral and contralateral motor neurons using electrophysiology techniques.
Role: Principle Investigator

HONORS AND AWARDS

Rita Allen Foundation Pain Scholar	2022
Trailblazer Early State Investigator R21 Award - NIBIB	2021
42nd Annual O'Leary Prize Neuroscience Award Finalist – Washington University in St. Louis	2019
Diokno-Lapides Essay Contest on Urodynamic and Neurourology Research Winner	2019
Thach Award Poster Finalist – Washington University Neuroscience Retreat	10/2018 and 10/2017
Washington University in St. Louis, Department of Anesthesiology Academic Evening – Best Postdoctoral Researcher Abstract	4/2018
American Pain Society -Young Investigator Travel Award	4/2014, 3/2018 and 4/2019
Urology Care Foundation Research Scholar Award (*Declined-Due to F32 Funding*)	2017
University of Iowa – Department of Pharmacology Retreat 2014 Best Graduate Student Poster Award	5/2014
Invited Poster for NIH Pain Consortium 2014	5/2014
University of Iowa Department of Pharmacology- Telphy Travel Grant	10/2012
Graduate Student Senate (GSS) Travel Funds Award	10/2012

TEACHING:

Course Coordinator – Veterinary Neuroscience (VME5110D) – Fall 2020 - Current
University of Florida – Gainesville, FL
Educational goals of the course are to prepare DVM students to understand the etiology of clinical cases they will encounter in which neurological malfunctions are causative factors. The objectives of this course are to obtain a systematic overview of basic nervous system anatomy and physiology. To study organization of the sensory and motor systems of the brain.

Course Co-Coordinator- Graduate Student Seminar (VME6937) – Spring 2020 - Current
University of Florida – Gainesville, FL
This course is a forum for UF graduate students and faculty to exchange information that can advance animal health, human health, and environmental health. The objectives of this course are to enhance students' ability to communicate their scientific ideas and data concisely and cohesively via oral presentations.

Coordinator- Department of Physiology Seminar – Spring 2020, Fall 2020
University of Florida – Gainesville, FL
The course is a departmental seminar where speakers are invited from the University of Florida or outside institution to share their work in a seminar format.

Lecturer - Mammalian Physiology - Autonomic Nervous System – Fall 2019
University of Florida – Gainesville, FL

Adjunct Professor - Systemic Human Physiology (BIO4540) – Fall 2017
Saint Louis University - Saint Louis MO
I delivered 7 of the 23 one-hour lectures (covering Endocrine Signaling, Blood Physiology, Gas Exchange, Respiratory and Renal Systems), revised lecture materials, generated in-class quiz questions (using the 'Clicker' system), developed in-class group activities, chaired pre-test study/review sessions, and participated in the writing, proctoring & grading of four exams over the course of the semester.

Lecturer - Drugs: Their Nature, Action, and Use (071:120) - 2013 and 2014
The University of Iowa – Iowa City, IA
Taught the lecture 'Pain, Analgesics and Inflammation' to first-year undergraduates. In charge of modifying/updating slides with new information and designing test and quiz questions.

MENTORSHIP AND LEADERSHIP EXPERIENCE

Mentor Academy Workshop for College of Veterinary Medicine – 3/2022
University of Florida – Gainesville, FL — Co Instructor
Aaron Mickle, PhD

- I co-lead a three-hour mentoring course for the college of veterinary medicine. This course was targeted at early- and mid-career faculty. We covered several topics, including Establishing Expectations, Maintaining Communication, Assessing Understanding, Dealing with Ethics, Fostering Independence, and Addressing Diversity.

Mentor Academy- 1/2020
University of Florida – Gainesville, FL — Instructor
Roger Fillingim, PhD

- I completed the Mentor Academy, which consists of 8 classes covering topic including communication skills, having difficult conversations, diversity & inclusion, ethics & professionalism in mentoring, Fostering independence, and aligning expectations.

NIH Fellowship Writing Workshop – Mentor - 2018
Washington University – Saint Louis, MO — Group Leader

Lori Setton, Ph.D.

- I mentored graduate students in writing and revising different portions of NIH fellowship applications (F31). Over three 1.5-hour meetings we discussed different components (Abstract, Specific Aims page, and Personal statement) of the application and guided the students on the important aspects of grant writing.

Mentorship Training Program - 2018
Washington University – Saint Louis, MO — Instructor
Erin Heckler, Ph.D.

- I completed a mentorship training program targeted postdoctoral fellows to learn strategies and techniques to be an effective mentee and mentor. This program used a curriculum from the University of Wisconsin Center for the Improvement of Mentored Experiences in Research.

Neuroscience Outreach – 2017-2019
Saint Louis University High School – Saint Louis MO — Group Leader
Judy Golden, Ph.D.

- A group from the Gereau Lab would visit Saint Louis University High School yearly to teach freshmen and seniors about neuroscience research and neuroanatomy using human donor specimens.

Teaching Your Research Workshop - 2012
The University of Iowa – Iowa City, IA — Instructor
Darren Hoffman, Ph.D.

- Attended a summer workshop that involved designing a full college-level or graduate-level course based on your research topic. Learning and applying complex skills of curriculum design and instructional planning.

Mentees

Mentees	**Dates**	**Major**
Undergraduate Students		
Olivia Yang	8/2019 - 7/2021	Psychology
Trishna Patel	8/2019 - 7/2021	Biomedical Engineering
Abby Morris	8/2019 - 7/2021	Animal Science
Michael Sturn	8/2019 - 7/2021	Biology
Jamie Hendren	1/2020 - 12/2020	Engineering
Nathan Young	8/2020 -	Computer Science
Karla Aleman	8/2020 -	Biology
Zona Ahmed	8/2020 – 4/2022	Applied Physiology and Kinesiology
Karthik Devulapally	8/2020 -	Biochemistry and Economics
Kelsey Andux	8/2021 -	Biomedical Engineering
Cassandra Garzia	8/2021-	Computer Science
Post- Baccalaureate		
Olivia Yang	7/2021 - 6/2022	
Gabriella Robilotto	11/2019 - 8/2022	
Graduate Students		
Mannan Shah (MS)	1/2021- 6/2021	Biomedical Engineering
Gabriella Robilotto (PhD)	8/2022-	Veterinary Sciences
Shane Priester	8/2022-	Biomedical Engineering
Post-Doctoral Trainees		
Firoj Alom	7/2021-	

SERVICE

Local:

Departmental Communications Committee - University of Florida – College of Veterinary Medicine – Department of Physiological Sciences - (2022 – Current) – Chair

Student Faculty Communication Committee – the University of Florida – (07-2019 -06-2022)- Chair for 2020 and 2021

IT Faculty Committee – University of Florida – College of Veterinary Medicine – (01/2021- Current) – Chair 2022

Associate Dean of Academic and Student Affairs Search Committee - University of Florida – College of Veterinary Medicine - 2021

Curriculum Committee – the University of Florida – College of Veterinary Medicine – (07/2020 – 06/2021)

National:

Grant Reviewer – NIH Heal Initiative Special Emphasis Panel

Reviewing Editor - *Frontiers in Systems Neuroscience* and *Frontiers in Pain Research - Abdominal and Pelvic Pain*

Scientific Program Committee – United States Association for the Study of Pain (06/2021- Current)

Society of Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction – Basic Science Program Committee (05-2022 – Current)

Journal Reviewer for *American Journal of Physiology*, *Nature Communications*, *Neuroscience Letters, PLOS One, Scientific Reports, STAR Protocols, PAIN* and *Biomedicine and Pharmacotherapy*

PROFESSIONAL AFFILIATIONS

Society of Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction (SUFU)	6/2021 - present
International Association for the Study of Pain	1/2014 - present
Society for Neuroscience	4/2012 - present
Society of Basic Urological Research	11/2020 - present
United States Association for the Study of Pain	3/2021 - present
American Urological Association	1/2016 -present
American Pain Society	1/2014 – 12/2019