KATHLEEN M. MUNLEY

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Current Position: Graduate Student, Indiana University (2016-Present)

EDUCATION:

2016-Present	Ph.D.	**Evolution, Ecology and Behavior, Indiana University** Specialization: Physiology and Behavior Minor: Neural Science *Mentor: Gregory E. Demas*
2013	B.S.	**Marine Biology, University of Miami** Minor: Chemistry *Mentor: Martin Grosell*
2013	B.A.	**Creative Writing, University of Miami**

RESEARCH POSITIONS:

2016-Present	**Graduate Research Associate;** Department of Biology, Indiana University. Project title: Neuroendocrine mechanisms underlying seasonal aggression in Siberian hamsters (*Phodopus sungorus*). *Mentor: Gregory E. Demas*.
2013-2016	**Research Assistant;** Department of Biological Sciences, Louisiana State University. Project title: Regulation of GABA production in killifish (*Fundulus species*) during acute hypoosmotic challenge. *Principal Investigator: Fernando Galvez*.
2010-2013	**Undergraduate Research Assistant;** Department of Marine Biology and Ecology, University of Miami. Project titles: Changes to intestinal transport physiology and carbonate production at various CO_2 levels and temperatures in the Gulf toadfish (*Opsanus beta*); the effect of prolonged lead exposure on growth, survival, and reproduction of the freshwater pulmonate snail, *Lymnaea stagnalis*. *Mentor: Martin Grosell*.

PUBLICATIONS:

Google Scholar h-index: 3; i10-index: 2; total citations: 43
** denotes mentored undergraduate students*

Peer-Reviewed Manuscripts (5)

Munley, K. M., Rendon, N. M., & Demas, G. E. (2018). Neural androgen synthesis and aggression: Insights from a seasonally breeding rodent. *Frontiers in Endocrinology, 9,* 136.

Heuer, R. M., **Munley, K. M.,** Narsinghani, N., Wingar, J., Mackey, T. M., & Grosell, M. (2016). Changes to intestinal transport physiology and carbonate production at various CO_2 levels in a

marine teleost, the Gulf toadfish (*Opsanus beta*). *Physiological and Biochemical Zoology, 89,* 402-416.

Stickle, W. B., Lindeberg, M., Rice, S. D., **Munley, K. M.,** & Reed, V. (2016). Seasonal changes in the thermal regime and gastropod tolerance from the rocky intertidal zone in southeast Alaska. *Journal of Experimental Marine Biology and Ecology, 482,* 56-63.

Munley, K. M., Brix, K. V., Panlilio, J., Deforest, D. K., & Grosell, M. (2013). Growth inhibition in early life-stage tests predicts full life-cycle toxicity effects of lead in the freshwater pulmonate snail, *Lymnaea stagnalis*. *Aquatic Toxicology, 128-129,* 60-66.

Brix, K. V., Esbaugh, A. J., **Munley, K. M.**, & Grosell, M. (2012). Investigations into the mechanism of lead toxicity to the freshwater pulmonate snail, *Lymnaea stagnalis*. *Aquatic Toxicology, 106-107,* 147-156.

Invited Book Chapters (1)

Jalabert, C., **Munley, K. M.**, Demas, G. E., & Soma, K. K. (2018). Aggressive behavior. In M. K. Skinner (Ed.), *Encyclopedia of Reproduction* (2nd ed., Vol. 1, pp. 242-247). Amsterdam: Elsevier.

Works in Progress (3)

Munley, K. M., Deyoe, J. E., Ren, C. C.*, & Demas, G. E. (*anticipated submission: Spring 2019*). Melatonin mediates seasonal transitions in circulating androgen profiles and aggressive behavior in male Siberian hamsters. *Hormones and Behavior*.

Munley, K. M., Whitehead, A., Liu, D., & Galvez, F. (*anticipated submission: Spring 2019*). Upregulation of polyamine and γ-aminobutyric acid (GABA) production are indicative of osmotic plasticity in killifish (*Fundulus sp*.). *Journal of Experimental Biology*.

Rendon, N. M., Petersen, C. L., Amez, A. C., Boyes, D. L., **Munley, K. M.**, Kingsbury, M. A., & Demas, G. E. (*anticipated submission: Spring 2019*). Seasonal patterns of melatonin section alter aggressive phenotypes of female Siberian hamsters. *Proceedings of the Royal Society B: Biological Sciences*.

Thesis

Munley, K. M. (2013). Growth inhibition in early life-stage tests predicts full life-cycle toxicity effects of lead in the freshwater pulmonate snail, *Lymnaea stagnalis. Senior Undergraduate Honors Thesis, University of Miami, Coral Gables, FL. 7 pp.*

PRESENTATIONS:

Conference Presentations and Published Abstracts (9)

Munley, K. M., Deyoe, J. E., Ren, C. C.*, & Demas, G. E. (2019). Melatonin mediates seasonal transitions in circulating androgen profiles and aggression in male Siberian hamsters. *Society for Integrative and Comparative Biology; Tampa, Florida*.

Munley, K. M., Deyoe, J. E., Jalabert, C., Ma, C., Ren, C. C.*, Soma, K. K., & Demas, G. E. (2018). Effects of melatonin on seasonal shifts in androgen levels and aggression in male Siberian hamsters. *International Congress of Neuroendocrinology; Toronto, Canada*.

Munley, K. M., Deyoe, J. E., Jalabert, C., Ma, C., Ren, C. C.*, Soma, K. K., & Demas, G. E. (2018). Effects of melatonin on seasonal shifts in androgen levels and aggression in male Siberian hamsters. *Animal Behavior Conference; Bloomington, IN*.

Ren, C. C.*, Deyoe, J. E., Sylvia, K. E., **Munley, K. M.**, & Demas, G. E. (2018). Photoperiod modulates gut microbiome and behavior in Siberian hamsters (*Phodopus sungorus*). *Animal Behavior Conference; Bloomington, IN*.

Munley, K. M., Whitehead, A., Liu, D., & Galvez, F. (2017). Upregulation of polyamine biosynthesis and γ-aminobutyric acid (GABA) production are indicative of osmotic plasticity in killifish (*Fundulus sp.). Animal Behavior Conference; Bloomington, IN*.

Munley, K. M., Liu, D., & Galvez, F. (2014). The roles of glutamate and putrescine in γ-aminobutyric acid (GABA) synthesis in *Fundulus heteroclitus* during osmotic stress. *American Physiological Society Intersociety Meeting: Comparative Approaches to Grand Challenges in Physiology; San Diego, CA.*

Heuer, R. M., **Munley, K. M.**, Narsinghani, N., Wingar, J., Mackey, T., & Grosell, M. (2014). Changes to intestinal transport physiology at varying levels of hypercapnia in the Gulf toadfish (*Opsanus beta*). *American Physiological Society Intersociety Meeting: Comparative Approaches to Grand Challenges in Physiology; San Diego, CA.*

Heuer, R. M., **Munley, K. M.**, Narsinghani, N., & Grosell, M. (2014). Influence of hypercapnia on intestinal transport and calcium carbonate formation in the Gulf toadfish. *International Congress on the Biology of Fish; Edinburgh, Scotland.*

Munley, K. M. (2013). Growth inhibition in early life-stage tests predicts full life-cycle toxicity effects of lead in the freshwater pulmonate snail, *Lymnaea stagnalis*. *Atlantic Coast Conference Meeting of the Minds; Winston Salem, NC*.

<u>Other Presentations</u> (3)

Ren, C. C.*, Deyoe, J. E., Sylvia, K. E., **Munley, K. M.**, & Demas, G. E. (2018). Photoperiod modulates gut microbiome and behavior in Siberian hamsters (*Phodopus sungorus*). *Indiana University Hutton Honors College Research Symposium; Bloomington, IN*.

Munley, K. M., Liu, D., & Galvez, F. (2015). From salinity to behavior: the effect of osmotic stress on GABA production in the killifish, *Fundulus heteroclitus*. *Louisiana Environmental Education Symposium; Baton Rouge, LA.*

Munley, K. M., Liu, D., & Galvez, F. (2014). The roles of glutamate and putrescine in γ-aminobutyric acid (GABA) synthesis in *Fundulus heteroclitus* during osmotic stress. *Louisiana State University BioGrads Symposium; Baton Rouge, LA.*

RESEARCH GRANTS AND FELLOWSHIPS ($25,576):

2019	Society for Integrative and Comparative Biology (SICB) Grant-in-Aid of Research ($1,000)
2018	Common Themes in Reproductive Diversity (CTRD) NIH Predoctoral Fellowship (1 yr.); Center for the Integrative Study of Animal Behavior, Indiana University ($23,376)
2014	University Grant Finalist; Louisiana Environmental Education Commission, Louisiana Department of Wildlife and Fisheries ($1,200)

HONORS, AWARDS, AND SCHOLARSHIPS:

2018	Trainee Travel Award; International Neuroendocrine Federation ($485)
2018	College of Arts and Sciences Fall Travel Award; Indiana University ($200)
2018	Provost's Travel Award for Women in Science; Indiana University ($600)
2018	Center for the Integrative Study of Animal Behavior (CISAB) Travel Grant; Indiana University ($500)
2018	Enrichment Travel Award; Department of Biology, Indiana University ($250)
2016	Graduate Fellowship; College of Arts and Sciences, Indiana University ($12,500)
2014	Travel Grant; Graduate Student Association, Louisiana State University ($200)
2013	Graduated University of Miami with departmental honors distinction
2010-2013	Member; Golden Key International Honor Society, University of Miami
2009-2013	Recipient; University Scholarship, University of Miami ($24,000/year)
2009-2013	Member; Honors Students' Association, University of Miami

TEACHING AND MENTORING EXPERIENCE:

2019	**Graduate Mentor, Jim Holland Summer Science Research Program (SSRP); Department of Biology, Indiana University** – Mentoring a high school student conducting an independent research project in the Demas lab.
2018	**Associate Instructor; Center for the Integrative Study of Animal Behavior, Indiana University –** Research and Professional Ethics for the Bio-behavioral Sciences (ABEH-A 502).
2018	**Mentor, Research Experience for Undergraduates (REU) Program in Animal Behavior; Center for the Integrative Study of Animal Behavior, Indiana University** – Mentored 2 undergraduate students conducting independent research projects in the Demas lab.

CISAB REU Program in Animal Behavior Students Mentored (2):

Desirée Nieves Canabal (University of Puerto Rico at Mayagüez, 2018)
Project Title: Fecal transplantation and the role of the gut microbiome in aggressive behavior

Ayley Shortridge (Michigan State University, 2018)
Project Title: Modulation of the HPA axis and anxiety-like behavior following fecal transplantation in Siberian hamsters

2017-Present	**Mentor, Indiana University –** Mentored 1 undergraduate student conducting an independent research project in the Demas lab and supervised and taught techniques to 4 undergraduate research assistants conducting research in the Demas lab.

Indiana University Undergraduate Students Mentored (1):
Clarissa Ren (Indiana University Hutton Honors College Research Program, 2017-Present)
Project Title: Photoperiod modulates the gut microbiome and behavior in Siberian hamsters

Indiana University Undergraduate Research Assistants Mentored (4):
Kate Adaniya (2018-Present, Cox Scholars Program); Grace Murphy (2018-Present, Hutton Honors College); Andi Nowakowski (2018-Present, Hutton Honors College); John Reinhart (2018-Present).

2016-2017 **Assistant Instructor; Department of Biology, Indiana University –** Integrative Human Physiology (BIOL-P 451) and Biology Laboratory (BIOL-L 113) undergraduate courses.

2015 **Guest Instructor; Department of Biology, University of Washington –** Presented lecture in Survey of Physiology (BIOL 118) undergraduate course.

2014 **Content Tutor; Cox Communications Academic Center for Student-Athletes, Louisiana State University –** General Biology (BIOL 1001), General Chemistry I (CHEM 1201), General Chemistry II (CHEM 1202), and Introduction to Oceanography (OCS 1005) undergraduate courses. Received College Reading & Learning Association (CRLA) 1 certification.

2013-2016 **Mentor, Louisiana State University –** Supervised and taught techniques to 5 undergraduate research assistants conducting research in the Galvez lab.

Louisiana State University Undergraduate Research Assistants Mentored (5):
Jamie Drummond (2014-2016); Ryan Hoffman (2015-2016, Roger Hadfield Ogden Honors College); Brittney Keosayasing (2015-2016); Christina Rubio (2015-2016, Roger Hadfield Ogden Honors College); Veronica Rubio (2014-2016, Initiative for Maximizing Student Development).

2013-2016 **Teaching Assistant; Department of Biological Sciences, Louisiana State University –** Vertebrate Physiology Laboratory (BIOL 4161) and Marine Communities Laboratory (BIOL 4263) undergraduate courses.

OUTREACH:

2018, 2017 **Instructor; Foundations in Science and Mathematics Program, Indiana University –** Designed and taught Zoology (Animal Diversity) course to local middle and high school students in the greater Bloomington area.

2018, 2017 **Abstract judge, Outstanding Junior Scientist Competition; Indiana Junior Academy of Science** – evaluated abstracts submitted by high school students across the state of Indiana that conducted independent research projects.

2018, 2016 **Volunteer, Science Fest; College of Arts and Sciences, Indiana University** – organized and led hands-on activities and demonstrations for children and adults in the greater Bloomington community.

2017-Present **Recruitment Chair, Editor, and Writer; ScIU Blog, Indiana University –** Organizes and coordinates events to recruit new writers and editors and composes bimonthly blog posts about cutting-edge science and current events at the Indiana University Bloomington campus. Website: http://blogs.iu.edu/sciu/.

2017 **Guest Speaker; STEM Research Bootcamp, Indiana University –** Lead workshop on writing abstracts and poster presentations for undergraduate STEM research boot camp hosted by the Groups and Hudson & Holland Scholars programs.

2014-2016 **Graduate Mentor; EnvironMentors Program, Louisiana State University –** Mentored high school students from Scotlandville Magnet High School in conducting an independent research project and designing and presenting a scientific poster at the LSU

EnvironMentors Science Fair. My EnvironMentors student for the 2014-2015 academic year, De'Marcus Goins, was awarded 1st place at the LSU EnvironMentors Science Fair and 3rd place at the EnvironMentors National Fair in Washington, D.C. for his poster presentation, earning himself an $800 college scholarship.

2014 **Graduate Mentor; Biology Intensive Orientation for Students (BIOS), Louisiana State University** – Mentored incoming freshman undergraduate students during a summer biology boot camp program, which helps students make the transition to the expectations of college prior to the start of their first semester.

2014 **Volunteer, Ocean Commotion; Louisiana Sea Grant** – organized and led hands-on activities for children in the greater Baton Rouge community.

2013 **Instructor; High School Careers in Medicine Workshop, University of Miami –** Designed and taught Introduction to Physiology course to rising high school seniors from underrepresented backgrounds in the Miami Dade Public School system.

PROFESSIONAL ACADEMIC SERVICE AND RELEVANT EXPERIENCE:

2019 Session Chair, Society for Integrative and Comparative Biology Annual Meeting – "Hormones & Behavior II: Everything but the Birds."

2019, 2018 Hospitality Committee Chair, Animal Behavior Conference.

2018 Session Moderator, Animal Behavior Conference – "Sex Differences in the Brain and Behavior."

2017-Present **Ad Hoc Reviewer** – *Hormones and Behavior; Journal of Experimental Zoology, Part A; Journal of Mammalogy*.

2017-Present Graduate Recruitment Weekend planning committee, Indiana University.

MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS:

Society for Behavioral Neuroendocrinology (SBN); Society for Integrative and Comparative Biology (SICB); Animal Behavior Society (ABS); American Physiological Society (APS); Graduate Women in Science (Delta Sigma Epsilon); Sigma Xi Scientific Research Society.