

Loranzie S. Rogers

Department of Psychology
University of Washington
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EDUCATION

Ph.D. Psychology

2019 - Present

University of Washington, Department of Psychology

Area: Animal Behavior

Advisor: Dr. Joseph A. Sisneros

Dissertation: Auditory sensitivity of the midshipman utricle: sound pressure, reproductive state-, and hormone-dependent sensitivity

M.S. Integrative Biosciences

2017 - 2019

University of Minnesota Duluth, Department of Biology

Advisor: Dr. Allen F. Mensinger

Thesis: The effect of biological and anthropogenic sound playbacks and self-generated movements on the hearing sensitivity of the oyster toadfish, *Opsanus tau*

Bachelor of Science

2013 - 2017

University of Minnesota Duluth, Department of Biology

Major: Biology Minor: Chemistry and Statistics

GRANTS & FELLOWSHIPS

Graduate: Ph.D.

Howard Hughes Medical Institute Gilliam Fellowship (\$150,000)

2021 - 2024

Ford Predoctoral Fellowship (Honorable Mention)

2021

University of Washington NIH Auditory Neuroscience Training Grant (NIH T32; \$25,500)

06/ - 09/2021

Graduate: M.S.

National Science Foundation Graduate Research Fellowship (\$138,000)

2018 - 2023

University of Minnesota Graduate School Excellence in Research Grant (\$6,441)

2018

University of Minnesota Diversity of Views and Experience Fellowship (\$42,000)

2017

AWARDS & HONORS

Graduate: Ph.D.

University of Washington Research Exchange Program (\$1,500)

2022

University of Washington Department of Psychology Travel Award (\$750)

2019

Graduate: M.S.

University of Minnesota Distinguished Master's Thesis Award (\$500)

2021

University of Minnesota Graduate School Travel Award (\$400)

2018

Swenson College of Science and Engineering Travel Award (\$400)

2018

University of Minnesota Integrated Biosciences Travel Award (\$500)

2018

Society for Neuroscience Trainee Professional Development Award (\$1,200)

2018

Best Student Paper Presentation North American Fisheries Society (\$250)

2018

University of Minnesota Graduate School Travel Award (\$559)

2018

University of Minnesota LSAMP Travel Award (\$1,000)

2018

Undergraduate

University of Minnesota Duluth Undergraduate Research Opportunities Program (\$2,000)

2017

University of Minnesota LSAMP Travel Award (\$1,300)

2017

National Science Foundation Research Experience for Undergraduates (\$5,500)

2016

University of Minnesota LSAMP Travel Award (\$550)

2016

University of Minnesota Duluth Undergraduate Research Opportunities Program (\$2,000)

2016

University of Minnesota Duluth Undergraduate Research Opportunities Program (\$2,000)

2015

Ronald E. McNair Scholars Program (\$2,500)

2015

PUBLICATIONS

- Rogers LS**, Coffin AB, and Sisneros JA (2022). Reproductive state modulates utricular auditory sensitivity in a vocal fish. *Journal of Neurophysiology*, 128(5), 1344-1354. doi:10.1152/jn.00315.2022
- Rogers LS**, Van Wert JC, and Mensinger AF (2022). Response of toadfish (*Opsanus tau*) utricular afferents to multimodal inputs. *Journal of Neurophysiology*, 128(2). doi: 10.1152/jn.00483.2021.
- Zeng R, Brown AD, **Rogers LS**, Lawrence OT, Clark JI, and Sisneros JA (2021). Age-related loss of auditory sensitivity in the zebrafish (*Danio rerio*). *Hearing Research*, 403. doi: 10.1016/j.heares.2021.108189.
- Putland RL, **Rogers LS**, Giuffrida B and Mensinger AF (2020). Anesthetic effects of AQUI-S® (eugenol) on the afferent neural activity of the oyster toadfish (*Opsanus tau*). *Fish Physiology and Biochemistry*. doi: 10.1007/s10695-020-00874-w.
- Rogers LS**, and Sisneros JA (2020). Auditory evoked potentials of utricular hair cells in the vocal plainfin midshipman, *Porichthys notatus*. *Journal of Experimental Biology*, 223(17). doi: 10.1242/jeb.226464.
- Rogers LS**, Putland RL, and Mensinger AF (2020). The effect of biological and anthropogenic sound on the auditory sensitivity of oyster toadfish, *Opsanus tau*. *Journal of Comparative Physiology A*, 206(1), 1-14. doi: 10.1007/s00359-019-01381-x.
- Butler JM, Whitlow SM, **Rogers LS**, Putland RL, Mensinger AF, and Maruska KP (2019). Reproductive-state dependent plasticity in the visual system of an African cichlid fish. *Hormones and Behavior*. doi: 10.1016/j.yhbeh.2019.06.003.
- Nissen AC, Vetter BJ, **Rogers LS**, and Mensinger AF (2019). Impacts of anthropogenic sound on hearing sensitivities of bigheaded carps. *Fish Physiology and Biochemistry*, 1-13. doi: 10.1007/s10695-019-00657-y.
- Mensing AF, Van Wert JC, and **Rogers LS** (2019). Lateral line sensitivity in free-swimming toadfish *Opsanus tau*. *Journal of Experimental Biology*, 222(2). doi: 10.1242/jeb.190587.
- Vetter BJ, **Rogers LS**, and Mensinger AF (2019). Visual sensitivity and the impacts of strobe light on invasive silver (*Hypophthalmichthys molitrix*) and bighead (*H. nobilis*) carp. *Journal of Fish Biology: The Sensory Ecology of Fishes* (special issue). 95:256–262. doi: 10.1111/jfb.13880.
- Keyler TD, Hrabik TR, Mensinger AF, **Rogers LS**, and Gorman OT (2018). Effect of light intensity and substrate type on siscowet lake trout (*Salvelinus namaycush siscowet*) predation on deepwater sculpin (*Myoxocephalus thompsonii*). *Hydrobiologia*. 1-12. doi: 10.1007/s10750-019-3944-5.
- Rogers LS**, Van Wert JC, and Mensinger AF (2017). An implantable two axis micromanipulator made with a 3D printer for recording neural activity in free-swimming fish. *Journal of Neuroscience Methods*, 288, 29-33. doi: 10.1016/j.jneumeth.2017.06.012.

PROFESSIONAL PRESENTATIONS

Conference Talks * Denotes presenting author

- Rogers LS***, Lozier NR, Sapozhnikova YP, Diamond KA, and Sisneros JA. Functional plasticity of the swim bladder in a vocal fish. Society for integrative and Comparative Biology Annual Meeting. Austin, TX. January 3-7, 2023.
- Rogers LS*** and Sisneros JA. Reproductive state-dependent plasticity of auditory utricular sensitivity in female plainfin midshipman, *Porichthys notatus*. Society for integrative and Comparative Biology Annual Meeting. Phoenix, AZ. January 3-7, 2022.
- Rogers LS*** and Sisneros JA. Seasonal plasticity of utricular hair cell auditory sensitivity in the plainfin midshipman. J.B. Johnston Club for Evolutionary Neuroscience Annual Meeting. Chicago, IL. November 11-12, 2021.
- Rogers LS***, Van Wert JC, and Mensinger AF. Multimodal sensory integration of the utricle in freely swimming toadfish, *Opsanus tau*. Society for integrative and Comparative Biology Meeting. Austin, TX. January 3-7, 2020.
- Putland RL*, **Rogers LS**, Mackiewicz AG, and Mensinger AF. Effect of anthropogenic sound on the communication space of the oyster toadfish, *Opsanus tau*. Society for integrative and Comparative Biology Meeting. Austin, TX. January 3-7, 2020.
- Rogers LS***, Vetter BJ, and Mensinger AF. The effect of light stimuli on dark-adapted visual sensitivity in invasive silver (*Hypophthalmichthys molitrix*) and bighead (*H. nobilis*) carp. 2019 Society for Integrative and Comparative Biology Meeting, Tampa, FL. January 3-7, 2019.
- Mensing AF*, Van Wert JC, and **Rogers, LS**. Lateral line activity during self-generated movement in free swimming toadfish, *Opsanus tau*. 2018 J.B. Johnston Club for Evolutionary Neuroscience Annual Meeting, San Diego, CA. November 2, 2018.
- Rogers LS***, Van Wert JC, and Mensinger AF. The effect of self-generated movement on lateral line sensitivity in the toadfish, *Opsanus tau*. 2018 National American Fisheries Society Meeting, Atlantic City, NJ. August 19-23, 2018.
- Keyler TD*, Hrabik TR, **Rogers LS**, Mensinger AF, and Gorman OT. Foraging Mechanisms of Siscowet Lake Trout (*Salvelinus namaycush*) on the Benthic Deepwater Sculpin (*Myoxocephalus thompsonii*): Effect of Light and Substrate Composition on Native Predator-Prey Interaction. International Charr Symposium, Duluth, MN. June 18-21, 2018.
- Van Wert JC*, **Rogers LS**, and Mensinger AF. The effect of self-generated movement on lateral line sensitivity in the Toadfish, *Opsanus tau*. 2018 Society of Integrative and Comparative Biology Meeting, San Francisco, CA. January 3-7, 2018.

Poster Presentations

- Jasper CJ*, **Rogers LS**, Hayward T, Molano O, Farbod L, Sisneros JA, Coffin AB. Effects of estrogen on hair cells in plainfin midshipman (*Porichthys notatus*) and zebrafish (*Danio rerio*). Association for Research in Otolaryngology Annual Meeting. Orlando, FL. February 11-15, 2023.
- Rogers, LS*** and Sisneros JA. The auditory functions of the utricle and its potential susceptibility to anthropogenic noise. The effects of noise of aquatic life. Berlin, Germany. July 10-15, 2022.
- Rogers LS*** and Sisneros JA. Seasonal plasticity of utricular hair cell auditory sensitivity in female plainfin midshipman, *Porichthys notatus*. Association for Research in Otolaryngology Annual Meeting. San Jose, CA. February 5-9, 2022.
- Jasper CJ*, **Rogers LS**, Sisneros JA, Coffin AB. Mechanisms of estrogen induced auditory plasticity in the plainfin midshipman (*Porichthys notatus*). Association for Research in Otolaryngology Annual Meeting. San Jose, CA. February 5-9, 2022.
- Balebail S*, **Rogers LS**, Li Z, Reicherter A, Kim C, Yang S, Sisneros JA. Investigating the role of call periodicity and higher harmonic frequencies in mate attraction in the male plainfin midshipman. Society for Integrative and Comparative Biology. Phoenix, AZ. January 3-7, 2022.

Rogers LS* and Sisneros JA. Reproductive state-dependent plasticity of auditory utricular sensitivity in female plainfin midshipman, *Porichthys notatus*. Howard Hughes Medical Institute Gilliam Conference. Virtual. September 20-22, 2021.

Rogers LS*, Van Wert JC, and Mensinger AF. The effect of self-generated movement on lateral line sensitivity in the toadfish, *Opsanus tau*. 2018 Society for Neuroscience Meeting, San Diego, CA. October 3-7, 2018.

Butler JM*, Whitlow SM, **Rogers LS**, Putland RL, Mensinger AF, and Maruska KP. Reproductive state dependent visual sensitivity in an African cichlid fish. 2018 Society for Neuroscience Meeting, San Diego, CA. November 3-7, 2018.

Rogers LS*, Giuffrida B, Le Roux V, and Mensinger AF. Visualization of the Oyster Toadfish (*Opsanus tau*) Anterior Lateral Line via Micro-CT. 2017 Society of Integrative and Comparative Biology Meeting, New Orleans, LA. January 4-8, 2017.

Mensing AF, **Rogers LS***, and Van Wert JC*. An implantable two axis micromanipulator made by a 3-D printer for recording neural activity in free swimming fish. 2017 Society of Integrative and Comparative Biology Meeting, New Orleans, LA. January 4-8, 2017.

Keyler TD*, Hrabik TR, **Rogers LS**, Harrington KA, and Mensinger AF. Visual Sensitivity of Walleye (*Sander vitreus*): A comparison of freshwater fishes. 2016 Midwest Fish & Wildlife Conference, Grand Rapids, MI. January 23-26, 2016.

TEACHING EXPERIENCE

Teaching Assistant

Animal Behavior, University of Washington. Seattle, WA

Fall 2021 and 2022

General Biology II, University of Minnesota Duluth. Duluth, MN

2016

PROFESSIONAL & ACADEMIC ACTIVITIES

Departmental Service

UW Psychology Department Diversity Steering Committee Co-Chair

2021 - 2023

UW Psychology Department Admissions Committee

2021

UW Psychology Department Molecular Mechanisms of the Mind Faculty Search Committee

2020

Society Service

Society for Integrative and Comparative Biology

Division of Neurobiology, Neuroethology, and Sensory Biology Student/Postdoc Rep.

2022 - Present

Student/Postdoctoral Affairs Committee

2021 - Present

J.B. Johnston Club for Evolutionary Neuroscience Diversity Task Force

2021 - Present

Society Memberships

Animal Behavior Society • J.B. Johnston Club for Evolutionary Neuroscience • Society for Neuroscience • Society for Integrative and Comparative Biology

Reviewer

Journal of Experimental Biology (3)