

Julia A. Licholai

jlicholai@gmail.com

Education

Brown University – National Institutes of Health Graduate Partnership Program – *Bethesda, MD*
PhD, Neuroscience 09/2018 – current

University of Washington – *Seattle, WA* 2011 - 2015
BS, Neurobiology specialized in computational neuroscience GPA: 3.5/4.0

Relevant Experience

Graduate Student in Dr. Nicholas Ryba's laboratory 08/2019 – current
National Institute of Dental and Cranial Research, National Institutes of Health
-Mapping out secretory reflex circuitries from glands to the brain stem.
-Assisting with calcium imaging data to compliment other projects.

Graduate Rotation Student in Dr. David Sheinberg's laboratory 09/2018 – 05/2019
Department of Neuroscience, Brown University
-generated simple MATLAB graphs of behavioral data obtained from a macaque monkey trained to haptically identify a visual object.

Post-baccalaureate in Dr. Alexxai Kravitz's laboratory 01/2016 – 09/2018
National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health
-Produced a protocol for fiber microscopy to image in two colors in collaboration with two companies.
-Studied neuronal responses in the striatum during food intake related behaviors.
-Built an interactive website to monitor streaming data.

Research Intern in Dr. Larry Zweifel's laboratory 09/2012 -06/2015
Department of Psychiatry, University of Washington
-Investigated the role of D1 dopamine receptors (D1R) in the lateral hypothalamus (LH) in mice and studied at the behavioral effects of re-expressing D1R in the LH of D1R knock-out mice.
-Conducted histology and behavioral experiments to study the effects of inhibiting cells expressing a specific dopamine receptor in the dentate nucleus of the mouse cerebellum.

Research Intern in Dr. David Raible's laboratory 06/2012 - 04/2014
Biological Structure Department, University of Washington
-Studied the regenerative properties of hair cells in zebrafish lateral line.
-Screened zebrafish larvae for mutants unable to regenerate hair cells on their exterior surface.
-Developed a protocol to study the effects of neomycin-induced apoptosis in hair cells after heat shock treatment in wild type zebrafish larvae.

Awards and Accomplishments

NSF Graduate Research Fellowship Program – Honorable Mention 2018
NIH Intramural Research Training Award 9/2015-9/2018
Poster Award at NIH Postbac Poster Day 05/13/2016
UW Mary Gates Research Award 03/2015-6/2015
Dean's List (7 quarters) 12/2011-6/2015

Leadership and Teaching

- Brown GPP Student News Website Manager 04/2020- current
National Institute of Health, Bethesda, MD
- recreated the student website, regularly wrote posts, and organized some student events
- GSChronicles Public Relations Committee 08/2021 – 6/2022
National Institutes of Health, Bethesda, MD
- Wrote articles and designed page layouts for the quarterly NIH graduate student newsletter.
- Fellows Award for Research Excellence (FARE) Committee Member 12/2019 – 07/2021
National Institute of Health, Bethesda, MD
- Coordinated recruiting (made flyers), judging (oversaw sections), and awarding travel awards
- Neural Systems Teaching Assistant 09/2020 – 12/2020
Brown University, Providence, RI (virtual)
-lead weekly sections, graded assignments and exams, and monitored a virtual questions board
- The Informer Editor 05/2016 - 9/2018
National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD
- Wrote articles, advertised, and designed page layouts for the quarterly NIDDK newsletter.
- Fellows Advisory 05/2016 - 5/2018
National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD
- Planned and executed the annual NIDDK Scientific Conference.

Community Service and Outreach

- STEAM Room, a STEM Pop-Up Art Gallery Organizer 07/2021 – current
Brown University, Providence, RI
- organized the first STEM related art showcase with pieces submitted by graduate students
- Curiologie Volunteer 12/2021 - current
National Institutes of Health, Bethesda, MD 03/2016 - 3/2017
- Accompanied middle school science workshops.
- Lab Leaks Social Media Coordinator 07/2021 – 1/2022
<http://www.lableaks.org>
- Regularly created science related content and established their social media presence
- Massive Science Writer 12/2020 – 11/2021
<https://massivesci.com>
- Published writing and contributed commentary for an online media company
- Q?rius Volunteer 11/2015 - 3/2016
National Natural History Museum, Washington, DC
- Greeted patrons and supervised their interactions with available specimens.
- Neurosci Community Outreach Volunteer 11/2014 - 5/2015
University of Washington, Seattle, WA
- Accompanied middle school science workshops.
- Library Volunteer 10/2007 - 9/2013
King County Library System, Sammamish, WA
- Found and shelved books requested by patrons.

Publications

Legaria A. A., Matikainen-Ankney B.A., Yang B., Ahanonu B., **Licholai J.A.**, Parker J.G., Kravitz A.V. Striatal fiber photometry reflects primarily non-somatic changes in calcium. *Nat Neurosci.* Accepted, pending revisions.

von Buchholtz J. L., Ghitani N., Lam R.M., **Licholai J.A.**, Chesler A.T., Ryba N. J. P. Decoding cellular mechanisms for mechanosensory discrimination. *Neuron.* 2021; 0896-6273.

Matikainen-Ankney, B.A, Ali, M. A., Miyazaki, N.L., Fry, S.A., **Licholai, J.A.**, Kravitz, A. V., Weight Loss After Obesity is Associated with Increased Food Motivation and Faster Weight Regain in Mice. *Obesity.* 2020; ;28(5):851-856. 10.1002/oby.22758

Fobbs W.C., Bariselli S., **Licholai J.A.**, Miyazaki N., Matikainen-Ankney B.A., Creed M.C., Kravitz A.V., Continuous representations of speed by striatal medium spiny neurons. *J Neurosci.* 2020; 10.1523/JNEUROSCI.1407-19.2020

Licholai J.A.*, Nguyen K.P.* , Fobbs W.C., Schuster C.J., Ali M.A., Kravitz A.V., Why Do Mice Overeat high-fat diets? How high-fat diet alters the regulation of daily caloric intake in mice. *Obesity.* 2018;26(6):1026–33. 10.1002/oby.22195

*made equal contributions

London T.D., **Licholai J.A.**, Szczot I., Ali M.A., et al (2018) Coordinated ramping of dorsal striatal pathways preceding food approach and consumption. *J Neurosci* 38(14):3547–3558.

Locke T. M., Soden M. E., Miller S. M., Hunker A., Knakal C., **Licholai J. A.**, et al. (2018). Dopamine D1 receptor-positive neurons in the lateral nucleus of the cerebellum contribute to cognitive behavior. *Biol. Psychiatry* 84 401–412. 10.1016/j.biopsych.2018.01.019

Nguyen, K.P., Ali, M.A., O’Neal, T.J., Szczot, I., **Licholai, J.A.**, Kravitz, A.V. Feeding Experimentation Device (FED): Construction and validation of an open-source device for measuring food intake in rodents. (2016). *JOVE.* 267:108-14.

Presentations

(February 2022) *Deciphering specific somatosensory circuits controlling secretory function.* Poster presented at NIH Graduate Student Research Symposium, Bethesda, MD.

(February 2020) *Deciphering specific somatosensory circuits controlling secretory function.* Poster presented at NIH Graduate Student Research Symposium, Bethesda, MD.

(November 2018) *Why Do Mice Overeat high-fat diets? How high-fat diet alters the regulation of daily caloric intake in mice.* Poster presented at Society for Neuroscience, San Diego, CA.

(May 2018) *Why Do Mice Overeat high-fat diets?* Poster presented at Annual NIDDK Conference, Bethesda, MD.

(April 2018) *Why Do Mice Overeat high-fat diets?* Poster presented at Annual Diabetes, Endocrinology and Obesity Branch Retreat, Bethesda, MD.

(November 2017) *Calcium imaging from two neuronal subtypes.* Poster presented at Society for Neuroscience, Washington, DC.

(May 2017) *Calcium imaging from two neuronal subtypes.* Poster presented at Annual NIDDK Conference, Bethesda, MD.

(April 2017) *Calcium imaging from two neuronal subtypes*. Poster presented at Annual Diabetes, Endocrinology and Obesity Branch Retreat, Bethesda, MD.

(November 2016) *Feeding Experimentation Device Plus (FED+): an open-source behavior device for monitoring rodent home cage feeding in real-time*. Poster presented at Society for Neuroscience, San Diego, CA.

(May 2016) *Wireless Feeding Experimentation Device (FED) to monitor home cage feeding behavior in rodents*. Poster presented at Annual NIDDK Conference, Bethesda, MD.

(May 2015) *The Role of D1 Dopamine Receptor in Food Intake Regulation*. Poster presented at the Undergraduate Research Symposium, Seattle, WA.

(April 2015) *The Role of D1 Dopamine Receptor in Food Intake Regulation*. Poster presented at the National conference on Undergraduate Research, Cheney, WA.

(May 2014) *Cognitive Effects of Silencing Dopamine Receptor-1 Expressing Cells in Dentate Nucleus of Cerebellum in Mice*. Poster presented at the Undergraduate Research Symposium, Seattle, WA.

(May 2013). *The Effect of Heat Shock on Neomycin-Induced Hair Cell Death in Zebrafish*. Poster presented at the Undergraduate Research Symposium, Seattle, WA.