Stanford



Lauren O'Connell

Associate Professor of Biology

Curriculum Vitae available Online

Bio

BIO

Lauren O'Connell is a neuroscientist, evolutionary biologist, and Associate Professor in the Department of Biology at Stanford University. She specializes in exploring the intersections of behavioral neuroscience, physiology, and ecology. Her research investigates how animals evolve new behaviors and physiological traits. In neuroscience, she focuses on the evolution of parent-offspring interactions to better understand how parental investment shapes offspring well-being. Her physiology research examines how poisonous animals protect their nervous systems from environmental toxins, with the aim of developing antidotes for compounds with high overdose risk.

Dr. O'Connell began her academic journey at Tarrant County College, earning an Associate of Arts in Natural Sciences in 2004. She then transferred to Cornell University, where she developed an interest in the mechanistic basis of animal behavior. After completing her undergraduate studies, she pursued a Ph.D. in Cellular and Molecular Biology at the University of Texas at Austin, studying social networks in cichlid fish and investigating the evolution of brain regions supporting social behavior in vertebrates. Following her Ph.D., O'Connell became a Bauer Fellow at Harvard University, where she established her independent research lab. In 2017, she joined Stanford University's Department of Biology, progressing from Assistant Professor to Associate Professor.

Lauren O'Connell's research has earned numerous accolades, including the Presidential Early Career Award for Scientists and Engineers from President Biden, the L'Oréal USA For Women in Science Fellowship, an NIH New Innovator Award, and the Frank A. Beach Early Career Award. Her work and perspectives have been highlighted in prominent outlets such as The Wall Street Journal, National Geographic, and The New York Times, among others.

Dr. O'Connell's upbringing on a goat farm in rural Texas deeply influenced her passion for organismal biology and her commitment to science outreach. Growing up in this environment instilled in her a drive to make science accessible to underserved communities. She is dedicated to engaging with rural, low-income, and public school students, aiming to inspire the next generation of scientists by bringing research and discovery into classrooms that might otherwise lack access to such opportunities.

ACADEMIC APPOINTMENTS

- Associate Professor, Biology
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)
- Faculty Fellow, Sarafan ChEM-H

- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Co-Director of Neural Systems & Behavior, Marine Biological Laboratory, (2025- present)

HONORS AND AWARDS

- Presidential Early Career Award for Scientists and Engineers, President Biden (2024)
- Camille Dreyfus Teacher-Scholar Award, The Camille and Henry Dreyfus Foundation (2023)
- Dean’s Award for Distinguished Teaching, Stanford University (2021)
- Director’s New Innovator Award, National Institutes of Health (2019)
- Frank A. Beach Award, Society for Behavioral Neuroendocrinology (2018)
- For Women in Science Fellowship, L'Oreal USA (2015)
- Capranica Prize, International Society for Neuroethology (2013)
- Young Investigator Award, International Society for Neuroethology (2012)
- Early Career Award, Society for Social Neuroscience (2011)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, Society for the Study of Evolution (2015 - present)
- Scientific Advisory Board, The Rowland Institute at Harvard (2024 - present)
- Member, International Society for Neuroethology (2008 - present)

PROFESSIONAL EDUCATION

- Ph.D., University of Texas at Austin , Cellular and Molecular Biology (2011)
- B.S., Cornell University , Biological Sciences (2006)
- A.A., Tarrant County Community College , Natural Sciences (2004)

COMMUNITY AND INTERNATIONAL WORK

- Spatial cognition in reptiles and toads, Australia
- Maternal behavior in poison frogs, Madagascar
- How poison frogs get their toxins, Ecuador

LINKS

- Lab Website: https://www.laurenoconnelllab.com/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

The O'Connell lab studies how genetic and environmental factors contribute to biological diversity and adaptation. We are particularly interested in understanding (1) how behavior evolves through changes in brain function and (2) how animal physiology evolves through repurposing existing cellular components.

NEUROSCIENCE

Our lab explores the neural mechanisms underlying social behavior and environmental adaptation. By understanding these processes, we aim to address critical challenges in human health and ecological resilience, contributing to solutions for a rapidly changing world.

All kinds of families: Evolutionary tuning of neural circuits governing family interactions:
Our lab studies the neural basis of family relationships, from parental care and pair bonding to infant behaviors. We explore how parents coordinate care, how infants communicate their needs to parents, and how these interactions shape development and well-being. Using biparental poison frogs that work as a team to care for their offspring and beg them for food with dance, we investigate the neural mechanisms underlying behavioral coordination and communication. This work sheds light on the fundamental processes that sustain family bonds across species.

Brains under pressure: Neural adaptations to shifting climates: Our lab investigates the neural mechanisms that enable animals to adapt to changing environments. We study how the brain senses and responds to abiotic factors like temperature and water availability, uncovering what makes some species more resilient or vulnerable to environmental shifts. By exploring these mechanisms, we aim to understand the constraints and flexibility of neural systems that support survival in dynamic ecosystems.

CHEMICAL ECOLOGY
We study how predator-prey interactions evolve and are shaped by the environment, aiming to understand interspecies dynamics and create new chemical tools.

Pick your poison: Neurotoxin sponges and the physiology of chemical defense:
Our lab studies anti-toxin proteins to understand how animals have evolved physiological resistance to harmful compounds. We work to uncover the mechanisms behind these adaptations using machine learning, protein engineering, and toxicology. Our goal is to develop anti-toxin proteins capable of neutralizing deadly compounds, providing critical solutions for toxins that pose significant risks to human health.

You are what you eat: How diet-derived neuronal actuators shape species interactions:
Our research explores how natural products drive interspecies interactions, bridging the fields of chemistry and biology. By combining field and laboratory studies and using approaches such as untargeted metabolomics, high throughput chemical screens, and field manipulations, we work to uncover the nature of these ecological interactions. By identifying chemical actuators of neuronal receptors and revealing biosynthetic pathways, we gain insights into the chemical foundations of ecological dynamics.

PROJECTS

- Spatial cognition in rainforest frogs - Stanford University, Centro Jambatu
- Evolution of chemical defenses in poison frogs - Stanford University
- Evolution of pair bonding in vertebrates - Stanford University

Teaching

COURSES

2026-27

- Biology PhD Lab Rotation: BIO 299 (Aut, Win, Spr)
- Physiology: BIO 84 (Win)

2025-26

- Organismal Biology Lab: BIO 161 (Aut)
- Physiology: BIO 84 (Win)

2024-25

- Organismal Biology Lab: BIO 161 (Aut)
- Physiology: BIO 84 (Win)

2023-24

- Organismal Biology Lab: BIO 161 (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

William Pangburn, Nemo Robles, Alina Xiao

Postdoctoral Faculty Sponsor

Zeran Lin, Daniela Pareja Mejia, Monique Pedroza

Doctoral Dissertation Advisor (AC)

Max Madrzyk, Cesar Mena, Mila Pamplona Barbosa, Amanda Pohlman, Shirley Jennifer Serrano Rojas, Ian Shriner

Doctoral (Program)

Amanda Pohlman

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biology (School of Humanities and Sciences) (PhD Program)

Publications

PUBLICATIONS

- **There is a biological substrate to being a dad; we should tap into it.** *Psychoneuroendocrinology*
  Fernandez-Duque, E., Gettler, L. T., Bell, A. M., Cabrera, N. J., Portaluppi, J. C., Feigelson, M., Feldman, R., Hrdy, S. B., Majeed, R., Mayes, L., O'Connell, L. A., Rilling, J. K., Stover, et al
  2026: 108035

- **Home security cameras as a tool for behavior observations and science affordability.** *PloS one*
  Goolsby, B. C., Fischer, M. T., Chen, T. G., Pareja-Mejía, D., Shaykevich, D. A., Lewis, A. R., Raboisson, G., Dellefont, K., Lacey, M. P., O'Connell, L. A.
  2026; 21 (10): e0360298

- **Correction: Neural correlates of spatial orientation in a territorial frog Allobates femoralis.** *Journal of comparative physiology. A, Neuroethology, sensory, neural, and behavioral physiology*
  Pašukonis, A., Fischer, E. K., O'Connell, L. A.
  2026

- **Social isolation is associated with microRNA expression changes in the visual system of poison frog tadpoles.** *bioRxiv : the preprint server for biology*
  Khosla, N. M., Madrzyk, M. M., Nakamura, K., Palmeri, M. L., Butler, J. M., O'Connell, L. A.
  2026

- **Neural correlates of spatial orientation in a territorial frog Allobates femoralis.** *Journal of comparative physiology. A, Neuroethology, sensory, neural, and behavioral physiology*
  Pašukonis, A., Fischer, E. K., O'Connell, L. A.
  2026

- **Behavioral responses buffer seasonal variation more strongly than endocrine and chemical responses in poison frogs.** *Integrative and comparative biology*
  Serrano-Rojas, S. J., Pašukonis, A., Gonzalez, M., Rodriguez, C., Usto, R. F., Carazas, A., García, C. S., Zolorzano, J. P., Arcila-Pérez, L. F., Boluarte-Salinas, S., Baldarrago, E., Sosa-Salazar, A., O'Connell, et al

2026

- **Tobacco extract is a chemotaxis repellent for C. elegans.** *microPublication biology*
  Abdelghne, B. J., Zreik, Z. K., Carter, A. N., Aguilar, G. K., Morales, G., Ramirez, D., Bradon, N., Golde, C. L., O'Connell, L. A.
  2026; 2026

- **Non-lethal imaging and modeling approaches for estimating dry mass in aquatic larvae.** *PloS one*
  Granados Frias, D., Akbari, N., O'Connell, L. A., Juarez, B. H.
  2026; 21 (4): e0345767

- **Four Neotropical frog species exhibit shared and distinct skin bacterial communities in a laboratory setting.** *microPublication biology*
  Jansari, V., Castro-Martinez, D. A., Dailey, M. J., Roti, O., Seibert, M. R., Abdelghne, B. J., Aguilar, G. K., Amine, A., Ben-Efraim, K., Carolan, R. E., Carter, A. N., Chang, M., Dye, et al
  2026; 2026

- **Bay leaf extract is a chemotaxis repellent for C. elegans.** *microPublication biology*
  Wu, S. H., Amine, A., Ben-Efraim, K., Dye, N. J., Melian, M., Nakamura, K. C., Nemawarkar, R., Saigal, K., Sosa, H. M., Vo, L. T., Abdelghne, B. J., Aguilar, G. K., Carolan, et al
  2026; 2026

- **Shadowboxing salamanders: Defensive behavior in two Amazonian Bolitoglossa species (Amphibia: Plethodontidae)** *ACTA HERPETOLOGICA*
  Pareja-Mejia, D., Rojas-Padilla, O., Lacey, M., Masache-Sarango, M., Sole, M., O'Connell, L. A.
  2025; 20 (2): 275-278

- **Diet and chemical defenses of the Sonoran Desert toad.** *PloS one*
  Luccioni, M. D., Wyman, J. T., Espinoza, E. O., O'Connell, L. A.
  2025; 20 (11): e0335661

- **Poison frogs.** *Nature methods*
  Goolsby, B. C., Dailey, M. J., Coloma, L. A., O'Connell, L. A.
  2025

- **Extraordinary creatures: poison frogs** *JOURNAL OF EXPERIMENTAL BIOLOGY*
  O'Connell, L., Kay, J.
  2025; 228 (19)

- **Poison frog chemical defences are influenced by environmental availability and dietary selectivity for ants.** *The Journal of animal ecology*
  Martin, N. A., Rodriguez, C., Alvarez-Buylla, A., Fiocca, K., Morrison, C. R., Chamba-Carrillo, A., Garcia-Ruilova, A. B., Renteria, J., Tapia, E. E., Coloma, L. A., Donoso, D. A., O'Connell, L. A.
  2025

- **Effects of parental care on skin microbial community composition in poison frogs.** *eLife*
  Fischer, M. T., Xue, K. S., Costello, E. K., Dvorak, M., Raboisson, G., Robaczewska, A., Caty, S. N., Relman, D. A., O'Connell, L. A.
  2025; 14

- **Velvety tree ant extract is a chemotaxis repellent for C. elegans.** *microPublication biology*
  Gaerlan, M., Carrillo, M., Ceva, S., Chundi, S., Diallo, B., Fong, J. N., Huang, K., Jackson, J., Padilla, J., Quintana, L., Santa Maria, K., Sarkisian, S. M., Sequeira, et al
  2025; 2025

- **Olfactory cues elicit species-specific locomotive responses in poison frog tadpoles.** *microPublication biology*
  Phipps, M. E., Baker, P. R., Bachmann, L., Park, S., Perez, M. J., Sharma, S. N., Soto-Hernandez, Y., Gaerlan, M., Carrillo, M., Ceva, S., Chundi, S., Diallo, B., Fong, et al
  2025; 2025

- **Chronic recording of brain activity in awake toads.** *Journal of neuroscience methods*
  Shaykevich, D. A., Woods, G. A., O'Connell, L. A., Hong, G.
  2025: 110449

- **Neural and sensory basis of homing behaviour in the invasive cane toad, Rhinella marina.** *Proceedings. Biological sciences*

Shaykevich, D. A., Pareja-Mejía, D., Golde, C., Pašukonis, A., O'Connell, L. A.
2025; 292 (2041): 20250045

- **Argentine ant chemical profiles vary by location on the Stanford University campus.** *microPublication biology*
  Nangia, A., Gonzalez, M., O'Connell, L. A., Fiocca, K.
  2025; 2025
- **Alkaloids are associated with increased microbial diversity and metabolic function in poison frogs.** *Current biology : CB*
  Caty, S. N., Alvarez-Buylla, A., Vasek, C., Tapia, E. E., Martin, N. A., McLaughlin, T., Golde, C. L., Weber, P. K., Mayali, X., Coloma, L. A., Morris, M. M., O'Connell, L. A.
  2024
- **Infanticide is driven by unfamiliarity with offspring location and associated with androgenic shifts in mimic poison frogs.** *Hormones and behavior*
  Lewis, A. R., Goolsby, B. C., Juarez, B. H., Lacey, M. P., O'Connell, L. A.
  2024; 166: 105656
- **Infanticide is driven by unfamiliarity with offspring location and associated with androgenic shifts in mimic poison frogs.** *bioRxiv : the preprint server for biology*
  Lewis, A. R., Goolsby, B. C., Juarez, B. H., Lacey, M. P., O'Connell, L. A.
  2024
- **Chronic recording of brain activity in awake toads.** *bioRxiv : the preprint server for biology*
  Shaykevich, D. A., Woods, G. A., O'Connell, L. A., Hong, G.
  2024
- **Comparative analysis of amphibian genomes: An emerging resource for basic and applied research.** *Molecular ecology resources*
  Kosch, T. A., Crawford, A. J., Lockridge Mueller, R., Wollenberg Valero, K. C., Power, M. L., Rodriguez, A., O'Connell, L. A., Young, N. D., Skerratt, L. F.
  2024: e14025
- **Effects of parental care on skin microbial community composition in poison frogs.** *bioRxiv : the preprint server for biology*
  Fischer, M. T., Xue, K. S., Costello, E. K., Dvorak, M., Raboisson, G., Robaczewska, A., Caty, S. N., Relman, D. A., O'Connell, L. A.
  2024
- **Activity of forkhead box P2-positive neurons is associated with tadpole begging behaviour.** *Biology letters*
  Ludington, S. C., McKinney, J. E., Butler, J. M., Goolsby, B. C., Callan, A. A., Gaines-Richardson, M., O'Connell, L. A.
  2024; 20 (9): 20240395
- **Physiological state matching in a pair bonded poison frog** *ROYAL SOCIETY OPEN SCIENCE*
  Nowicki, J. P., Rodriguez, C., Lee, J. C., Goolsby, B. C., Yang, C., Cleland, T. A., O'Connell, L. A.
  2024; 11 (7)
- **Physiological state matching in a pair bonded poison frog.** *Royal Society open science*
  Nowicki, J. P., Rodríguez, C., Lee, J. C., Goolsby, B. C., Yang, C., Cleland, T. A., O'Connell, L. A.
  2024; 11 (7): 240744
- **Neural and sensory basis of homing behavior in the invasive cane toad, Rhinella marina.** *bioRxiv : the preprint server for biology*
  Shaykevich, D. A., Pareja-Mejía, D., Golde, C., Pašukonis, A., O'Connell, L. A.
  2024
- **Tadpoles rely on mechanosensory stimuli for communication when visual capabilities are poor.** *Developmental biology*
  Butler, J. M., McKinney, J. E., Ludington, S. C., Mabogunje, M., Baker, P., Singh, D., Edwards, S. V., O'Connell, L. A.
  2024
- **Water availability and temperature as modifiers of evaporative water loss in tropical frogs.** *Integrative and comparative biology*
  Juarez, B. H., Quintanilla-Salinas, I., Lacey, M. P., O'Connell, L. A.
  2024
- **Genome assembly of the dyeing poison frog provides insights into the dynamics of transposable element and genome-size evolution.** *Genome biology and evolution*

Dittrich, C., Hoelzl, F., Smith, S., Fouilloux, C. A., Parker, D. J., O'Connell, L. A., Knowles, L. S., Hughes, M., Fewings, A., Morgan, R., Rojas, B., Comeault, A. A.
2024

- **Pavement ant extract is a chemotaxis repellent for C. elegans.** *microPublication biology*
  Lopez, J. S., Ali, S., Asher, M., Benjamin, C. A., Brennan, R. T., Burke, M. L., Civantos, J. M., DeJesus, E. A., Geller, A., Guo, M. Y., Haase Cox, S. K., Johannsen, J. M., Kang, et al
  2024; 2024

- **A toxic environment selects for specialist microbiome in poison frogs.** *bioRxiv : the preprint server for biology*
  Caty, S. N., Alvarez-Buylla, A., Vasek, C., Tapia, E. E., Martin, N. A., McLaughlin, T., Weber, P. K., Mayali, X., Coloma, L. A., Morris, M. M., O'Connell, L. A.
  2024

- **Binding and sequestration of poison frog alkaloids by a plasma globulin.** *eLife*
  Alvarez-Buylla, A., Fischer, M. T., Moya Garzon, M. D., Rangel, A. E., Tapia, E. E., Tanzo, J. T., Soh, H. T., Coloma, L. A., Long, J. Z., O'Connell, L. A.
  2023; 12

- **Selection on Visual Opsin Genes in Diurnal Neotropical Frogs and Loss of the SWS2 Opsin in Poison Frogs.** *Molecular biology and evolution*
  Wan, Y. C., Navarrete Méndez, M. J., O'Connell, L. A., Uricchio, L. H., Roland, A. B., Maan, M. E., Ron, S. R., Betancourth-Cundar, M., Pie, M. R., Howell, K. A., Richards-Zawacki, C. L., Cummings, M. E., Cannatella, et al
  2023; 40 (10)

- **Tissue-specific in vivo transformation of plasmid DNA in Neotropical tadpoles using electroporation.** *PloS one*
  Delia, J., Gaines-Richardson, M., Ludington, S. C., Akbari, N., Vasek, C., Shaykevich, D., O'Connell, L. A.
  2023; 18 (8): e0289361

- **Activity of FoxP2-positive neurons correlates with begging behavior in a social tadpole.** *bioRxiv : the preprint server for biology*
  Ludington, S. C., McKinney, J. E., Butler, J. M., O'Connell, L. A.
  2023

- **Home security cameras as a tool for behavior observations and science equity.** *bioRxiv : the preprint server for biology*
  Goolsby, B. C., Fischer, M., Pareja-Mejia, D., Lewis, A. R., Raboisson, G., Oa Connell, L. A.
  2023

- **Definition of a saxitoxin (STX) binding code enables discovery and characterization of the anuran saxiphilin family**
  Zakrzewska, S., Chen, Z., Hajare, H. S., Alvarez-Buylla, A., Abderemane-Ali, F., Bogan, M., Ramirez, D., O'Connell, L. A., Du Bois, J., Minor, D. L.
  CELL PRESS.2023: 164A

- **Definition of a saxitoxin (STX) binding code enables discovery and characterization of the anuran saxiphilin family.** *Biophysical journal*
  Zakrzewska, S., Chen, Z., Hajare, H. S., Alvarez-Buylla, A., Abderemane-Ali, F., Bogan, M., Ramirez, D., O'Connell, L. A., Du Bois, J., Minor, D. L.
  2023; 122 (3S1): 164a

- **Albino Xenopus laevis tadpoles prefer dark environments compared to wild type.** *microPublication biology*
  Adebogun, G. T., Bachmann, A. E., Callan, A. A., Khan, U., Lewis, A. R., Pollock, A. C., Alfonso, S. A., Arango Sumano, D., Bhatt, D. A., Cullen, A. B., Hajian, C. M., Huang, W., Jaeger, et al
  2023; 2023

- **Argentine ant extract induces an osm-9 dependent chemotaxis response in C. elegans.** *microPublication biology*
  Alfonso, S. A., Arango Sumano, D., Bhatt, D. A., Cullen, A. B., Hajian, C. M., Huang, W., Jaeger, E. L., Li, E., Maske, A. K., Offenberg, E. G., Ta, V., Whiting, W. W., Adebogun, et al
  2023; 2023

- **Feed Me: Robotic Infiltration of Poison Frog Families** *Living Machines: Biomimetic and Biohybrid Systems*
  Chen, T. G., Goolsby, B. C., Bernal, G., O'Connell, L. A., Cutkosky, M.
  2023: 293-302

- **Glassfrogs conceal blood in their liver to maintain transparency.** *Science (New York, N.Y.)*
  Taboada, C., Delia, J., Chen, M., Ma, C., Peng, X., Zhu, X., Jiang, L., Vu, T., Zhou, Q., Yao, J., O'Connell, L., Johnsen, S.
  2022; 378 (6626): 1315-1320

- **Poison frog dietary preference depends on prey type and alkaloid load.** *PloS one*
  Moskowitz, N. A., D'Agui, R., Alvarez-Buylla, A., Fiocca, K., O'Connell, L. A.
  2022; 17 (12): e0276331
- **Contrasting parental roles shape sex differences in poison frog space use but not navigational performance.** *eLife*
  Pasukonis, A., Serrano-Rojas, S. J., Fischer, M., Loretto, M., Shaykevich, D. A., Rojas, B., Ringler, M., Roland, A. B., Marcillo-Lara, A., Ringler, E., Rodriguez, C., Coloma, L. A., O'Connell, et al
  2022; 11
- **Definition of a saxitoxin (STX) binding code enables discovery and characterization of the anuran saxiphilin family.** *Proceedings of the National Academy of Sciences of the United States of America*
  Chen, Z., Zakrzewska, S., Hajare, H. S., Alvarez-Buylla, A., Abderemane-Ali, F., Bogan, M., Ramirez, D., O'Connell, L. A., Du Bois, J., Minor, D. L.
  2022; 119 (44): e2210114119
- **Noninvasive Detection of Chemical Defenses in Poison Frogs Using the MasSpec Pen.** *ACS measurement science Au*
  Krieger, A. C., Povilaitis, S. C., Gowda, P., O'Connell, L. A., Eberlin, L. S.
  2022; 2 (5): 475-484
- **Evidence that toxin resistance in poison birds and frogs is not rooted in sodium channel mutations and may rely on "toxin sponge" proteins**
  Abderemane-Ali, F., Rossen, N. D., Kobiela, M. E., Craig, R. Z., Garrison, C. E., Chen, Z., Colleran, C. M., O'Connell, L. A., Du Bois, J., Dumbacher, J. P., Minor, D. L.
  CELL PRESS.2022: 25
- **Aggressive but not reproductive boldness in male green anole lizards correlates with baseline vasopressin activity.** *Hormones and behavior*
  Kabelik, D., Julien, A. R., Waddell, B. R., Batschelett, M. A., O'Connell, L. A.
  1800; 140: 105109
- **Molecular physiology of pumiliotoxin sequestration in a poison frog.** *PloS one*
  Alvarez-Buylla, A., Payne, C. Y., Vidoudez, C., Trauger, S. A., O'Connell, L. A.
  2022; 17 (3): e0264540
- **Long distance homing in the cane toad (Rhinella marina) in its native range.** *The Journal of experimental biology*
  Shaykevich, D. A., Pasukonis, A., O'Connell, L. A.
  1800
- **Evidence that toxin resistance in poison birds and frogs is not rooted in sodium channel mutations and may rely on "toxin sponge" proteins.** *The Journal of general physiology*
  Abderemane-Ali, F., Rossen, N. D., Kobiela, M. E., Craig, R. A., Garrison, C. E., Chen, Z., Colleran, C. M., O'Connell, L. A., Du Bois, J., Dumbacher, J. P., Minor, D. L.
  2021; 153 (9)
- **Evolutionary insights into sexual behavior from whiptail lizards.** *Journal of experimental zoology. Part A, Ecological and integrative physiology*
  O'Connell, L. A., Crews, D.
  2021
- **Rapid toxin sequestration modifies poison frog physiology.** *The Journal of experimental biology*
  O'Connell, L. A., LS50: Integrated Science Laboratory Course, O'Connell, J. D., Paulo, J. A., Trauger, S. A., Gygi, S. P., Murray, A. W.
  2021
- **The Parental Dilemma: How Evolution of Diverse Strategies for Infant Care Informs Social Behavior Circuits.** *Frontiers in neural circuits*
  Autry, A. E., O'Connell, L. A.
  2021; 15: 734474
- **Social boldness correlates with brain gene expression in male green anoles.** *Hormones and behavior*
  Kabelik, D., Julien, A. R., Ramirez, D., O'Connell, L. A.
  2021; 133: 105007
- **The skin microbiome facilitates adaptive tetrodotoxin production in poisonous newts.** *eLife*
  Vaelli, P. M., Theis, K. R., Williams, J. E., O'Connell, L. A., Foster, J. A., Eisthen, H. L.

2020; 9

- **The plant terpenoid carvone is a chemotaxis repellent for C. elegans.** *microPublication. Biology*
  Ellington, C., Hayden, A., LaGrange, Z., Luccioni, M., Osman, M., Ramlan, L., Vogt, M., Guha, S., Goodman, M., O'Connell, L.
  2020; 2020
- **Multi-glomerular projection of single olfactory receptor neurons is conserved among amphibians.** *The Journal of comparative neurology*
  Weiss, L., Jungblut, L. D., Pozzi, A. G., Zielinski, B. S., O'Connell, L. A., Hassenklover, T., Manzini, I.
  2020
- **Multiglomerular projections of single olfactory receptor neurons are a conserved and distinct feature of the amphibian olfactory system**
  Weiss, L., Jungblut, L. D., Pozzi, A. G., Zielinski, B. S., O'Connell, L. A., Hassenkloever, T., Manzini, I.
  OXFORD UNIV PRESS.2020: 122
- **Studying convergent evolution to relate genotype to behavioral phenotype.** *The Journal of experimental biology*
  Gallant, J. R., O'Connell, L. A.
  2020; 223 (Pt Suppl 1)
- **Prospects for sociogenomics in avian cooperative breeding and parental care.** *Current zoology*
  Termignoni-Garcia, F. n., Louder, M. I., Balakrishnan, C. N., O'Connell, L. n., Edwards, S. V.
  2020; 66 (3): 293–306
- **Neural correlates of winning and losing fights in poison frog tadpoles.** *Physiology & behavior*
  Fischer, E. K., Alvarez, H. n., Lagerstrom, K. M., McKinney, J. E., Petrillo, R. n., Ellis, G. n., O'Connell, L. A.
  2020: 112973
- **Gene expression correlates of social evolution in coral reef butterflyfishes.** *Proceedings. Biological sciences*
  Nowicki, J. P., Pratchett, M. S., Walker, S. P., Coker, D. J., O'Connell, L. A.
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