# Lauren A. O'Connell

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## Positions

| | |
|---|---|
| Stanford University, Associate Professor, Department of Biology | 2024 – present |
| Marine Biological Laboratory, Co-Director of Neural Systems & Behavior | 2025 – 2029 |
| Stanford University, Assistant Professor, Department of Biology | 2017 – 2024 |
| Harvard University, Bauer Fellow, FAS Center for Systems Biology | 2012 – 2017 |

## Education

| | |
|---|---|
| University of Texas at Austin, Ph.D. Cellular and Molecular Biology | 2006 – 2011 |
| *Research Advisor: Dr. Hans Hofmann* | |
| Cornell University, B.S. Biological Sciences | 2004 – 2006 |
| Tarrant County Community College, A.A. Natural Sciences | 2002 – 2004 |

## Honors and Awards

| | |
|---|---|
| Presidential Early Career Award for Scientists and Engineers from President Biden | 2024 |
| Camille Dreyfus Teacher-Scholar Award ($100,000) | 2023 |
| Stanford Faculty Women's Forum Inspiring Early Academic Career Award | 2022 |
| Society for Neuroscience Janett Rosenberg Trubatch Career Development Award | 2021 |
| Stanford University Dean's Award for Distinguished Teaching | 2021 |
| HHMI Gilliam Fellowship for Advanced Study Mentor ($24,000) | 2020, 2022 |
| Pew Biomedical Scholar ($300,000) | 2020 |
| McKnight Scholar Award ($225,000) | 2020 |
| New York Stem Cell Foundation Robertson Investigator Award | 2020 |
| NIH Director's New Innovator Award | 2019 |
| Rosalind Franklin Young Investigator Award, Honorable Mention | 2019 |
| Rita Allen Foundation Scholar ($500,000) | 2019 |
| Kavli Fellow of the National Academy of Sciences | 2019 |
| Hellman Faculty Fellow ($40,000) | 2018 |
| Society for Behavioral Neuroendocrinology Frank A. Beach New Investigator Award | 2018 |
| L'Oreal USA Changing the Face of STEM Mentorship Award ($7,500) | 2016, 2018-19 |
| L'Oreal USA For Women in Science Fellowship ($60,000) | 2015 |
| National Geographic Society Explorer | 2015 |
| Adele Lewis Grant Fellowship from Graduate Women in Science ($10,000) | 2015 |
| International Society for Neuroethology Konishi Neuroethology Research Award | 2014 |
| International Society for Neuroethology Capranica Prize | 2013 |
| International Society for Neuroethology Young Investigator Award | 2012 |
| Society for Social Neuroscience Early Career Award | 2011 |
| Society for Behavioral Neuroendocrinology Young Investigator Award | 2011 |
| University of Texas – Austin William S. Livingston Outstanding Graduate Student Award | 2011 |
| Tarrant County College Natural Science Department Award of Excellence | 2003, 2004 |
| Louis Stokes Alliance for Minority Participation Research Award | 2003 |

## Publications *please see attached publication list for details*

- **69** peer reviewed original research publications
- **9** preprints and manuscripts under review
- **15** reviews and book chapters
- **8** scientific protocols
- **8** pedagogy focused publications (teaching & student-led publications)
- **5** manuscripts in preparation
- **1** textbook

## Sponsored Research Support *(I am the sole PI unless otherwise indicated)*

### Current funding

National Science Foundation – Integrative Organismal Systems, $1,227,000 2024 – 2028
*Ecophysiology of chemical defense evolution in poison frogs*
National Institute of Child Health and Human Development, $2,824,289 2023 – 2028
*Dopamine regulation of infant perceptual motor development and communication*
National Institute of Neurological Disorders and Stroke, $635,966 2023 – 2026
*Multiphoton imaging for understanding social brain function in tadpoles*
National Science Foundation – Division of Biological Infrastructure, $599,448 2023 – 2026
*BIORETS: INterSPecies Interactions Research Experience (INSPIRE)*

### Completed funding

National Institute of Neurological Disorders and Stroke, $655,927 (Co-PI) 2022 – 2024
*Mesh electronics for understanding space encoding in the amphibian brain*
New York Stem Cell Foundation – Robertson Neuroscience Investigator, $1,500,000 2019 – 2024
*A new model system for infant social decision-making*
National Science Foundation – Integrative Organismal Systems, $1,200,000 2019 – 2024
*CAREER: From ecology to neurobiology: spatial cognition in rainforest frogs*
National Institutes of Health – Director's New Innovator Award, $2,365,000 2019 – 2024
*Dietary tuning of infant social communication*
National Science Foundation – Integrative Organismal Systems, $1,600,000 2018 – 2023
*EDGE: Enabling functional genomics tools in amphibians*
National Science Foundation – Integrative Organismal Systems, $800,000 2016 – 2020
*Bioaccumulation mechanisms of defensive chemicals in a poison frog*

## Teaching Experience

### Current teaching activity

- ***Neural Systems & Behavior* course at the Marine Biological Laboratory** (Summer 2025 – 2029): I co-direct the famed NS&B course at the MBL – an advanced summer laboratory course focused on the neural basis of behavior.
- ***BIO 161: Organismal Biology Laboratory*** *(Developer & Lab Leader, undergraduate laboratory course):* I developed an undergraduate laboratory course focusing on organismal and integrative biology. Students learn to formulate hypotheses, conduct research, and write a journal-style article. This course has led to six research publications with all the students as co-authors and one pedagogy publication on how to integrate gene editing technologies into undergraduate teaching (Martin et al., 2020).
- ***BIO 84:* Physiology** (*Co-lecturer, undergraduate course*): This core course focuses on physiological processes in vertebrate animals, organized by organ systems. I co-resigned this course to incorporate more equitable teaching practices like active learning, peer sharing, more frequent learning assessments rather than exams, and writing extensive Narrative Notes rather than requiring a textbook.

### Previous teaching activity

- ***BIO 159: Herpetology*** *(Co-developer and co-lecturer - undergraduate laboratory course):* I co-created this course the provide hands on field experiences in organismal biology to undergraduate and graduate students. This course contains a mix of field and lab experiments, contract grading to empower student learning and assessments, and poster session highlighting student projects.
- ***BioPOP*** *(Co-developer, graduate mini-course):* I co-founded BioPOP (Biology Pre-Orientation Programing), a program for incoming graduate students to reduce isolation between tracks through team-based science, mitigate feelings of imposter syndrome, engage students in our collaborative community, and promote mental wellness from the very beginning of their Stanford experience.
- ***BIO 85: Evolution*** *(Co-lecturer, undergraduate course):* This core course focuses on historical and modern topics in Evolution, from natural selection to modern evolutionary principles. I helped redesign the Evolution course to incorporate more equitable teaching practices like active learning, peer sharing, frequent learning assessments, and external evaluations from the Center of Teaching and Learning.
- ***THINK15: How Does Your Brain Work?*** *(Developer and lecturer):* Thinking Matters courses are meant to enable critical thinking in incoming Stanford undergraduate students. I designed course material at the intersections of neuroscience, social justice, and science communication.

- ***LS50: Integrated Science*** *(Developer & Lab Leader, undergraduate laboratory component):* At Harvard University, I developed a laboratory module for this first-year undergraduate course where students learned how to formulate a hypothesis, perform research, and write a journal-style article. Work performed by students resulted to peer reviewed journal articles with all students as co-authors.

## Speaking Engagements

### Invited conference talks (*Plenary/Keynote)

1. International Meetings on the Neuroscience of Parenting. Barcelona, Spain. May 2025.
2. International Symposium on Olfaction and Taste. Reykjavik, Iceland. June 2024.
3. Society for Neuroscience. Washington D.C., USA. November 2023.
4. *European Society for Evolutionary Biology. Prague, Czech Republic (Virtual). August 2022.
5. International Society for Chemical Ecology. Kuala Lumpur, Malaysia (Virtual). August 2022.
6. *Alaska INBRE (IDeA Network of Biomedical Research Excellence, Virtual). October 2020.
7. National Academy of Sciences, Kavli Frontiers of Science, Irvine, CA. February 2019.
8. *International Society for Neuroethology, 13th Congress. Brisbane, Australia. July 2018.
9. Society for Molecular Biology and Evolution. Texas, USA. July 2017.
10. Society for Behavioral Neuroendocrinology, 21st Annual Meeting, California, USA. June 2017.
11. *Animal Behavior Society, 53rd Annual Conference, Missouri, USA. July 2016.
12. International Society for Neuroethology, 11th Congress. Sapporo, Japan. August 2014.
13. North American Society for Comparative Endocrinology. Querétaro, Mexico. May 2013.
14. Center for Studies in Behavioral Neurobiology. Montreal, Canada. November 2012.
15. International Society for Neuroethology, 10th Congress. Maryland, USA. August 2012.
16. Society for Social Neuroscience. Washington D.C., USA. November 2011.
17. International Society for Neuroethology, 9th Congress. Salamanca, Spain. August 2010.

### Invited research seminars and lectureships (*invitation by graduate students or postdocs)

1. Max Plank Institute for Chemical Ecology, Jena, Germany, July 2025.
2. Simons Foundation Presidential Lecture, Simons Foundation, New York, NY, May 2025.
3. Department of Organismic and Evolutionary Biology, Harvard University, Cambridge, MA, January 2025.
4. Department of Ecology and Evolutionary Biology, Yale University, New Haven, USA, January 2025.
5. Department of Integrative Biology, University of Texas at Austin, Austin, USA. August 2024.
6. Mahoney Institute for Neuroscience, University of Pennsylvania, Philadelphia, USA. January 2024.
7. *Department of Biology, Washington University, St. Louis, USA. December 2023.
8. *Department of Organismic and Evolutionary Biology, Harvard University, Cambridge, USA. Nov 2023.
9. Department of Biology, Florida State University, Tallahassee, USA. April 2023.
10. Department of Neurobiology, Duke University, Durham, USA. April 2023.
11. National Academy of Science Seymour Benzer/Sydney Brenner Lecture, Irvine, USA. April 2023.
12. *Museum of Comparative Zoology, University of California Berkeley, Berkeley, USA. March 2023.
13. *Department of Neuroscience, University of Chicago. Chicago, USA. October 2022.
14. Max Plank Institute for Neurobiology, Munich, Germany. December 2021.
15. Institute for Neuroscience, City University of New York. Virtual. April 2021.
16. Department of Biochemistry and Biophysics, University of California San Francisco. Virtual. April 2021.
17. *Department of Genetics, Yale University. Virtual Seminar. April 2021.
18. *Department of Ecology and Evolutionary Biology, Brown University. Virtual Seminar. March 2021.
19. Department of Psychology, University of Michigan. Virtual Seminar. December 2020.
20. Institute for Neuroscience, Georgia Institute of Technology. Virtual Seminar. November 2020.
21. Department of Psychology, University of Southern California. Virtual Seminar. November 2020.
22. Department of Biology, Indiana University. Virtual Seminar. October 2020.
23. Department of Physiology, McGill University. Virtual Seminar. October 2020.
24. Department of Ecology and Evolution, University of California – Davis, Davis, USA. May 2019.
25. Department of Psychology, University of California – Davis, Davis, USA. May 2019.
26. Department of Biology, San Francisco State University, San Francisco, USA. April 2019.
27. *Department of Molecular and Cell Biology, University of California, Berkeley, USA. March 2019.
28. *Department of Ecology & Evolution, Princeton University. Princeton, USA. December 2018.
29. Department of Biology, University of Utah. Salt Lake City, USA. September 2018.
30. *Department of Biology, University of Massachusetts – Amherst. Amherst, USA. March 2018.

31. Department of Biological Sciences, Chapman University. Orange, USA. November 2017.
32. *Department of Biology, Kansas State University. Manhattan, USA. December 2016.
33. *Department of Ecology and Evolution, University of Chicago. Chicago, USA. September 2016.
34. Department of Neurobiology and Behavior, Cornell University. Ithaca, USA. September 2016.
35. Department of Biology, University of North Carolina – Chapel Hill. Chapel Hill USA. September 2015.
36. *Department of Genetics, North Carolina State University. Raleigh, USA. November 2014.
37. Department of Biomedical Sciences, University of New Hampshire. Durham, USA. October 2014.
38. *School of Integrative Biology, University of Illinois Urbana–Champaign. Urbana, USA. October 2014.
39. Grass Foundation, Marine Biological Laboratories. Woods Hole, USA. June 2014.
40. Department of Integrative Biology, University of Texas at Austin. Austin, TX. May 2014.
41. Lewis–Sigler Institute of Integrative Genomics, Princeton University. New Jersey, USA. April 2014.
42. Department of Biology, Columbia University. New York, USA. March 2014.
43. Department of Biology, East Carolina University. Greenville, USA. October 2013.
44. Department of Ecology, Behavior, and Evolution, Boston University. Boston, USA. December 2012.
45. Department of Biology, McGill University. Montreal, Canada. November 2012.

## News features, interviews, popular science and other media communications

News features and media communications on research

eLife Magazine Digest. July 31. “Caring is Sharing”. M Fischer. 2025
Natal Gazing. May 21. “What mice and frogs can tell us about fatherhood.” D Saxbe. 2025
Stanford Report. April 9. “Research Matters: We need to understand how something works.” 2025
Knowable Magazine. April 24. “Mysteries of the poisonous amphibians.” G. Giller. 2023
SciTechDaily, Dec 26. “The Mystery Protein: Safeguarding Poison Dart Frogs from Their Own Toxins” 2023
Stanford Report, Dec 14. “Stanford researchers study frog spatial skills.” HM MacCormick. 2022
PBS KQED, June 22. “Meet a great dad from the animal world: The poison frog” E. DeFranco. 2022
Vox, May 26. “The frogs need poison to survive. Humans are messing with their supply.” B Jones. 2021
Stanford Report, Nov 21. “Motherly poison frogs shed light on the maternal brain.” K Than 2019

Science Interviews

The future of parent-child bonding. Podcast: The Future of Everything with Russ Altman. 2025
Setting up a frog colony and pair bonding with Lauren O’Connell. Podcast: Synaptic with B. Huggett. 2024
Parenting lessons from frogs and spiders. Podcast: From Our Neurons to Yours. April 13. 2023
Early career researchers: an interview with Lauren O'Connell. J Exp Biol. 220 (13): 2303–2305. 2017
Breaking Bio Podcast: Frogs, Fellowships, and Family with Dr. Lauren O’Connell. Sep 14. 2015

Interviews leading to our work being featured in popular science books

- Father Time by Sarah Hrdy
- Bitch by Lucy Cooke

Children’s Literature

Forward in Science Comics: Frogs: Awesome Amphibians. By Liz Prince. ISBN: 1250268869 2024

Science Policy Pieces

Federal funding affects us all. Mansfield Report. 21 July Letter to the Editor. 2025

## Research Advising

***I currently advise three postdoctoral fellows, seven PhD students, nine undergraduates and five scientific staff. I have served on over 18 graduate student thesis committees and supervised over eight undergraduate honors theses.***

### Mentorship

Training modules:

- The Science of Effective Mentorship
- Optimizing the Practice of Mentoring
- Leveling the Playing Field by Articulating Expectations
- Improving Communication with Your Mentee
- Sharing Mentorship Challenges and Solutions
- Culturally Aware Mentoring
- Promoting Research Self-Efficacy
- Raising Issues of Culture in the Research Mentoring Relationship
- Putting Culturally Aware Principles into Practice

Mentoring Certificates: HHMI Mentorship Skills Development Course through the Gilliam Program (X2), Optimizing the Practice of Mentoring, Harassment Prevention and Title IX

## Current lab members

### Current Postdoctoral Fellows (3)

| | | | |
|---|---|---|---|
| Najva Akbari | Ph.D. 2022 | Cornell University, Ithaca, USA | 2022 – present |
| *Wu Tsai Interdisciplinary Fellow, National Institutes of Health NRSA Postdoctoral fellow* | | | |
| Mabel Gonzalez | Ph.D. 2022 | Universidad de los Andes, Bogotá, Colombia | 2022 – present |
| *Pew Latin American Fellow* | | | |
| Victoria Watson-Zink | Ph,D. 2022 | University of California – Davis, Davis, USA | 2022 – present |
| *National Science Foundation Postdoctoral Fellow, Stanford Science Fellow, HHMI Hanna Gray Fellow* | | | |

### Current Graduate Students (7)

| | | |
|---|---|---|
| Billie Goolsby | Graduate Student in Biology | 2020 – present |
| *HHMI Gilliam Fellow, National Science Foundation Graduate Research Fellowship* | | |
| Neil Khosla | Graduate Student in Biology | 2021 – present |
| Max Madrzyk | Graduate Student in Biology | 2024 – present |
| Cesar Mena | Graduate Student in Biology | 2024 – present |
| *National Science Foundation Graduate Research Fellowship, Stanford Graduate Fellow* | | |
| Amanda Muñoz-Meneses | Graduate Student in Biology | 2022 – present |
| Mila Pamplona Barbosa | Graduate Student in Biology | 2022 – present |
| Shirley Jennifer Serrano Rojas | Graduate Student in Biology | 2022 – present |
| *Stanford Graduate Fellow* | | |

### Current Undergraduate Students (9)

| | | | |
|---|---|---|---|
| Natalie Bai | BS 2028 | Stanford University | 2025 – present |
| Melody Joy Daily | BS 2028 | Stanford University | 2024 – present |
| Jocelyn Ma | BS 2027 | Foothill College | 2024 – present |
| Keira Nakamura | BS 2026 | Stanford University | 2022 – present |
| Teisha Nichimitsu | BA 2026 | Stanford University | 2025 – present |
| Mei Li Palmeri | BS 2026 | Stanford University | 2023 – present |
| Vanessa Rodriguez | BS 2027 | Stanford University | 2024 – present |
| Maren Rudoph-Snyder | BA 2027 | Los Altos Hills College | 2025 – present |
| Katelyn Santa Maria | BS 2026 | Stanford University | 2024 – present |

### Current Scientific Staff (5)

| | | | |
|---|---|---|---|
| Leigh Henderson | *Research Technician* | MS 2016 | 2024 – present |
| Madison Lacey | *Animal Caretaker* | BS 2021 | 2023 – present |
| Jessica Nowicki | *Research Technician* | Ph.D. 2016 | 2016 – present |
| David Ramirez Rodriguez | *Lab Manager* | BS 2018 | 2020 – present |
| Camilo Rodríguez Lopez | *Data Analyst* | Ph.D. 2022 | 2023 – present |

### Biology Major Advisees (15)

- Baraa Abdelghne
- Corynn Branche
- Sofia Ceva
- Sowmya Chundi
- Gabrielle George
- Sara Goldstein
- Guillermo Molina
- Keira Nakamura
- Conner Oberhauser
- Jessie Ong
- Ernesto Orellana
- Mei Li Palmeri
- Mckenzie Quinn
- Samuel Wu
- Chuyi Zhang

## Former lab members

### Former Postdoctoral Fellows (7)

| | | | |
|---|---|---|---|
| Katie Fiocca | Ph.D. 2022 | Drexel University, Philadelphia, USA | 2022 – 2025 |
| *National Science Foundation Postdoctoral Fellow* | | | |
| *Current post: Lecturer at Stanford University* | | | |
| Bryan Juarez | Ph.D. 2021 | Iowa State University, Ames, USA | 2021 – 2024 |
| *National Science Foundation Postdoctoral Fellow* | | | |
| *Current post: Postdoctoral Research Associate at Ohio Wesleyan University* | | | |
| Marie-Therese Fischer | Ph.D. 2012 | University of Vienna, Vienna, Austria | 2020 – 2024 |
| *Erwin Schrödinger Fellow* | | | |
| *Current post: Research Scientist at the University of Vienna* | | | |
| Julie Butler | Ph.D. 2020 | Louisiana State University, Baton Rouge, USA | 2022 – 2023 |
| *National Science Foundation Postdoctoral Fellow* | | | |

*Current post: Assistant Professor at Augusta University*

Andrius Pasukonis — Ph.D. 2016 — University of Vienna, Vienna, Austria — 2016 – 2021
*Marie Skłodowska-Curie Fellow*
*Current post: Assistant Professor Vilnius University*

Eva Fischer — Ph.D. 2015 — Colorado State University, Fort Collins, USA — 2015 – 2019
*National Science Foundation Postdoctoral Fellow*
*Current post: Assistant Professor at University of California – Davis*

Alexandre–Benoit Roland — Ph.D. 2013 — ESPCI Paris, France — 2013 – 2017
*Current post: Research Scientist at CNRS Cayenne*

Former Graduate Students (4)

Daniel Shaykevich — Ph.D. 2024 — Stanford University, Stanford, USA — 2019 – 2024
*National Science Foundation Graduate Research Fellowship*
*Current post: Postdoctoral Fellow at the University of California Berkeley*

Aurora Alvarez-Buylla — Ph.D. 2023 — Stanford University, Stanford, USA — 2018 – 2023
*HHMI Gilliam Fellow, National Science Foundation Graduate Research Fellowship*
*Current post: Postdoctoral Fellow at the University of California Berkeley*

Stephanie Caty — Ph.D. 2023 — Stanford University, Stanford, USA — 2019 – 2023
*National Science Foundation Graduate Research Fellowship, Stanford Graduate Fellow*
*Current post: Postdoctoral Fellow at the Department of Energy*

Nora Martin (*née* Moskowitz) — Ph.D. 2022 — Stanford University, Stanford, USA — 2019 – 2022
*National Science Foundation Graduate Research Fellowship*
*Current post: Industry position in the Boston area*

Former Undergraduate Students (13)

| | | | |
|---|---|---|---|
| Penelope Baker | BS 2025 | Stanford University | Research Honors |
| Rachel D'Agui | BA 2023 | Stanford University | |
| Amaris Lewis | BS 2023 | Stanford University | Research Honors |
| Harmony Alvarez | BS 2022 | Stanford University | |
| Marina Luccioni | BA 2022 | Stanford University | Research Honors |
| Jordan McKinney | BS 2022 | Stanford University | Research Honors |
| Jules Wyman | BS 2022 | Stanford University | |
| Cooper Vasek | BS 2022 | San Francisco State University | |
| Moremi Mabogunje | BS 2021 | San Francisco State University | |
| Sarah Ludington | BS 2021 | Stanford University | Research Honors |
| Maximiliana Bogan | BS 2020 | Stanford University | |
| Christopher Jackson | BS 2020 | Stanford University | Research Honors |
| Aditya Iyer | BS 2019 | India Institute of Science | |
| Travis Ramirez | MS 2018 | Stanford University | |

Former Middle and High School Teachers (4)

| | | | |
|---|---|---|---|
| Aayesha Nangia | Huerta Middle School, Santa Clara, CA | Middle School Science | 2024 |
| Anjana Amirapu | Lowell High School, San Francisco, CA | High School Biology | 2023 |
| Barbara Dorritie | Cambridge Rindge and Latin, Boston, MA | High School Biology | 2017 |
| Tammy Fay | Masconomet Regional High School, MA | High School Biology | 2017 |

Former Biology Major Advisees (7)

- Harmony Alvarez
- Cyrus Hajian
- Michael James
- Madeleine Kriz
- Sarah Ludington
- Amaris Lewis
- Jordan McKinney

## Graduate student qualifying exam and/or thesis advisory committees *(committee chair in bold)*

Current Committees (10)

| | | | |
|---|---|---|---|
| Nim Robles | Schumer Lab | Stanford Biology | 2025 – |
| Tab Henry | Burmeister Lab | UNC Biology | 2025 – |
| William Pangburn | Schumer Lab | Stanford Biology | 2025 – |
| Mikaela Wilson | Clandinin Lab | Stanford Biology | 2025 – |
| AbuBakr Sangare | Barnes Lab | Stanford Biology | 2025 – |
| Sky Shi | Giocomo Lab | Stanford Biology | 2024 – |

| | | | |
|---|---|---|---|
| Alina Xiao | Luo Lab | Stanford Biology | 2023 – |
| Leonardi Gozali | Shah Lab | Stanford Biology | 2023 – |
| Caroline Arellano-Garcia | Goodman Lab | Stanford Biology | 2023 – |
| **Ilana Zucker-Scharff** | Clandinin Lab | Stanford Neuroscience | 2018 – |

Former Committees (8)

| | | | |
|---|---|---|---|
| Daniela Pareja Mejia | Solé Lab | Universidade Estadual de Santa Cruz | 2022 – 2025 |
| **Livia Wyss** | Wang Lab | Stanford Biology | 2020 – 2024 |
| **Tessa Logan** | Goodman Lab | Stanford Neuroscience | 2020 – 2023 |
| Pam Rios | Red-Horse Lab | Stanford Biology | 2019 – 2023 |
| Max Czapansky | Goldbogen Lab | Stanford Biology | 2020 – 2022 |
| Kimberly Howell | Richards-Zawacki Lab | University of Pittsburg | 2019 – 2022 |
| Callie Chappell | Fukami Lab | Stanford Biology | 2018 – 2022 |
| Andrew McKay | Burnet Lab | Stanford Biology | 2018 – 2020 |

## Service

### Stanford University Service

Department of Biology

| | |
|---|---|
| Graduate Admissions Committee, CMOB Member | 2024 – 2025 |
| Integrative & Organismal Biology Faculty Search Committee, Biology | 2023 |
| Co-Chair of the Diversity, Equity, Inclusion, and Belonging Committee | 2022 – 2024 |
| Integrative & Organismal Biology Faculty Search Committee, Biology | 2022 |
| Co-founder of the Stanford Biology PhD Preview Program | 2020 – 2022 |
| Director of BioPOP program (grad student pre-orientation programming) | 2020 – 2022 |
| Co-Founder of Biology Preview Program | 2020 – 2022 |
| Biology Undergraduate Studies Committee, Member | 2021 – 2022 |
| Graduate Admissions Committee, Evo Evo Member | 2020 – 2021 |
| Graduate Admissions Committee, CMOB Member | 2018 – 2020 |

University Wide

| | |
|---|---|
| Community Engagement, Inclusion, and Belonging Committee Chair, Institute for Neuroscience | 2024 – 2026 |
| Member of Committee to Support Students with Disabilities | 2022 – 2023 |

### Professional Leadership and Scientific Service

Advisory Boards, Panels, and Committees

| | |
|---|---|
| The Rowland Institute at Harvard, Scientific Advisory Board | 2024 – |
| National Science Foundation Committee of Visitors for Integrative Organismal Systems (IOS) | 2022 |
| National Academy of Science Committee on Functional Genomics | 2019 – 2020 |
| IUCN Amphibian Specialist Group on Genomics | 2020 – 2021 |

Professional Memberships

- Animal Behavior Society
- International Society for Neuroethology
- JB Johnston Club for Evolutionary Neuroscience
- Society for Behavioral Neuroendocrinology
- Society for Neuroscience
- Society for Social Neuroscience
- Society for the Study of Evolution

Editorial Duties

| | | |
|---|---|---|
| eLife | Reviewing Editor | 2019–2024 |
| Ecology and Evolution | Associate Editor | 2013–2017 |

Grant Review Panels

- National Science Foundation (NSF): Neural Systems Cluster (IOS), EDGE program

Grant Review Ad Hoc

- Austrian Science Foundation (FWF: Fonds zur Förderung der wissenschaftlichen Forschung)
- National Science Foundation Directorate for Biological Sciences (BIO): Behavioral Systems, Neural Systems – Modulation
- European Research Council
- German Research Foundation (DFG: Deutsche Forschungsgemeinschaft)

Scientific Peer Review

- Animal Behaviour
- Behavioral Brain Research
- Behavioral Ecology and Sociobiology
- Biology Letters
- BioTropica
- Brain Behavior & Evolution
- Comparative Biochemistry and Physiology
- Current Biology
- Ecology Letters
- Ethology Ecology & Evolution
- General and Comparative Endocrinology
- Genes Brain and Behavior
- Genome Biology and Evolution
- Ecology Letters
- Evolution Letters
- Hormones and Behavior
- Insect Science
- Journal of Chemical Neuroanatomy
- Molecular Ecology
- Nature
- Neuroscience Letters
- Physiology and Behavior
- PLoS Computational Biology
- PLoS ONE
- Proceedings of the National Academy of Science
- Proceedings of the Royal Society B
- Science
- Science Advances
- Scientific Reports

## Outreach & Other Activities

Lowell High School, San Francisco, CA 2024
*Guest Speaker: Introduction to scientific research as a career*

Night Life at the California Academy of Science, San Francisco, CA 2018 – 2019
*Scientific outreach booth on amphibians; over 100 adults attend*

Generation Sci – Bay Area Community College Outreach Event, Stanford, CA 2018 – 2019
*Invited Speaker, Panelist, and Scientific Outreach Booth Leader*

Stanford Biology Graduate Program, Stanford, CA 2018
*Invited Speaker, "Mentor-Mentee Relationships"*

Stanford Office of Postdoctoral Affairs, Stanford, CA 2017
*Invited Speaker – "How to prepare a research statement for an academic job"*

Bay Area Science Festival, San Francisco, CA 2017
*Scientific outreach booth on amphibians; over 1,000 children attended.*

## Publication List

### Preprints and manuscripts under review

1. Luccioni M, Wyman JT, Espinoza EO, **O'Connell LA**. Diet and chemical defenses of the Sonoran Desert toads. Preprint DOI: 10.1101/2023.10.06.561297
2. Goolsby BC, Fischer MT, Pareja Mejia D, Lewis AR, Raboisson G, **O'Connell LA**. Home security cameras as a tool for behavior observations and science equity. Preprint DOI: 10.1101/2023.04.17.537238
3. Butler JM, Singh D, Baker P, Edwards SV, Summers K, **O'Connell LA**. Dopamine neurons govern olfactory-gated infant begging behavior. Preprint DOI: 10.1101/2023.03.18.533277
4. McKinney JE, Ludington SC, Butler JM, **O'Connell LA**. Proopiomelanocortin (POMC) is a negative regulator of tadpole aggression through opioid receptor signaling. Preprint DOI: 10.1101/2022.11.28.518266
5. Juarez BH, **O'Connell LA**. Climate as a driver of global breeding periods in anurans. Preprint DOI: 10.1101/2022.07.21.501061v1
6. Martin NA, Rodriguez C, Alvarez-Buylla A, Fiocca K, Morrison CR, Chamba Carrillo A, Garcia Ruilova A, Renteria J, Tapia EE, Coloma LA, Donoso DA, **O'Connell LA**. Poison frog chemical defenses are influenced by dietary preferences and environmental availability of ants. Preprint DOI: 10.1101/2022.06.14.495949
7. Granados Frias D, Akbari N, **O'Connell LA**, Juarez BH. Non-lethal imaging and modeling approaches for estimating dry mass in aquatic larvae. Preprint DOI: 10.32942/X2393S
8. Fiocca K, Gonzalez M, **O'Connell LA**. Physiological adaptations enabling sequestration of chemical defenses in animals. *Invited review in revision at J Exp Biol.*
9. Goolsby BC, Dailey MJ, Coloma LA, **O'Connell LA**. Poison frogs. Invited Creature Column at Nature.

### Original research publications (all peer-reviewed, *co–first authorship)

1. Fischer MT, Xue KS, Costello EK, Dvorak M, Raboisson G, Robaczewska A, Caty SN, Relman DA, **O'Connell LA**. 2025. Effects of parental care on skin microbial community composition in poison frogs. eLife 14:RP103331. Preprint DOI: 10.1101/2024.09.11.612488. Article DOI: 10.7554/eLife.103331; PMID: 40742751
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## Protocols

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