Caleb Clifton Vogt, PhD

University of Colorado, Boulder
Boulder, CO 80301
Email: caleb.vogt@colorado.edu
Web: calebvogt.github.io

SUMMARY

Postdoctoral Research Associate in the Department of Molecular, Cellular & Developmental Biology at the University of Colorado, Boulder. My research focuses on investigating the behavioral and neural mechanisms underlying the maintenance and stability of social cooperation and conflict in freely ranging rodent species using innovative field biology methods and wireless multi-site data loggers. My expertise spans neurobiology, animal behavior, sociobiology, evolutionary anthropology, and technical analyses and methods for the neuroscience of animal behavior. I am committed to advancing our scientific understanding of the neural circuitry supporting the development of social structure, and the ecological and behavioral contexts which impact the cost-benefit dynamics involved in the maintenance of such structures.

EDUCATION & TRAINING

Postdoctoral Training *2025 – Present*
University of Colorado, Boulder - Boulder, CO USA
Laboratory: Dr. Zoe Donaldson Laboratory – Dept. of Molecular, Cellular & Developmental Biology

Postdoctoral Training *2024*
Cornell University - Ithaca, NY USA
Laboratory: Dr. Azahara Oliva and Dr. Antonio Fernandez-Ruiz Laboratory – Dept. of Neurobiology and Behavior

PhD *2017 – 2024*
Cornell University – Ithaca, NY USA
Concentration: Cellular and Molecular Neuroscience; Sociobiology
Committee: Dr. Michael J. Sheehan (Primary Mentor), Dr. Joseph Fetcho, Dr. Michael Webster
PhD Thesis: Behavioral Mechanisms Supporting Social Structure and Territory Formation in House Mice

BSc *2012 – 2016*
University of Michigan – Ann Arbor, MI USA
Concentration: Double Major in Neuroscience (Honors) and Evolutionary Anthropology
Neuroscience Honors Thesis: An Investigation of Oxytocinergic Modulation of Striatal Dopamine Neurochemistry and Behavior in the Male Prairie Vole
Committee: Dr. Brandon Aragona (Primary Mentor), Dr. Terry Robinson, Dr. Ben Dantzer

PUBLICATIONS

** = co-first authorship, † = undergraduate mentored co-author*

1. **Vogt, C.C.**, Lorman, S.G. † , and Donaldson, Z.R. (2026). "On aims and methods in field neuroethology: Investigating neural mechanisms of behavior in semi-natural and natural contexts." *Current Opinion in Neurobiology*, 99, p. 103241. Available at: https://doi.org/10.1016/j.conb.2026.103241
2. **Vogt, C.C.** and Sheehan, M.J. (2025). "The Sikkim mouse (Mus pahari) exhibits distinct spatial, circadian, and social behaviors compared to laboratory mice." *bioRxiv*, p. 2025.11.13.688123. Available at: https://doi.org/10.1101/2025.11.13.688123
3. Zipple, M.N., Chang Kuo†, D., Meng, X.†, Reichard, T.M.†, Guess, K.†, **Vogt, C.C.**, Moeller, A.H., Sheehan, M.J. (2025). *Genetically identical mice express alternative reproductive tactics depending on social conditions in the field.* Proceedings of the Royal Society B: Biological Sciences, 291(2019), p. 20240099. Available at: https://doi.org/10.1098/rspb.2024.0099
4. Miller, C. H., Reichard, T. M. † , Yang, J., Carlson-Clarke, B. † , **Vogt, C. C.**, Warden, M. R., & Sheehan, M. J. (2025). *Pregnancy modulates responses to male odors in house mice.* Hormones and Behavior 175, 105802. Available at: https://doi.org/10.1016/j.yhbeh.2025.105802
5. **Vogt, C. C.**, Zipple, M. N., Sprockett, D. D., Miller, C. H., Hardy, S. X. † , Arthur, M. K. † , Greenstein, A. M.†, Colvin, M. S., Michel, L. M., Moeller, A. H., & Sheehan, M. J. (2024). *Female behavior drives the formation of distinct social structures in C57BL/6J versus wild-derived outbred mice in field enclosures.* BMC Biology, 22(1), 35. Available at: https://doi.org/10.1186/s12915-024-01809-0
6. **Vogt, C. C.** (2024). *Behavioral Mechanisms Supporting Social Structure and Territory Formation in House Mice.* PhD Dissertation, Cornell University.
7. Zipple, M.N., **Vogt, C.C.**, and Sheehan, M.J. (2023). *Re-wilding model organisms: Opportunities to test causal mechanisms in social determinants of health and aging.* Neuroscience & Biobehavioral Reviews 152, 105238. Available at: https://doi.org/10.1016/j.neubiorev.2023.105238
8. Legan, A.W.*, **Vogt, C.C.*** and Sheehan, M.J. (2023) *'Postural analysis reveals persistent changes in paper wasp foundress behavioral state after conspecific challenge'*, Ecology and Evolution, 13(9), p. e10436. Available at: https://doi.org/10.1002/ece3.10436
9. Dahake, A., Jain, P., **Vogt, C.C.**, Kandalaft, W., Stroock, A.D., and Raguso, R.A. (2022). *A signal-like role for floral humidity in a nocturnal pollination system.* Nature Communications. Available at: https://doi.org/10.1038/s41467-022-35353-8
10. Jernigan, C. M., Stafstrom, J. A., Zaba, N. C.† , **Vogt, C. C.**, & Sheehan, M. J. (2022). *Color is necessary for face discrimination in the Northern paper wasp, Polistes fuscatus.* Animal Cognition. Available at: https://doi.org/10.1007/s10071-022-01691-9
11. Sheehan, M. J., Miller, C. H., **Vogt, C. C.**, & Ligon, R. A. (2018). *Behavioral Evolution: Can You Dig It?* Current Biology, 28(1), R19–R21. Available at: https://doi.org/10.1016/j.cub.2017.11.016

PRESENTATIONS

- **Vogt, C.C.** (2026) *Aims and Approaches in Field Neuroethology: Scaling behavioral observation from lab to field.* MMB Seminar, Department of Molecular, Cellular & Developmental Biology, University of Colorado, Boulder.
- **Vogt, C.C.** (2025) *Beyond the Cage: A rewilding approach for investigating the neural basis of selective social attachment and loss.* MMB Seminar, Department of Molecular, Cellular & Developmental Biology, University of Colorado, Boulder.
- **Vogt, C.C.** (2025) *Beyond the Cage: Harnessing High-resolution Spatial Monitoring and Field Neuroscience to Investigate Mammalian Social Structure.* Behavioral Neuroscience Scientific Skills Development Seminar Series, University of Colorado, Boulder
- **Vogt, C.C.** (2024) *Beyond the Cage: Social structure and territoriality in rewilded lab and wild mice.* PhD Dissertation Defense, Department of Neurobiology and Behavior, Cornell University.
- **Vogt, C.C.** (2023) *A World of Waldos: Deletion of the major urinary protein gene family alters house mouse spatial and social structure.* Neurobiology and Behavior Presentation Series. Cornell University
- Zipple, M., **Vogt, C.C.**, Sheehan, M. (2023) *The Best of Both Worlds: The Power and Opportunities of Re-Wilded Model Organisms.* Animal Behavior Society Meeting. Portland, OR.
- **Vogt, C.C.** et al. (2022) *Effects of psilocybin on the social and spatial structure of re-wilded laboratory mice.* Neurobiology and Behavior Graduate Student Symposium Talk. Cornell University.
- **Vogt, C.C.** et al. (2022) *The spatial and social organization of re-wilded lab mice.* Neurobiology and Behavior Graduate Student Recruitment Talk. Cornell University
- **Vogt, C.C.** et al. (2021) *Spatial and social structure of re-wilded lab mice.* Society for Social Neuroscience Conference Virtual Poster.
- **Vogt, C.C.** et al. (2019) *Strain variation in male territorial aggression and effects on female space use in house mice.* Neurobiology and Behavior Graduate Student Symposium Invited Talk. Cornell University.
- **Vogt, C.C.** et al. (2018) *Effects of social upheaval on female space use and foraging behavior in re-wilded laboratory mice.* International Society for Behavioral Ecology Poster, Minneapolis, MN.
- **Vogt, C.C.** et al. (2016) *An investigation of oxytocinergic modulation of striatal dopamine neurochemistry and behavior in the male prairie vole.* Molecular, Cellular, & Developmental Biology Undergraduate Research Symposium Poster, University of Michigan.
- **Vogt, C.C.** et al. (2016) *Validation of a novel method in paleoneurology: endocast 3D scanning and printing.* Hominid Origins Project Symposium Poster, University of Michigan.
- **Vogt, C.C.** et al. (2013) *Head stability in genetically modified mice.* Undergraduate Research Opportunity Program Project Symposium Poster, University of Michigan.

RESEARCH EXPERIENCE

Dr. Zoe Donaldson Laboratory - Dept. of Molecular, Cellular & Developmental Biology, University of Colorado, Boulder *2025 – Present*

Dr. Azahara Oliva and Dr. Antonio Fernandez-Ruiz Laboratory - Dept. of Neurobiology and Behavior, Cornell University *2022 – 2024*

Dr. Michael J. Sheehan Laboratory - Dept. of Neurobiology and Behavior, Cornell University *2017 – 2024*

Dr. Melissa R. Warden Laboratory - Dept. of Neurobiology and Behavior, Cornell University *2017 – 2019*

Dr. Monica Dus Laboratory, Research Technician - Department of Molecular, Cellular, and Developmental Biology, University of Michigan *2016 – 2017*

Dr. Brandon Aragona Laboratory, Lab Manager and Research Assistant - Department of Biopsychology, University of Michigan *2014 – 2016*

Dr. Ben Dantzer Laboratory, Research Assistant - Department of Biopsychology, University of Michigan *2014 – 2015*

Dr. John C. Mitani Laboratory, Research Assistant - Department of Anthropology, University of Michigan *2013 – 2014*

Dr. William M. King Laboratory, Research Assistant - Department of Otolaryngology and Kresge Hearing Research Institute, University of Michigan Hospital and Health System *2012 – 2013*

GRANTS, FELLOWSHIPS, & AWARDS

- Department of Neurobiology and Behavior Potter Fellowship, Cornell University, Spring 2024
- Mong Junior Neurotechnology Fellow, Cornell University, 2022-2023
- Cornell Lab Outstanding Graduate Student Award (Nominated), Cornell University, 2022
- Neurobiology & Behavior Departmental Research Grant in Animal Behavior, Cornell University, 2020
- Neurobiology & Behavior Departmental Research Grant in Animal Behavior, Cornell University, 2019
- Cornell University Graduate School Conference Travel Grant, Cornell University, 2018
- Neurobiology & Behavior Departmental Research Grant in Animal Behavior, Cornell University, 2018
- Neurobiology & Behavior Summer Research Fellowship, University of Michigan, 2015
- Undergraduate Research Opportunity Program Biomedical & Life Sciences Summer Fellowship, University of Michigan, 2013

TEACHING

Instructor of Record, Cornell University

- **Fall 2020,** Cognition Evolving – Deep Origins of Human Brain Adaptations (BIONB 1220, First Year Writing Seminar) ***Position declined, alternative funding acquired
- **Fall 2020,** Social Neurobiology – Evolution of the Social Brain (BIONB 1220, First Year Writing Seminar)
- **Spring 2020,** Social Neurobiology - From Circuits to Societies (BIONB 1220, First Year Writing Seminar)

Graduate Teaching Assistant, Cornell University

- **Spring 2022,** Principles of Neurophysiology (BIONB 4910)
- **Fall 2021,** Behavioral Ecology, Evolution and Genomics (BIONB 3230)
- **Spring 2019,** Introduction to Neurobiology (BIONB 2220)
- **Fall 2018,** Introduction to Behavior (BIONB 2210)

MENTORSHIP

Undergraduate Mentorship

- **Samuel Garmanay,** University of Colorado, Boulder, Class of 2027, UROP Fellow
- **Sophia Lorman,** University of Colorado, Boulder, Class of 2027, David E Drutz Scholarship, Sesquicentennial Scholar, UROP Fellow
- **Kwynn Guess,** Cornell University, Class of 2024, Honors Thesis Student
- **Daniel Chang,** Cornell University, Class of 2024, Honors Thesis Student, NSF GRFP Fellow
- **Tess Reichard,** Cornell University, Class of 2023, Honors Thesis Student
- **Summer Hardy,** Cornell University, Class of 2023, Honors Thesis Student
- **Cassie Meng,** Cornell University, Class of 2023, Honors Thesis Student
- **Riya Yerramilli,** Cornell University, Class of 2024
- **Adam Greenstein,** Cornell University, Class of 2021, M.D. Candidate at the University of Buffalo
- **Matthew Arthur,** Cornell University, Class of 2021, M.D. Candidate at Harvard Medical School, Honors Thesis Title: *Temporal Changes in Space Use in Territorial Male Mice in a Large Naturalistic Enclosure*
- **Yuqui (Ruby) Guo,** Cornell University, Class of 2020
- **Kaelynn Workman,** Cornell University, Class of 2019, M.D. Candidate at Case Western Reserve University School of Medicine, Honors Thesis Title: *Investigating sociability and partner preference in Mus spicilegus, Mus Pahari, and Mus musculus domesticus*

PROFESSIONAL & ACADEMIC SERVICE

- **Reviewer for:** *Scientific Reports, Biological Theory, Agricultural and Forest Entomology*
- **Panel Member,** Neurobiology & Behavior Diversity & Inclusion Graduate School Preview Weekend, Cornell University, 2021
- **Executive Recruitment Committee,** Neurobiology and Behavior Graduate Student Society, Cornell University, 2020 - 2021
- **President,** Neurobiology and Behavior Graduate Student Society, Cornell University, 2018 – 2019
- **President,** Project MYELIN at Cornell, Cornell University. Funded MYELIN neuroscience outreach chapter at Cornell, 2018 – 2020
- **Volunteer,** Michigan MYELIN Project, University of Michigan. Neuroscience outreach organization for K-8 children, 2015 – 2017

PRESS

- *When placed outdoors, female lab mice behave very differently*, Cornell Chronicle, 2024
- *Toxic Tours and Chimp Lasers*, University of Michigan LSA Magazine, 2014
- *Contests for grants to be held at U-M*, The Detroit News, 2014

REFERENCES

Dr. Zoe Donaldson
Associate Professor
Department of Molecular, Cellular, and Developmental Biology
University of Colorado, Boulder
zoe.donaldson@colorado.edu

Dr. Michael Sheehan
Nancy and Peter Meinig Family Investigator in the Life Sciences, Associate Professor
Department of Neurobiology and Behavior
Cornell University
msheehan@cornell.edu

Dr. Azahara Oliva
Assistant Professor
Department of Neurobiology & Behavior
Cornell University
ao035@cornell.edu

Dr. Antonio Fernandez-Ruiz
Assistant Professor
Department of Neurobiology & Behavior
Cornell University
afr77@cornell.edu

Dr. Monica Dus
Associate Professor
Department of Molecular, Cellular, and Developmental Biology
University of Michigan
mdus@umich.edu

Dr. John Mitani
James N. Spuhler Collegiate Professor
Department of Anthropology
University of Michigan
mitani@umich.edu