

Robin M. Mitchell

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Education

Mills College – Oakland, CA August 2019 – Expected May 2022
B.A. Biochemistry & Molecular Biology
Thesis: Deficient mechanosensation in *mec-3* decreases precipice response in *C. elegans*

Laney College – Oakland, CA January 2019 – May 2019
Mathematics coursework to prepare for transfer

University of California, Berkeley – Berkeley, CA August 2017 – August 2018
Intended major in Neurobiology

Publications

Mitchell, RM; Pattillos, DS; Zhang, S; Young, JJ. (2021). Deficient mechanosensation in *mec-3* decreases precipice response in *C. elegans*. *microPublication Biology*.
<https://doi.org/10.17912/micropub.biology.000429>.

Research Experience

Undergraduate Research Scientist, Young Lab, Mills College December 2020 – Present

- Devised methodology to characterize a previously unresearched behavioral phenomenon called the precipice response in *C. elegans*
- Performed mechanosensory and other behavioral assays to link mechanosensation to the precipice response (see publication)
- Wrote an abstract that was accepted for a poster session at the International *C. elegans* conference
- Wrote a grant to secure funding to present this work at the International *C. elegans* conference

Research Assistant, Behavioral Ecology Lab, Mills College January 2020 – Present

- Extracted glucocorticoid metabolites from California ground squirrel fecal samples and ran ELISAs to elucidate connections between stress levels and intrinsic factors of individuals
- Translated audio field notes into an Excel database of squirrel social and spatial information
- Catalogued and organized over eight years' worth of DNA samples and glucocorticoid extracts
- Trained new lab members on fecal glucocorticoid metabolite extraction procedure

Research Scholar, Jill Barrett Undergraduate Research Program, Mills College May – July 2021

- Extracted glucocorticoid metabolites from California ground squirrel fecal samples and ran ELISAs to elucidate connections between stress levels and intrinsic factors of individuals
- Live-trapped and handled free-living squirrels in preparation for processing and data collection
- Isolated DNA from squirrel tissue samples and standardized samples for library preparation

Skills

Lab:

Competitive enzyme-linked immunosorbent assays (ELISAs)	Nanodrop
<i>C. elegans</i> maintenance	Micropipetting
<i>C. elegans</i> mechanosensory assays	Aseptic technique
Fecal glucocorticoid metabolite extraction	Bacterial isolation
Small rodent handling	Differential staining
DNA extraction from tissue samples	Light microscopy
DNA standardization for library preparation	Video recording equipment used with microscopes
	Autoclaving

Professional:

Proficient in Microsoft Office Suite
Grant writing

Awards and Grants

- Alfie Ogborn Jackson Barry Prize, Mills College** 2022
- Awarded annually by the Mills College Chemistry Department to one outstanding chemistry or biochemistry student
- Undergraduate Research Opportunity Program Grant, Mills College** 2022
- Awarded \$500 by Mills College to conduct research into mechanisms underlying a novel behavior called the precipice response in *C. elegans* under the supervision of Dr. Jared Young
- Jill Barrett Research Scholarship, Mills College** 2022
- Awarded a highly competitive \$3500 stipend to participate part-time in an 11-week research program as a Research Scholar
- Phi Beta Kappa Honor Society** 2021
- Students selected on the basis of outstanding academic achievements as undergraduates at Mills College and for records of having met high standards of personal conduct and academic integrity
- Undergraduate Research Opportunity Program Grant, Mills College** 2021
- Awarded \$153 by Mills College to present a research project at the 23rd International *C. elegans* Conference
- Jill Barrett Research Scholarship, Mills College** 2021
- Awarded a highly competitive \$4000 stipend plus \$2500 for on-campus housing to participate in a full-time 11-week research program as a Research Scholar
- Russell Women in Science Scholar, Mills College** 2020
- Selected as a Research Scholar for an endowed research position in the Chemistry Department at Mills College; this research was canceled due to COVID-19

Posters and Presentations: Extramural

Oral Presentations:

- Alrashid, Z., **Mitchell, R.M.**, Ortiz-Jimenez, C., Conroy, S., Mochizuki, S., Smith, J.E. (2021 Aug 6). Effects of anthropogenic activity on stress physiology and its consequences for habitat selection. Animal Behavior Society 2021 Virtual Meeting.

Posters:

- **Mitchell, R.**, Zhang, S., Pattillos, D., Young, J. (2021 June 23). Reversal behavior upon encountering a cliff involves mechanosensation. 23rd International *C. elegans* Conference.

Posters and Presentations: Mills College

Oral Presentations:

- **Mitchell, R.M.** (2021 Nov 23). Deficient mechanosensation in *mec-3* decreases precipice response in *C. elegans*. Presentation to the faculty of the Biology Department at Mills College.
- Alrashid, Z., **Mitchell, R.M.** (2021 Oct 11). Effects of anthropogenic activity on stress physiology in California ground squirrels. Jill Barrett Research Symposium.

Posters:

- **Mitchell, R.**, Zhang, S., Pattillos, D., Young, J. (2021 Oct 11). Reversal behavior upon encountering a cliff involves mechanosensation. Jill Barrett Research Symposium.
- Baldoza, J.E., von Maydell, K.P., Weinberger, T.M., **Mitchell, R.M.**, Holding, M.L., Tarvin, R.D., Sudmant, P.H., Smith, J.E. (2021 Oct 11). Heritability of risk-sensitivity behaviors of California ground squirrels through whole-genome sequencing. Jill Barrett Research Symposium.

Teaching Experience

Neurobiology Teaching Assistant, Mills College

January 2022 – Present

- Provided academic support for students in BIO 175 (Neurobiology) in preparation for exams and homework completion; assisted with grading and providing feedback on student work
- Supported students in BIO 175L with laboratory procedures and projects

Peer Tutor, Mills College

August 2020 – Present

- Tutored for the following courses: Organic Chemistry I & II, Biochemistry I & II, General Biology I & II, General Physics I, Genetics, and Neurobiology
- Met one-on-one with peers to work through material and develop study plans

Genetics Teaching Assistant, Mills College

August – December 2021

- Provided academic support for students in BIO 135 (Genetics) in preparation for exams and homework completion; assisted with grading and providing feedback on student work

General Biology Teaching Assistant, Mills College

August 2020 – December 2021

- Fall 2020 & Spring 2021: Wrote review packets, led weekly discussion sections, and held office hours for students in BIO 001 and 002 (General Biology I and II)
- Fall 2021: Designed co-curriculum alongside professors to enhance students' use of metacognitive skills to improve learning

Private Tutor

February 2018 – May 2021

- Provided academic support and assisted with development of study strategies for middle- and high-school students in the following courses: Algebra I, Geometry, Algebra II/Trigonometry, Biology, Chemistry, Probability and Statistics, English I/II, AP English Language & Composition, Spanish I/II/III

Other Work Experience

Supervisor/Butcher, Star Meats LLC, Berkeley CA

August 2017 – September 2021

- Prepared merchandise for sale by cutting meat, poultry, and fish; pumping sausage; and making ready-to-eat dishes
- Took inventory and placed several orders each week

Student Theatre Technician, West Contra Costa Unified Schools

May 2016 – June 2017

- Worked primarily as a sound board operator to control microphones and speakers onstage for a variety of events, including plays, awards ceremonies, band concerts, dance performances, and graduations

Professional Organization Membership

Genetics Society of America, 2021–present

Animal Behavior Society, 2021–present