

OLIVIA KOSTERLITZ

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EDUCATION

- 2016 – Present **Ph.D. in Biological Sciences, University of Washington**
Advisor: *Benjamin Kerr*
Advisory Committee: *Toby Bradshaw, Maitreya Dunham, Jennifer Nemhauser*
- 2012 – 2016 **B.S. in Biology, University of Utah**
Minor in Chemistry
Advisor: *Richard Clark*

RESEARCH EXPERIENCE

- 2018 – present NSF Graduate Research Fellow, Kerr Lab, University of Washington Biology Department
Advisor: *Benjamin Kerr*
- 2017 – 2018 Research Assistant, Kerr Lab, University of Washington Biology Department
Advisor: *Benjamin Kerr*
- 2017 Rotation, Promislow Lab, University of Washington Biology Department
Advisor: *Daniel Promislow*
- 2016 Rotation, Amemiya Lab, Benaroya Research Institute
Advisor: *Chris Amemiya*
- 2015 – 2016 Research Technician, Clark Lab, University of Utah Department of Biology
Advisor: *Richard Clark*
- 2014 – 2015 Research Assistant, Pain Research Center, University of Utah Department of Anesthesiology
Advisor: *Akiko Okifuji*
- 2014 – 2015 Research Associate, Emergency Room University of Utah Hospital
- 2014 Research Coordinator, Behavioral Business Laboratory, University of Utah Spencer Eccles School of Business
Advisor: *Jennifer Overbeck*

PUBLICATIONS

* Joint first authors

Published

- Wybouw N, Kurlovs AH, Greenhalgh R, Bryon A, **Kosterlitz O**, Manabe Y, Osakabe M, Vontas J, Clark RM, and Van Leeuwen T. (2019). Convergent evolution of cytochrome P450s underlies independent origins of keto-carotenoid pigmentation in animals. *Proceedings of the Royal Society B: Biological Sciences* **286**, 20191039. <https://doi.org/10.1098/rspb.2019.1039>
- Snoeck S, Kurlovs AH, Bajda S, Feyereisen R, Greenhalgh R, Villacis-Perez E, **Kosterlitz O**, Dermauw W, Clark RM, and Van Leeuwen T. (2019). High-resolution QTL mapping in *Tetranychus urticae* reveals acaricide-specific responses and common target-site resistance after selection by different METI-I acaricides. *Insect Biochemistry and Molecular Biology* **110**, 19–33. <https://doi.org/10.1016/j.ibmb.2019.04.011>.

Wybouw N*, **Kosterlitz O***, Kurlovs AH, Bajda S, Greenhalgh R, Snoeck S, Bui H, Bryon A, Dermauw W, Leeuwen TV, and Clark RM. (2019). Long-Term Population Studies Uncover the Genome Structure and Genetic Basis of Xenobiotic and Host Plant Adaptation in the Herbivore *Tetranychus urticae*. *Genetics* 211, 1409–1427. <https://doi.org/10.1534/genetics.118.301803>.

Under review or in prep

Kurlovs AH, Snoeck S, **Kosterlitz O**, Leeuwen TV, and Clark RM (under review). Trait mapping in arthropods by bulk segregant analysis.

Kurlovs AH*, **Kosterlitz O***, Bui H, Greenhalgh R, Snoeck S, Bryon A, Leeuwen TV, and Clark RM (in prep). Forces shaping genetic diversity in the globally distributed generalist herbivore, *Tetranychus urticae*.

McGee R, **Kosterlitz O**, Kerr B, and Bergstrom C. (in prep). No pain no gain. Information acquisition is bounded by substitutional load.

Jordt H, Thibault S, **Kosterlitz O**, Top EM, and Kerr B. (in prep). Coevolution of host plasmid pairs facilitates the emergence of novel multi-drug resistance.

FELLOWSHIPS and GRANTS

2019	National Science Foundation BEACON research grant, Co-authors: <i>Doug Fowler</i> and <i>Ben Kerr</i> (\$27,000)
2019	National Science Foundation BEACON research grant, Co-authors: <i>Ryan McGee</i> , <i>Ben Kerr</i> , and <i>Carl Bergstrom</i> (\$25,000)
2019	Travel grant, BEACON an NSF Center for the Study of Evolution in Action (\$1,000)
2019	Graduate School Travel Grant, University of Washington (\$500)
2018	NSF Graduate Research Fellowship (\$34,000 x 3 years plus tuition)
2018	UW-Illumina Grant Program (\$1,500)
2018	National Science Foundation BEACON research grant, Co-authors: <i>Ashely Teufel</i> and <i>Ben Kerr</i> (\$54,000)
2018	Graduate and Professional Student Senate (GPSS) travel grant, University of Washington (\$500)
2017	Travel Grant, BEACON an NSF Center for the Study of Evolution in Action (\$1,000)
2014	Undergraduate Research Opportunity Fellowship, University of Utah Office of Undergraduate Research (\$2,400)

SCHOLARSHIPS, HONORS, and AWARDS

2019	Best talk, Gordon Research Seminar Microbial Population Biology, Andover, NH.
2018	R.C. Lewontin Early Career Award, Society for the Study of Evolution (\$2,300)
2017	National Defense Science & Engineering Graduate (NDSEG) Fellowship Finalist, Department of Defense (DoD)
2016	Undergraduate Research Scholar, University of Utah
2015 – 2016	Campus Involvement Scholarship, University of Utah (\$5,000)
2015	Outstanding Service Award, Phi Eta Sigma National Honor Society, University of Utah
2012 – 2013	Full tuition scholarship, University of Utah Dance Department (\$10,000)

ORAL PRESENTATIONS

*indicates undergraduate researchers

- 2019 Gordon Research Conference Microbial Population Biology, Andover, NH.
Kosterlitz O, Glenney C, Singhal S, and B Kerr. “A poison that is its own antidote”
- 2019 Gordon Research Seminar Microbial Population Biology, Andover, NH.
Kosterlitz O, Glenney C, Singhal S, and B Kerr. “A poison that is its own antidote”
- 2018 Graduate Student Symposium, Seattle, WA.
Kosterlitz O, Conlin P, Falter R*, Fowler D, and B Kerr. “Double bind or double duty? Identifying evolutionary trade-offs in beta-lactamase”
- 2017 Deep Mutational Scanning Research Symposium, Seattle, WA.
Kosterlitz O, Conlin P, Fowler D, and B Kerr. “Double bind or double duty? Identifying evolutionary trade-offs in beta-lactamase”
- 2016 Biology Undergraduate Research Symposium, Salt Lake City, UT.
Kosterlitz O, Kurlovs AH, and Clark RM. “The genetic architecture of diapause”

POSTERS

*indicates undergraduate researchers

- 2019 Deep Mutational Scanning Research Symposium, Seattle, WA.
Kosterlitz O, Conlin P, Falter R*, Fowler D, & B Kerr. “Double bind or double duty? Identifying evolutionary trade-offs in beta-lactamase”
- 2018 Evolution (International Joint Meeting), Montpellier, France.
Kosterlitz O, Conlin P, Falter R*, Fowler D, & B Kerr. “Double bind or double duty? Identifying evolutionary trade-offs in beta-lactamase”
- 2018 BEACON Congress, Lansing, MI.
Kosterlitz O, Conlin P, Fowler D, & B Kerr. “Double bind or double duty? Identifying evolutionary trade-offs in beta-lactamase”
- 2017 BEACON Congress, Lansing, MI.
Kosterlitz O, Conlin P, Fowler D, & B Kerr. “Double bind or double duty? Identifying evolutionary trade-offs in beta-lactamase”
- 2016 Undergraduate Research Symposium, Salt Lake City, UT.
Kosterlitz O, Iacob E, & Okifuji A. “The Relationship between Fibromyalgia and Sleep”

TEACHING EXPERIENCE

- 2018 – 2019 Field Trip Instructor, Department of Biology, University of Washington
Introductory Evolution and Ecology
- 2016 – 2018 Teaching Assistant, Department of Biology, University of Washington
Introductory Molecular and Cellular Biology (*Instructor: Ben Wiggins*)
Introductory Evolution and Ecology (*Instructors: Scott Freeman and Jake Cooper*)
Evolution and Systematics (*Instructor: Hannah Jordt*)
- 2015 – 2016 Tutor, Biology Learning Center, University of Utah

Courses: Genetics, Cell Biology, Evolution and Diversity, Introductory Biology, Biochemistry

2014 – 2016 Teaching Assistant, University of Utah College of Science
Cell Biology (*Instructor: Daryl Kropf*)
Organic Chemistry II (*Instructor: Matthew Sigman*)
Organic Chemistry I, (*Instructor: Holly Sebahar*)
Introductory Biology, (*Instructor: Renee Dawson*)

MENTORING

2019 – present Bailey Werner. *Undergraduate*. Kerr Lab, University of Washington.
2019 – present Claire Wate. *Undergraduate*. Kerr Lab, University of Washington.
2019 Miranda Mudge. *Graduate Student*. Kerr Lab, University of Washington.
2017 – 2019 Reilly Falter. *Undergraduate*. Kerr Lab, University of Washington.
Oral presentation, Mary Gates research symposium, University of Washington, 2019
John & Dorothy Franco Award. Department of Biology, University of Washington, 2019
Mary Gates Research Scholarship, University of Washington, 2018
Poster presentation, BEACON Congress, Michigan State University, 2017
2017 Haley Dixon. *Undergraduate*. Promislow Lab, University of Washington

SERVICES and ACTIVITIES

2019 Peer Reviewer, *Journal of Molecular Evolution*
2019 Participant, ComSciCon-PNW: Communicating Science Workshop, Seattle, WA.
2019 Co-organizer, Deep mutational scanning symposium, Seattle, WA. (Sponsored by Brotman-Baty Institute and Illumina)
2018 – present Graduate Student Coordinating Committee, Department of Biology, University of Washington
2018 – 2019 Faculty Search Committee, Department of Biology, University of Washington
2017 – 2018 Biology Education Research Journal Club, University of Washington
2017 – 2018 Volunteer, UW Science Explorers NSF funded outreach program, University of Washington
2017 Co-organizer, Deep mutational scanning symposium, Seattle, WA. (Sponsored by Illumina and SGI-DNA)
2017 – 2018 Volunteer, Burke Museum, University of Washington
2017 – 2018 Career Seminar Committee, Department of Biology, University of Washington
2016 – 2017 Volunteer, UW Dream Project, University of Washington
2016 Volunteer, Seattle Aquarium, Seattle, WA.
2013 – 2016 Volunteer, Road Home Homeless Shelter, Salt Lake City, UT.
2013 – 2016 Volunteer, Big Brothers Big Sisters, Salt Lake City, UT.
2014 – 2016 Volunteer, Melihah Free Clinic, Midvale, UT.

2015 – 2016	President, Phi Eta Sigma National Honor Society, University of Utah
2013 – 2015	Volunteer, Inspiration Hospice, Salt Lake City, UT.
2014 – 2015	Service and Education Committee, Phi Eta Sigma National Honor Society, University of Utah