

CASSANDRA LANE ETTINGER

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EDUCATION

UNIVERSITY OF CALIFORNIA, DAVIS 2013 – present

- PhD Candidate, Integrative Genetics & Genomics Graduate Group
- Dissertation: Surveying the taxonomic and functional diversity of the bacterial and fungal communities associated with the seagrass, *Zostera marina*
- Advisor: Dr. Jonathan Eisen

UNIVERSITY OF CALIFORNIA, BERKELEY 2009 – 2013

- B.A., Molecular & Cell Biology – Genetics, Genomics & Development Emphasis
- Honors thesis: "Genetic variation in abiotic tolerance and symbiotic quality among wild rhizobium bacteria"
- Advisor: Dr. Ellen Simms

UNIVERSITY OF YORK, UNITED KINGDOM 2012

- Visiting Scholar, Biology & Archaeology Departments
- Research project: Investigation of the role of dopamine in *Drosophila* vision and its relation to Parkinson's disease
- Advisor: Dr. Christopher Elliot

PEER-REVIEWED PUBLICATIONS

Ettinger CL & Eisen JA. 2019. Characterization of the mycobiome of the seagrass, *Zostera marina*, reveals putative associations with marine chytrids. *Frontiers in Microbiology*. DOI: [10.3389/fmicb.2019.02476](https://doi.org/10.3389/fmicb.2019.02476)

Amend A, Burgaud G, Cunliffe M, Edgcomb VP, **Ettinger CL**, Gutiérrez MH, Heitman J, Hom E, Ianiri G, Jones A, Kagami M, Picard K, Quandt A, Raghukumar S, Riquelme M, Stajich JE, Vargas-Muñiz J, Walker AK, Yarden O & Gladfelter AS. 2019. Fungi in the marine environment: open questions and unsolved problems. *mBio*. DOI: [10.1128/mBio.01189-18](https://doi.org/10.1128/mBio.01189-18)

Wilkins LGE*, **Ettinger CL***, Jospin G & Eisen JA. 2019. Metagenome-assembled genomes provide new insight into the microbial diversity of two thermal pools in Kamchatka, Russia. *Scientific Reports*. DOI: [10.1038/s41598-019-39576-6](https://doi.org/10.1038/s41598-019-39576-6) *co-first authors

Ettinger CL, Wilkins LGE, Dahlhausen KE, Ghose SL, Oberbauer D, Eisen JA & Coil DA. 2018. Even superheroes need help sometimes: Three incredible tales of microbial symbiosis. *Frontiers for Young Minds*. DOI: [10.3389/frym.2018.00050](https://doi.org/10.3389/frym.2018.00050)

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Brown EA, Dickinson PJ, Mansour T, Sturges B, Aguilar M, Young A, Korff C, Lind J, **Ettinger CL**, Varon S, Pollard R, Brown T, Raudespp T & Bannasch DL. 2017. *FGF4* retrogene on CFA 12 is responsible for chondrodystrophy and intervertebral disc disease in dogs. *PNAS*. DOI: [10.1073/pnas.1709082114](https://doi.org/10.1073/pnas.1709082114)

Ettinger CL, Williams SL, Abbott JM, Stachowicz JJ & Eisen JA. 2017. Microbiome succession during ammonification in eelgrass bed sediments. *PeerJ*. DOI: [10.7717/peerj.3674](https://doi.org/10.7717/peerj.3674)

Coil DA, **Ettinger CL** & Eisen JA. 2017. Gut Check: The evolution of an educational board game. *PLoS Biology* 15(4):e2001984. DOI: [10.1371/journal.pbio.2001984](https://doi.org/10.1371/journal.pbio.2001984)

Ettinger CL, Voerman SE, Lang JM, Stachowicz JJ & Eisen JA. 2017. Microbial communities in sediment from *Zostera marina* patches, but not the *Z. marina* leaf or root microbiomes, vary in relation to distance from patch edge. *PeerJ*. DOI: [10.7717/peerj.3246](https://doi.org/10.7717/peerj.3246)

Shehata HR, **Ettinger CL**, Eisen JA, & Raizada MN. 2016. Genes Required for the Anti-fungal Activity of a Bacterial Endophyte Isolated from a Corn Landrace Grown Continuously by Subsistence Farmers Since 1000 BC. *Frontiers in Microbiology*. DOI: [10.3389/fmicb.2016.01548](https://doi.org/10.3389/fmicb.2016.01548)

Mousa WK, Shearer, C, Limay-Rios, V, **Ettinger CL**, Eisen JA & Raizada MN. 2016. Root-hair endophyte stacking in finger millet creates a physicochemical barrier to trap the fungal pathogen *Fusarium graminearum*. *Nature Microbiology*. DOI: [10.1038/nmicrobiol.2016.167](https://doi.org/10.1038/nmicrobiol.2016.167)

DATA PUBLICATIONS

Ettinger CL, Mousa WM, Raizada MN, Eisen JA. 2015. Draft genome sequence of *Enterobacter* sp. strain UCD-UG_FMILLET (phylum *Proteobacteria*). *Genome Announcements*. DOI: [10.1128/genomeA.01461-14](https://doi.org/10.1128/genomeA.01461-14)

Ettinger CL, Shehata HR, Johnston-Monje D, Raizada MN, Eisen JA. 2015. Draft genome sequence of *Burkholderia gladioli* strain UCD-UG_CHAPALOTE (phylum *Proteobacteria*). *Genome Announcements*. DOI: [10.1128/genomeA.01462-14](https://doi.org/10.1128/genomeA.01462-14)

GRANTS & FELLOWSHIPS

MICROBIOME GRADUATE RESEARCH AWARD (\$1000) 2019
CENTER FOR POPULATION BIOLOGY (CPB) RESEARCH AWARD (\$5650) 2016 – 2019

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| CPB COLLABORATIVE PROJECT RESEARCH AWARD (\$4000) | 2018 |
| <ul style="list-style-type: none">Project: <i>Unlocking the terrestrial realm: Are microbial symbioses the key to land crab terrestrial invasions?</i>Co-PI: Victoria Morgan, PhD Candidate, Population Biology, UC Davis | |
| SIGMA XI GRANT-IN-AID OF RESEARCH (\$1000) | 2018 |
| H. A. LEWIN FAMILY FELLOWSHIP (\$2000) | 2018 |
| JEFFERY AND MARSHA GIBELING FELLOWSHIP (\$1100) | 2018 |
| CPB COLLABORATIVE PROJECT RESEARCH AWARD (\$4500) | 2017 |
| <ul style="list-style-type: none">Project: <i>Understanding belowground plant-microbe feedback loops during competition between native and invasive plant species in a grassland ecosystem</i>Co-PI: Marina LaForgia, PhD Candidate, Ecology, UC Davis | |
| NATURAL RESERVE SYSTEM RESEARCH GRANT (\$2000) | 2016 |
| SANTA BARBARA SCHOLARSHIP FOUNDATION (\$23,814) | 2009 – 2017 |
| <ul style="list-style-type: none">Tuition and stipend for four years at UC Berkeley and for four years at UC Davis | |
| MARINE BIOLOGICAL LABORATORY (MBL) SCHOLARSHIP (\$6975) | 2015 |
| <ul style="list-style-type: none">Tuition and room/board for the Microbial Diversity summer course at the MBL | |
| UNIVERSITY OF CALIFORNIA BLOCK GRANT | 2014 |
| <ul style="list-style-type: none">Tuition and stipend for two quarters at UC Davis | |

TEACHING EXPERIENCE

TEACHING ASSISTANT

- Introduction to Biology: Biodiversity and the Tree of Life (BIS2C), UC Davis – Spring 2015, Spring 2016, Summer 2016, Fall 2016, Winter 2017, Fall 2017, Fall 2018, Winter 2019, Fall 2019
- Complimentary class to BIS2C for underserved minority students (BIS98), UC Davis – Fall 2016
- Microbial Phylogenomics (EVE161), UC Davis – Winter 2018

ORGANIZER

- Marine Microbial Ecology Seminar (PBG 298 / ECL 290), UC Davis – Winter 2019

ACADEMIC SERVICE & AFFILIATIONS

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| UC Davis Data Science Initiative Graduate Affiliate | 2017 – present |
| UC Davis Center for Population Biology Graduate Affiliate | 2014 – present |
| Coastal & Marine Science Institute Grad Committee Co-chair | 2015 – 2019 |
| Integrative Genetics & Genomics Admissions Officer | 2016 – 2018 |

ACHIEVEMENTS & HONORS

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| NSF GRFP Honorable Mention | 2014 |
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PROFESSIONAL MEMBERSHIPS

Association for Women in Science, American Society for Microbiology, National Center for Science Education, American Association for the Advancement of Science, The Oceanography Society, Society for the Study of Evolution

REVIEWER

Environmental Microbiology, mSystems, PLOS One, PeerJ, FEMS Microbiology Ecology, Marine Ecology Progress Series

ORAL PRESENTATIONS

Ettinger CL & Eisen JA. 2019. "The seagrass mycobiome: what happened to fungal associations as plants moved back into the marine environment?" invited talk at the California Academy of Sciences, April 11, in San Francisco, California.

Ettinger CL & Eisen JA. 2018. "The seagrass mycobiome: what happened to fungal associations as plants moved back into the marine environment?" invited talk at the 12th annual UC Davis Research Retreat on Host Microbe Interactions, October 19, in Tahoe City, CA

Ettinger CL, Porter SS & Simms EL. 2013. "Genetic variation in abiotic tolerance and symbiotic quality among wild rhizobium bacteria" a ten-minute talk at the UC Berkeley Molecular and Cell Biology Honors Research Symposium, April 24, in Berkeley, California.

POSTER PRESENTATIONS

Ettinger CL & Eisen JA. 2018. "Characterization of the mycobiome of the seagrass, *Zostera marina*, across space and time" a poster presented at the Lake Arrowhead Microbial Genomics Conference, September 17, in Lake Arrowhead, California.

Ettinger CL, Lang JM, Voerman SE, Stachowicz JJ & Eisen JA. 2015. "The Seagrass Microbiome Project: Edge Effects and Seagrass Microbiome Diversity" a poster presented at the 115th General Meeting of the Amer. Soc. for Microbiology, June 1, in New Orleans, Louisiana.

Ettinger CL, Lang JM, Voerman SE, Stachowicz JJ & Eisen JA. 2015. "Edge Effects and Seagrass Microbiome Diversity" a poster presented at the Integrative Genetics and Genomics Graduate Group Colloquium, May 18, in Davis, California.

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Ettinger CL, Lang JM, Voerman SE, Stachowicz JJ & Eisen JA. 2014. "Edge Effects and Seagrass Microbiome Diversity" a poster presented at the 20th Annual International Meeting on Microbial Genomics, September 15, in Lake Arrowhead, California.

Ettinger CL, Lang JM, Voerman SE, Eisen JA & Stachowicz JJ. 2014. "Edge Effects and Seagrass Microbiome Diversity" a poster presented at the Integrative Genetics and Genomics Graduate Group Colloquium, June 2, in Davis, California. Won "People's Choice".

PROFESSIONAL DEVELOPMENT & WORKSHOPS

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| NAIST INTERNATIONAL STUDENT WORKSHOP in Nara, Japan | November 2018 |
| MARINE FUNGI WORKSHOP at the MBL | May 2018 |
| ANVIO WORKSHOP at the Joint Genome Institute | September 2017 |
| SCIENCE COMMUNICATION WORKSHOP at UC Davis | April 2017 |
| EARLY CAREER OCEAN SUMMIT in Waikoloa, HI | January 2017 |
| BAYESIAN STATISTICAL PHYLOGENETICS USING REVBayes at UC Davis | July 2016 |
| MICROBIAL DIVERSITY COURSE at the MBL | July – August 2015 |
| EXPLORATIONS IN DATA ANALYSES FOR METAGENOMIC ADVANCES IN MICROBIAL ECOLOGY (EDAMAME) COURSE at MSU | August 2014 |
| SOFTWARE CARPENTRY WORKSHOP at UC Davis | June 2014 |

VOLUNTEER & OUTREACH EXPERIENCE

EXPANDING YOUR HORIZONS 2013 – present

- *Workshop Leader*: Introduce 6th – 9th grade girls to STEM careers at UC Berkeley EYH; Lead a yearly bioinformatics workshop "Genome Detectives"

LETTERS TO A PRE-SCIENTIST 2017 – 2018

- *Volunteer*: Exchange letters with a pen pal about science careers

DAVIS SCIENCE COLLECTIVE 2014 – 2016

- *Volunteer*: Promote science through the Davis Public Library; Helped 5th graders with science fair project ideas and experiential designs

ADVISEES

Undergraduate Students:

- Neil Brahmabhatt (January 2018 – present)
- Jolie Lobrutto* (September 2018 – June 2019) *co-advised with Lena Capece
- Katelin Jones (June 2018 – September 2018)
- Tess McDaniel (June 2018 – September 2018)

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- Hannah Kang* (September 2017 – June 2018) *co-advised with Marina LaForgia
- Katie Somers (September 2017 – June 2018)

High Schools Students:

- Henna Hundal, Young Scholars Program (June 2014 – August 2014)

SKILLS & INTERESTS

COMPUTER SKILLS: Coding and data analysis in Python and R. Basic knowledge of UNIX and HTML/CSS. Proficient in 16S, ITS and 18S amplicon analysis. Experience with microbial metagenome assembly, annotation and binning.

INTERESTS: photography, theatre, reading, baking, knitting, mountain biking, paddle boarding, rock climbing, backpacking, skiing, graphic design, science communication