Danielle M. Stevens

Department of Plant Pathology
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Education:

Present	University of California, Davis (UCD)	Ph.D. Integrative Genetics & Genomics (IGG)
2018	Oregon State University (OSU)	B.S. Biochemistry & Biophysics (BB)

Research Experience:

04/2019 – Present
Graduate Student Researcher
Advisor: Dr. Gitta L. Coaker
UCD, Department of Plant Pathology | Davis, CA, USA

06/2017 – 09/2017
Research Intern
Advisor: Dr. Eva H. Stukenbrock
Max Planck Institute for Evolutionary Biology | Plön, Germany

02/2015 – 09/2018
Undergraduate Researcher
Advisor: Dr. Jeff H. Chang
OSU, Department of Botany and Plant Pathology | Corvallis, OR, USA
Non-required bachelor's thesis (embargoed until 08/2020):
Characterizing the symbiotic interactions between *Rhodococcus* and plants

Teaching Experience:

Teaching Assistant
BIS101, Genes and Gene Regulation
UCD, Department of Molecular & Cellular Biology
Fall 2019

Guest Lecturer
BB111, Introduction into Biochemistry and Biophysics Research
OSU, Department of Biochemistry & Biophysics
10/2016 & 11/2017

Teaching Intern
21X, Principles of Biology – Lab Course
OSU, Department of Integrative Biology
Spring 2016 – Spring 2017

Honors and Awards:

2019	NSF Graduate Research Fellowship Program Honorable Mention
	Best poster award at the Northern California Computation Biology (NCCB) Conference
2018	OSU Culture of Writing Award in Biochemistry and Biophysics
2017	OSU Carol L Woodstock Scholarship in Biochemistry and Biophysics
	OSU Merrill Family Foundation Scholarship
	Phi Beta Kappa: OSU Chapter
	Mortar Board Honor Society: OSU Chapter

Research Fellowships & Awards:

2019	UCD Peter J. Shields & Henry A. Jastro Research Award, $3,000
	NSF XCEDE Start-Up Computing Resource Allocation, 50,000 SUs, estimated value $7,445
2017	OSU & Agricultural Research Foundation Continuing Researchers Program, $1,000
	OSU Biochemistry & Biophysics Undergraduate Travel Fund Award, $700
2016	OSU Summer Undergraduate Research Experience, $5,000

Peer-Review Publications:

Google Scholar: https://tinyurl.com/DanielleMStevens

1. Savory EA[a], Weisberg AJ[a], **Stevens DM,** Creason AL, Fuller SL, Pearce E, and Chang JH. 2020. Phytopathogenic *Rhodococcus* have diverse plasmids with few conserved virulence functions. ***Frontiers in Microbiology.*** 11, 1022. DOI: 10.3389/fmicb.2020.01022

2. Lolle S[a], **Stevens DM[a],** Coaker GL. 2020. Plant NLR triggered immunity: From receptor activation to downstream signaling. (Review). ***Current Opinion in Immunology***. 62:99-105. DOI: https://doi.org/10.1016/j.coi.2019.12.007

3. Feurtey A, **Stevens DM,** Wolfgang S, and Stukenbrock EH. 2019. Inter-specific gene exchange introduces high genetic variability in crop pathogen. ***Genome Biology & Evolution***. 11(11):3095–3105. DOI: https://doi.org/10.1093/gbe/evz224

4. Thapa S, Davis II E, Lyu Q, Weisberg A, **Stevens DM**, Clarke C, Coaker G, and Chang JH. 2019. The evolution, ecology, and mechanisms of infection by Gram-positive, plant-associated bacteria. (Review). ***Annual Reviews in Phytopathology***. 57: DOI: https://doi.org/10.1146/annurev-phyto-082718-100124

5. Savory EA, Fuller SL, Weisberg AJ, Thomas WJ, Gordon MI, **Stevens DM,** Creason AL, Belcher MS, Serdani M, Wiseman MS, Grunwald NJ, Putnam ML, and Chang JH. 2017. Evolutionary transitions between beneficial and phytopathogenic *Rhodococcus* challenge disease management. ***eLife*** 6. DOI: https://doi.org/10.7554/eLife.30925

   Commentary on Publication
   - Melnyk, RA and Haney, CH (2017) Plasmid-powered evolutionary transitions. *eLife* 6: e33383.
   - Tena, G (2018) Dr. Rhodo and Mr. Coccus. *Nature Plants.* https://doi.org/10.1038/s41477-017-0093-6
   - Podcast in *Bacteriofiles* (2018): https://www.asm.org/index.php/podcasts/bacteriofiles/item/7305-plasmid-promotes-plant-pathogenesis-bacteriofiles-340

Preprints:

1. Lei L, **Stevens DM,** Coaker GL. In Review. Identification of a plant kinase that phosphorylates the bacterial effector AvrPtoB. Available on bioRxiv; DOI: https://doi.org/10.1101/2020.03.21.001826

2. Franco JY, Thapa SP, Pang Z, Gurung FB, Liebrand T, **Stevens DM**, Anacona V, Wang N, and Coaker G. In Review. Citrus vascular proteomics highlights the role of peroxidases and serine proteases during Huanglongbing disease progression. Available on bioRxiv; DOI: https://doi.org/10.1101/2020.04.05.025718

In-Press Science Communication:

Co-authored with Kelsey Wood. “Changing Times and Rolling the Dice: The new NSF GRFP rules and how we can maximize our odds” (2019), Initially on kelseywood.com; later in APS Phytopathology News (November addition). https://kelseywood.com/2019/09/30/changing-times-and-rolling-the-dice-the-new-nsf-grfp-rules-and-how-you-can-maximize-your-odds-for-success/

Professional Development and Service:

09/19 – 06/21	UCD, IGG Student Executive Committee | Recruitment Officer
09/17 – 06/18	OSU, College of Science | Peer Advisor
01/17 – 10/17	OSU, Planning committee for 50th Anniversary BB Departmental Celebration
09/15 – 06/16	OSU, University Housing & Dining Services | Academic Learning Assistant

Educational Tools Developed:

12/2016	OSU, Department of Integrative Biology | BI212, Principles of Biology, 4 credits ~1000 undergraduate students

[a] Co-first authors.

Videos designed & created for course
DNA: youtu.be/D7rIhlN3iBQ; RNA: youtu.be/0W2VZvqvA0w

Oral Presentations:

2019, May **Danielle M. Stevens,** Qingyang Lyu, Shree Thapa, and Gitta Coaker. Assessing protease diversity in the *Clavibacter* genus. Flash talk. Bay Area Meetup for Tomato Plant Pathology (BAMTOPP), Berkeley, CA.

2018, October **Danielle M. Stevens,** Elizabeth A. Savory, Skylar Fuller, and Jeff H. Chang. Characterizing the interactions between *Rhodococcus* bacteria and their plant hosts. UC Davis, Department of Plant Pathology, Early Career Scientist Seminar Series, Davis, CA.

2018, July Jeff H. Chang, John Fowler, Alex Weisberg, and **Danielle M. Stevens**. AnthroBiology, Mutants, GMOs, and Big Data – The History of Food. Co-presenter at Apprenticeships in Science & Engineering Midsummer Conference, Corvallis, OR.

Poster Presentations:

2019, Oct. **Danielle M. Stevens,** Qingyang Lyu, Shree Thapa, and Gitta Coaker. Investigating the role of Gram-positive bacterial secreted proteins in plant host specificity. Presented at 2019 Northern California Computational Biology Symposium, Davis, CA.

2019, July **Danielle M. Stevens,** Qingyang Lyu, Shree Thapa, and Gitta Coaker. Characterizing genetic diversity of the *Clavibacter* genus and the potential role of the secretome in host range. Presented at 2019 International Society for Molecular Plant-Microbe Interactions XVIII Congress, Glasgow, United Kingdom.

2018, May **Danielle M. Stevens**[b]**,** Elizabeth A. Savory, Skylar Fuller, and Jeff H. Chang**.** Characterizing the role of *fasR* in the virulence of phytopathogenic *Rhodococcus*. Presented at Celebrating Undergraduate Excellence (CUE), Corvallis, OR.

2018, May **Danielle Stevens**[b]**,** Alice Feuntry, and Eva Stukenbrock. Analyzing the genome of fungal wheat pathogen *Zymoseptoria tritici* (*Mycosphaerella graminicola*) for introgression. Presented at CUE, Corvallis, OR.

2017, April **Danielle Stevens,** Elizabeth A. Savory, Skylar Fuller, and Jeff H. Chang**.** Characterizing the role of FasR in the regulation of virulence in the plant pathogenic *Rhodococcus fascians*. Presented at Stanford Research Conference (SRC), Stanford, CA.

2016, Sept. **Danielle Stevens,** Elizabeth A. Savory, Skylar Fuller, and Jeff H. Chang. Characterizing the Virulence Regulon of Gram-positive Plant Pathogenic *Rhodococcus fascians.* Presented at Center for Genome Research & Biocomputing (CGRB) Fall conference, Corvallis, OR.

2016, July Elizabeth A. Savory, Allison L. Creason, Skylar Fuller, **Danielle M. Stevens**, Andrew Osbourne, Taifo Mahmud, and Jeff H. Chang. A new model for virulence in the emerging Gram-positive phytopathogen, *Rhodococcus fascians*. Presented at 2016 International Society for Molecular Plant-Microbe Interactions XVII Congress, Portland, OR.

2016, May **Danielle Stevens,** Elizabeth A. Savory, Skylar Fuller, and Jeff H. Chang. Characterizing the Virulence Regulon of Gram-positive Phytopathogenic *Rhodococcus fascians.* Presented at CUE, Corvallis, OR.

2015, Sept. **Danielle Stevens,** Elizabeth A. Savory, Skylar Fuller, Allison L. Creason, and Jeff H. Chang. Characterization of *fasR* Alleles of Phytopathogenic *Rhodococcus fascians.* Presented at CGRB Fall conference, Corvallis, OR.

[b] Both posters were presented concurrently.

Outreach & Volunteer Experiences:

State of Oregon Science Olympiad Co-Judge Event Supervisor

- Co-judge the mission-impossible event, a science themed rube Goldberg machine competition for high school students.
    - April 14th, 2018

Corvallis Boys and Girls Club 3rd/4th Grade Volleyball Coach

- Coached youth volleyball team for 3 months: ran two practices a week and two games a week for 10 weeks.
    - Sept. 2016 – May 2017; February – May 2018

OSU, College of Science Discovery Days

- Participated in two-day outreach event representing the Biochemistry and Biophysics club by teaching elementary children (ranging from 1000-2000) about DNA and proteins.
    - Nov. 2nd & 3rd 2016; May 3rd & 4th 2017; October 31st & Nov. 1st 2017; May 1st & 2nd 2018
- In 2018, was head co-organizer of the event where ~1500 students from the local Willamette valley learner about science from a variety of student run clubs and departments from the College of Science, College of Agricultural Sciences, College of Forestry, and College of Engineering.
    - May 1st & 2nd 2018

OSU, Department of Botany and Plant Pathology | High School STEM Camp

- June 27th – July 1st 2017, assisted in exercise about genetically modified organisms and how a plant pathogen *Agrobacterium tumefaciens* has been repurposed to insert genes into plants.
- July 11th 2018, independently organized and lead an exercise on how polymerase chain reaction can be used for forensics.

Professional Organizations

American Society for Microbiology (ASM) — Member Since: 2018
Molecular Plant-Microbe Interactions (MPMI) — Member Since: 2019
American Phytopathology Society (APS) — Member Since: 2019
American Association for the Advancement of Science (AAAS) — Member Since: 2019
*One-year free membership as part of the AAAS/Science Program for Excellence in Science