

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 <u>Non-required bachelor's thesis, available on request:</u> Characterizing the symbiotic interactions between <i>Rhodococcus</i> 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 – 2020	Local 290 Scholarship, in total \$4,000 UCD Peter J. Shields & Henry A. Jastro Research Award, in total \$6,000
2019	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 (- Co-first Author):**

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

1. Castro B**, Citterico M**, Kimura S**, **Stevens DM**, Wraczek M, Coaker G. Recent advancements in ROS compartmentalization, perception, and signaling in plants. (Review). *In Review in Nature Plants*.
2. Franco JY, Thapa SP, Pang Z, Gurung FB, Liebrand T, **Stevens DM**, Anaconda V, Wang N, Coaker G. 2020. Citrus vascular proteomics highlights the role of peroxidases and serine proteases during Huanglongbing disease progression. *Molecular and Cellular Proteomics*. Originally on bioRxiv; <https://doi.org/10.1101/2020.04.05.025718>
3. Lei L, **Stevens DM**, Coaker GL. 2020. Identification of a plant kinase that phosphorylates the bacterial effector AvrPtoB. *Molecular Plant*. Originally on bioRxiv; <https://doi.org/10.1016/j.molp.2020.08.018>
4. Savory EA**, Weisberg AJ**, **Stevens DM**, Creason AL, Fuller SL, Pearce E, Chang JH. 2020. Phytopathogenic *Rhodococcus* have diverse plasmids with few conserved virulence functions. *Frontiers in Microbiology*. 11, 1022. <https://doi.org/10.3389/fmicb.2020.01022>
5. Lolte S**, **Stevens DM****, Coaker GL. 2020. Plant NLR triggered immunity: From receptor activation to downstream signaling. (Review). *Current Opinion in Immunology*. 62:99-105. <https://doi.org/10.1016/j.coi.2019.12.007>
6. Feurtey A, **Stevens DM**, Wolfgang S, Stukenbrock EH. 2019. Inter-specific gene exchange introduces high genetic variability in crop pathogen. *Genome Biology & Evolution*. 11(11):3095–3105. <https://doi.org/10.1093/gbe/evz224>
7. Thapa S, Davis II E, Lyu Q, Weisberg A, **Stevens DM**, Clarke C, Coaker G, Chang JH. 2019. The evolution, ecology, and mechanisms of infection by Gram-positive, plant-associated bacteria. (Review). *Annual Reviews in Phytopathology*. 57: <https://doi.org/10.1146/annurev-phyto-082718-100124>
8. Savory EA**, Fuller SL**, Weisberg AJ**, Thomas WJ, Gordon MI, **Stevens DM**, Creason AL, Belcher MS, Serdani M, Wiseman MS, Grunwald NJ, Putnam ML, Chang JH. 2017. Evolutionary transitions between beneficial and phytopathogenic *Rhodococcus* challenge disease management. *eLife* 6. <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>

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 Organizations

American Society for Microbiology (ASM)
Molecular Plant-Microbe Interactions (MPMI)
American Phytopathology Society (APS)
American Association for the Advancement of Science (AAAS)

Member Since: 2018
Member Since: 2019
Member Since: 2019
Member: 2019 - 2020

*One-year free membership as part of the AAAS/Science Program for Excellence in Science

Professional Development and Service:

08/20 – 08/23 APS Evolutionary Genetics and Genomics Committee | Student Member
 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
 Videos designed & created for course
 DNA: youtu.be/D7rlhIN3iBQ; RNA: youtu.be/0W2VZvqvA0w

Oral Presentations:

2020, Sept. **Danielle M. Stevens** and Gitta Coaker. Gram-positive plant-associated bacterial pathogens and plant immunity: a mystery to unfold. 12th Annual US-Japan Seminar in Plant Pathology: Early Career Showcase. Virtual Seminar Hosted by Cornell University.

2019, May **Danielle M. Stevens**, Qingyang Lyu, Shree Thapa, and Gitta Coaker. Assessing protease diversity in the *Clavibacter* genus. 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**^a, 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.

^a Both posters were presented concurrently.

- 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.

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.