Danielle M. Stevens

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EDUCATION AND PROFESSIONAL EXPERIENCE

UC Berkeley, Postdoctoral Scholar	2024 – Present
UC Davis, Ph.D. Integrative Genetics and Genomics	2018 – 2024
Max Planck for Evolutionary Biology, Research Intern	2017
Oregon State University (OSU), B.S. Biochemistry and Biophysics	2014 - 2018

FELLOWSHIPS AND AWARDS

USDA-AFRI-NIFA Postdoctoral Fellowship	2025 – 2027
Best Poster Award at XXIII Bay Area Population Genetics Conference	2024
USDA-AFRI-NIFA Predoctoral Fellowship	2021 – 2024
UC Davis Peter J. Shields & Henry A. Jastro Research Award	2019 – 2024
UA Local 290 Scholarship (Research Supply Funds)	2019 – 2022
UC Davis Graduate Studies Spring Travel Award	2023
12th Annual US-Japan Seminar in Plant Pathology Early Career Award	2022
UCD Professor for the Future Fellow	2021
Sigma Xi, Associate Member	2020
NSF XCEDE Start-Up Computing Resource Allocation	2019
NSF Graduate Research Fellowship Program Honorable Mention	2019
Best poster award at the Northern California Computation Biology Conference	2019
OSU Culture of Writing Award in Biochemistry and Biophysics	2018
OSU & Agricultural Research Foundation Continuing Researchers Program	2017
OSU Biochemistry & Biophysics Undergraduate Travel Fund Award	2017
OSU Carol L Woodstock Scholarship in Biochemistry and Biophysics	2017
OSU Merrill Family Foundation Scholarship	2017
OSU Summer Undergraduate Research Experience	2016

RESEARCH PUBLICATIONS

18 publications (5 first/co-first authors) | **Authors contributed equally | ^^Student Mentee | Google Scholar

1. **Stevens DM,** ^^Yang D, ^^Liang T, Li T, Vega B, Coaker G, Krasileva K. mamp-ml: A deep learning approach to epitope immunogenicity in plants. On BioRxiv: https://www.biorxiv.org/content/10.1101/2025.07.11.664399v1
2. Leuschen-Kohl R, Roberts R, **Stevens DM**, Zhang N, Buchanan S, Pilikey B, Coaker G, Iyer-Pascuzzi AS. 2024. Tomato roots exhibit distinct, development-specific responses to bacterial-derived peptides. ***Accepted in Plant, Cell & Environment.*** On BioRxiv: https://doi.org/10.1101/2024.11.04.621969
3. Li T, Bolanos EJ, **Stevens DM,** Sha H, Prigozhin DM, Coaker G. 2025. Unlocking Expanded Flagellin Perception Through Rational Receptor Engineering**.** ***Nature Plants.*** https://doi.org/10.1038/s41477-025-02049-y

   Commentary on Publication:
   Armer, VJ and van der Hoorn, RAL (2025) Expanding flg22 recognition in plants. *Nature Plants.*
4. Alamos S, Szarzanowicz MJ, Thompson MG, **Stevens DM**, Kirkpatrick LD, Dee A, Pannu H, Cui R, Liu S, Nimavat M, Krasileva K, Baidoo EEK, Shih PM. 2025. Quantitative dissection of Agrobacterium DNA transfer uncovers competitive and cooperative interactions modulating pathogenesis. ***Nature Plants***. https://doi.org/10.1038/s41477-025-01996-w

Commentary on Publication:
Huang, TK and Lai, EM (2025) Cooperation and antagonism in Agrobacterium-mediated transformation. *Nature Plants.*

5. **Stevens DM,** Moreno-Perez A, Weisberg AJ, Ramsing C, Fliegmann J, Zhang N, ^^Madrigal M, Martin G, Steinbrenner A, Felix G, Coaker G. 2024. Natural variation of immune epitopes reveals intrabacterial antagonism. ***PNAS.***
https://doi.org/10.1073/pnas.2319499121

   Highlighted in:
   Plantae Plant Science Research Weekly: https://plantae.org/non-immunogenic-bacterial-epitopes-mask-recognition-of-their-immunogenic-counterparts/
   IS-MPMI Interfaces: https://www.ismpmi.org/Community/Interactions/Lists/Posts/Post.aspx?ID=1321

6. Trinh J**, Li T**, Franco J**, Toruño T**, **Stevens DM****, Thapa S, Wong J, Pineda R, Avila de Dios E, Kahn TL, Seymour D, Ramadugu C, Coaker G. 2023. Variation in microbial feature perception in the Rutaceae family with immune receptor conservation in citrus. ***Plant Physiology***.
https://doi.org/10.1093/plphys/kiad263

   Commentary on Publication:
   McMillan, HM (2023) New Receptors for common MAMPs: Can wild relatives save citrus from disease? *Plant Physiology.*

7. Lewis D, **Stevens DM,** Little H, Coaker G, Bostock R. 2023. Overlapping local and systemic defense induced by an oomycete fatty acid MAMP and brown seaweed extract in tomato*.* ***Molecular Plant-Microbe Interactions*.**
https://doi.org/10.1094/MPMI-09-22-0192-R
8. **Stevens DM,** ^^Tang A, Coaker G. 2021. A genetic toolkit for investigating *Clavibacter*: markerless deletion, permissive site identification and an integrative plasmid*.* ***Molecular Plant-Microbe Interactions.***
https://doi.org/10.1094/MPMI-07-21-0171-TA
9. Franco JY, Thapa SP, Pang Z, Gurung FB, Liebrand T, **Stevens DM**, Anacona 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****.*
https://doi.org/10.1074/mcp.RA120.002075
10. Lei L, **Stevens DM,** Coaker GL. 2020. Phosphorylation of the Pseudomonas effector AvrPtoB by Arabidopsis SnRK2.8 is required for bacterial virulence. ***Molecular Plant***.
https://doi.org/10.1016/j.molp.2020.08.018
11. 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.***
https://doi.org/10.3389/fmicb.2020.01022
12. Feurtey A, **Stevens DM,** Wolfgang S, Stukenbrock EH. 2019. Inter-specific gene exchange introduces high genetic variability in crop pathogen. ***Genome Biology & Evolution****.*
https://doi.org/10.1093/gbe/evz224
13. 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***.
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.*

Podcast in *Bacteriofiles* (2018).

REVIEWS AND COMMENTARY

14. Sutherland C, **Stevens DM,** Wei W, Seong K, Krasileva K. The Resistance Awakens: Natural diversity informs engineering of plant immune receptors at the DNA, RNA, and protein levels. 2025. ***The Plant Cell***. https://doi.org/10.1093/plcell/koaf109
15. Sasaki Y**,** González-Tobón J, Hino Y, Jin C, Li T, Nguyen TAN, Oakley B, **Stevens DM**. 2023. 12th Japan-US Seminar in Plant Pathology Meeting Report. ***Molecular Plant-Microbe Interactions***. https://doi.org/10.1094/MPMI-04-23-0041-MR
16. Castro B**, Citterico M**, Kimura S**, **Stevens DM,** Wraczek M, Coaker G. 2021. Stress-induced reactive oxygen species compartmentalization, perception and signaling. ***Nature Plants.*** https://doi.org/10.1038/s41477-021-00887-0
17. Lolle S**, **Stevens DM****,** Coaker GL. 2020. Plant NLR triggered immunity: From receptor activation to downstream signaling. ***Current Opinion in Immunology***. https://doi.org/10.1016/j.coi.2019.12.007
18. 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. ***Annual Reviews in Phytopathology***. https://doi.org/10.1146/annurev-phyto-082718-100124

ADDITIONAL MANUSCRIPTS

19. **Stevens DM,** ^^Madrigal M, Weisberg AJ, Svrerson RL, Ramsing C, Lu Y, Hwang IS, Smart C, Samac DA, Teper D, Oh CS, Ishimaru C, and Coaker G. Effector diversification and pangenome evolution of host-specific *Clavibacter* pathogens. ***In Prep.*** **Available on Request.**

TEACHING AND MENTORSHIP

UC Davis, PLP100, Biology of Plant Pathogens	Winter 2023
UC Davis, MIC102, Introduction to Microbiology	Spring 2021
UC Davis, BIS101, Genes and Gene Regulation	Fall 2019
OSU, BB111, Introduction into Biochemistry and Biophysics Research	10/2016 & 11/2017
OSU, 21X, Principles of Biology – Lab Course	Spring 2016 – 2017

Undergraduate	Tatiana Liang (Microbial Biology, UC Berkeley) Melanie Madrigal (Environmental Toxicology, UC Davis) Emily Fucarino (Molecular & Medical Microbiology, UC Davis) Jasmine Brandes (Human Development & Family Science, OSU)
Junior Specialist	Andrea Tang (UC Davis)
Ph.D. Student	David Yang (Computational Biology, UC Berkeley; Rotation) Charis Ramsing (Plant Pathology, UC Davis; Rotation) Dominique Lewis (Plant Pathology, UC Davis) Natalie Hamada (Plant Biology, UC Davis; provided guidance on awarded USDA NIFA Predoctoral Fellowship)

ORAL PRESENTATIONS

1. Machine Learning in Computational Biology (MLCB) 2025. New York City, NY.	Sept. 2025
2. Joint BioEnergy Institute (JBEI). Emeryville, CA.	July 2025
3. Cornell University Plant Pathology & Plant-Microbe Biology Dept. Seminar. Ithaca, NY.	March 2025

4. UC Davis Integrative Genetics & Genomics Seminar. Davis, CA. Feb. 2025
5. UC Berkeley Center for Computational Biology Retreat, Santa Cruz, CA. Oct. 2024
6. American Society of Plant Biology, Plant Biology 2024, Honolulu, HI. June 2024
7. UC Davis Host-Microbe Interactions Meeting, Davis, CA. May 2024
8. Corteva UC Davis Plant Science Symposium, Davis, CA. April 2024
9. IS-Molecular Plant-Microbe Interactions XVIV Congress, Providence, RI. July 2023
10. UC Davis Integrative Genetics and Genomics Colloquium, Davis, CA. Sept. 2022
11. 12th US-Japan Seminar on Plant Pathology, Ithaca, NY. Sept. 2022
12. American Phytopathology Society, Plant Health 2022. Pittsburg, PA. Aug. 2022
13. UC Davis Plant Pathology Spring 2022 Seminar Series. April 2022
14. American Phytopathology Society, Plant Health 2021. Online
15. UC Davis Host-Microbe Interactions Meeting. Online
16. 12th Annual US-Japan Seminar in Plant Pathology: Early Career Showcase. Online
17. Bay Area Meetup for Tomato Plant Pathology, Berkeley, CA. May 2019
18. UC Davis, Early Career Scientist Seminar Series, Davis, CA. Oct. 2018

POSTER PRESENTATIONS

1. Bay Area Plant Hub Symposium, San Francisco, CA. April 2025
2. UC Davis Plant Science Symposium, Davis, CA. April 2025
3. XXIII Bay Area Population Genetics Conference, Berkeley, CA. Nov. 2024
4. Inside Innovative Genomics Institute (IGI), Berkeley, CA. Oct. 2024
5. American Society of Plant Biology, Plant Biology, Honolulu, HI. June 2024
6. American Society for Microbiology, Microbe 2022, Washington, DC. June 2022
7. Northern California Computational Biology Symposium, Davis, CA. Oct. 2019
8. IS- Molecular Plant-Microbe Interactions XVIII Congress, Glasgow, UK. July 2019
9. Celebrating Undergraduate Excellence Symposium, Corvallis, OR. May 2018
10. Stanford Research Conference, Stanford, CA. April 2017

PROFESSIONAL DEVELOPMENT AND SERVICE

Organizer

UC Davis, SNPs and Sips Integrative Genetics & Genomics (IGG) Seminar 2023 – 2024
IS-MPMI XVIV Congress, July 2023
Plant responses towards vascular pathogens and phloem-feeding insects

Session Moderator

12th Annual US-Japan Seminar in Plant Pathology, Session 1: Disease Sept. 2022
APS Plant Health 2022, Aug. 2022
Genomics, Genetics, and Virulence of Plant Pathogenic Bacteria

Committees

UC Davis IGG Admissions Committee 2021 – 2024
UC Davis IGG Student Representative for Faculty Executive Committee 2022 – 2023
UC Davis IGG Recruitment Committee 2019 – 2021
OSU Biochemistry and Biophysics 50th Anniversary Planning Committee 2017

Ad hoc Reviewer

Molecular Plant-Microbe Interactions (3), Science (1), Nature (1), Science Advances (1), Plant Communications (1), mSystems (1), Molecular Plant Pathology (1), Phytopathology (2), Proteomes (1), Physiology and Molecular Plant Pathology (1), Plant Health Progress (1), MicroPublication (1)

Professional Development & Additional Training

EMBO Computational Structural Biology Workshop
Torrey Pines Training Consortium Lab Management & Leadership Symposium

University of Washington Summer Institute in Statistical Genetics & Big Data
OSU College of Science Peer Advisor
OSU University Housing & Dining Services Academic Learning Assistant

Outreach
UC Davis Educational Enrichment & Outreach Programs ABRCMS Prep
UC Davis EEOP Graduate School Interview Panel
State of Oregon Science Olympiad Co-Judge Event Supervisor
OSU College of Science Discovery Days
OSU College of Science Discovery Days Co-Organizer
OSU Dept. of Botany & Plant Pathology High School STEM Camp

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