Danielle M. Stevens

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EDUCATION

Ph.D. Integrative Genetics and Genomics 2024
University of California, Davis, USA

B.S. Biochemistry and Biophysics 2018
Oregon State University (OSU), USA

RESEARCH EXPERIENCE

University of California, Berkeley, USA 09/01/2024 – Present
USDA NIFA Postdoctoral Fellow | Advisor: Dr. Ksenia Krasileva

University of California, Davis, USA 09/03/2018 –
USDA NIFA Predoctoral Fellow | Advisor: Dr. Gitta Coaker 06/31/2024
UC Davis Professor for the Future Fellow

Max Planck for Evolutionary Biology, Germany 06/13/2017 –
Research Intern | Advisor: Dr. Eva Stukenbrock 09/06/2017

Oregon State University, USA 01/20/2015 –
Undergraduate Researcher | Advisor: Dr. Jeff Chang 08/31/2018

FELLOWSHIPS AND AWARDS

Fellowships and Grants

USDA-AFRI-NIFA Postdoctoral Fellowship	2025 – 2027
USDA-AFRI-NIFA Predoctoral Fellowship	2021 – 2024
UC Davis Professor for the Future Fellow	2021 – 2022
UC Davis Peter J. Shields & Henry A. Jastro Research Award	2019 – 2024
UA Local 290 Scholarship (Research Supply Funds)	2019 – 2022
NSF XCEDE Start-Up Computing Resource Allocation	2019
OSU & Agricultural Research Foundation Continuing Researchers Program	2017

Awards

Best Poster Award at XXIII Bay Area Population Genetics Conference	2024
UC Davis Graduate Studies Spring Travel Award	2023
12th Annual US-Japan Seminar in Plant Pathology Early Career Award	2022
Sigma Xi, Associate Member	2020
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 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

PUBLICATIONS

*Authors contributed equally | ^Student Mentee

18 total, 5 first/co-first author. Link to Google Scholar profile

18. **Stevens DM.** ^Yang D, ^Liang T, Li T, Vega B, Coaker G, Krasileva K (2025) Mamp-ml: A deep learning approach to epitope immunogenicity in plants. ***bioRxiv*** [Preprint]. doi: 10.1101/2025.07.11.664399 (under revision in ***Science***)

17. Leuschen-Kohl R, Roberts R, **Stevens DM,** Zhang N, Buchanan S, Pilikey B, Coaker G, Iyer-Pascuzzi AS (2025) Tomato roots exhibit distinct, development-specific responses to bacterial-derived peptides. ***Plant, Cell Environ.*** 1-17. PMID: 40910461

16. Li T, Bolanos EJ, **Stevens DM,** Sha H, Prigozhin DM, Coaker G (2025) Unlocking Expanded Flagellin Perception Through Rational Receptor Engineering. ***Nature Plants.*** **11,** 1628-1641. PMID: 40721669

    Commentary on Publication:
    Armer, VJ and van der Hoorn, RAL (2025) Expanding flg22 recognition in plants. ***Nature Plants.*** **11**, 1483-1484. PMID: 40721667

15. 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.*** 11, 2060-1073.

    Commentary on Publication:
    Huang, TK and Lai, EM (2025) Cooperation and antagonism in Agrobacterium-mediated transformation. ***Nature Plants.*** **11**, 946-948. PMID: 40355700

14. Sutherland C, **Stevens DM**, Wei W, Seong K, Krasileva K (2025) The Resistance Awakens: Natural diversity informs engineering of plant immune receptors at the DNA, RNA, and protein levels. ***The Plant Cell.*** **37(5),** koaf109. PMID: 40344182

13. **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***. 121 (23), e2319499121. PMID: 38814867

    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

12. 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.*** 1-19. PMID: 37144828

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

11. 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.*** **36**(6), 359-371. PMID: 36802868

10. 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.*** **36**(9), 549-553. PMID: 37102778

9. **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.*** **34**(12), 1336-1345. PMID: 34890250

8. Castro B*, Citterico M*, Kimura S*, **Stevens DM**, Wraczek M, Coaker G (2021) Stress-induced reactive oxygen species compartmentalization, perception and signaling. ***Nature Plants.*** **7**, 403-412. PMID: 33846592

7. 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***. 19(12), 1936-1951. PMID: 32883801

6. Lolle S*, **Stevens DM*,** Coaker GL (2020) Plant NLR triggered immunity: From receptor activation to downstream signaling. ***Current Opinion in Immunology.*** **62**, 99-105. PMID: 31958770

5. Lei L, **Stevens DM,** Coaker GL (2020) Phosphorylation of the Pseudomonas effector AvrPtoB by Arabidopsis SnRK2.8 is required for bacterial virulence. ***Molecular Plant.*** **13,** 1513-1522. PMID: 32889173

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,** 1-12. PMID: 32523572

3. 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.*** **57**, 341-365. PMID: 31283433

2. 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. PMID: 31603209

1. 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:e30925. PMID: 29231813

   Commentary on Publication:
   Melnyk, RA and Haney, CH (2017) Plasmid-powered evolutionary transitions. ***eLife*** 6: e33383. PMID: 29231817
   Tena, G (2018) Dr. Rhodo and Mr. Coccus. ***Nature Plants.*** 4, 8. doi: 10.1038/s41477-017-0093-6
   Podcast in Bacteriofiles (2018).

PRESENTATIONS

Invited Talk/Seminar

Lawrence Berkeley National Laboratory, Advance Light Source. Berkeley, CA.	Oct. 2025
Cornell University Dept. of Microbiology and Immunology. New York City, NY. Hosted by the Iliev Lab.	Sept. 2025
Joint BioEnergy Institute (JBEI). Emeryville, CA. Hosted by the Shih Lab.	July 2025
Cornell University Dept. of Plant Pathology and Plant-Microbe Biology. Ithaca, NY.	March 2025
UC Davis Integrative Genetics and Genomics Seminar. Davis, CA.	Feb. 2025
IS-Molecular Plant-Microbe Interactions XVIV Congress, Providence, RI.	July 2023
UC Davis Plant Pathology Spring 2022 Seminar Series. Davis, CA.	April 2022

Conference Talks

Machine Learning in Computational Biology 2025. New York City, NY.	Sept. 2025
UC Berkeley Center for Computational Biology Retreat. Santa Cruz, CA.	Oct. 2024
American Society of Plant Biology, Plant Biology 2024, Honolulu, HI.	June 2024
UC Davis Host-Microbe Interactions Meeting, Davis, CA.	May 2024
UC Davis Plant Science Symposium, Davis, CA.	April 2024
UC Davis Integrative Genetics and Genomics Colloquium, Davis, CA.	Sept. 2022
12th US-Japan Seminar on Plant Pathology, Ithaca, NY.	Sept. 2022
American Phytopathology Society, Plant Health 2022. Pittsburg, PA.	Aug. 2022
American Phytopathology Society, Plant Health 2021.	Online
UC Davis Host-Microbe Interactions Meeting.	Online
12th Annual US-Japan Seminar in Plant Pathology: Early Career Showcase.	Online
Bay Area Meetup for Tomato Plant Pathology, Berkeley, CA.	May 2019
UC Davis Early Career Scientist Seminar Series, Davis, CA.	Oct. 2018

Poster

UC Berkeley Plant and Microbial Biology Dept. Retreat. Berkeley, CA.	Sept. 2025
Bay Area Plant Hub Symposium, San Francisco, CA.	April 2025
UC Davis Plant Science Symposium, Davis, CA.	April 2025
XXIII Bay Area Population Genetics Conference, Berkeley, CA.	Nov. 2024
Inside Innovative Genomics Institute (IGI), Berkeley, CA.	Oct. 2024

American Society of Plant Biology, Plant Biology, Honolulu, HI.	June 2024
American Society for Microbiology, Microbe 2022, Washington, DC.	June 2022
Northern California Computational Biology Symposium, Davis, CA.	Oct. 2019
IS- Molecular Plant-Microbe Interactions XVIII Congress, Glasgow, United Kingdom.	July 2019
Celebrating Undergraduate Excellence Symposium, Corvallis, OR.	May 2018
Stanford Research Conference, Stanford, CA.	April 2017

TEACHING AND MENTORSHIP

Teaching Assistant

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, 21X, Principles of Biology – Lab Course	2016 – 2017

Guest Lectures

OSU, BB111, Introduction into Biochemistry and Biophysics Research

Graduate Students	Mia Denning (Computational Biology, UC Berkeley; Rotation) 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)
Junior Specialist	Andrea Tang (UC Davis)
Undergraduates	Riyaz Mehta (Molecular and Cellular Biology & Data Science, UC Berkeley) 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)

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