

Stephen Cohen

Curriculum vitae

Colorado State University
1177 Campus Delivery
Fort Collins, CO 80523-1177

stephen.cohen@colostate.edu
+1 717 676 9324
ORCID: 0000-0002-0748-0401

EDUCATION

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| Colorado State University
<i>Ph.D., Cell and Molecular Biology Graduate Program</i> | Fort Collins, CO
Aug. 2013 – Present |
| Lock Haven University of Pennsylvania
<i>B.Sc., Cellular and Organismal Biology, Summa Cum Laude</i> | Lock Haven, PA
Aug. 2009 – Jul. 2013 |

RESEARCH AND LABORATORY EXPERIENCE

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| Colorado State University
<i>Department of Bioagricultural Sciences and Pest Management</i>
<i>Graduate Research Assistant; Advisor: Jan E. Leach</i> <ul style="list-style-type: none">- Characterizing the rice response to simultaneous disease and heat stress using computational, molecular, greenhouse, and growth chamber techniques- Characterized rice resistance locus <i>Xo1</i> using molecular cloning, greenhouse, and growth chamber techniques | Fort Collins, CO
Jan. 2014 – Present |
| Colorado State University
<i>Department of Biology</i>
<i>Rotation Student; Provisional Advisor: June I. Medford</i> <ul style="list-style-type: none">- Cloned and tested nanoluciferase-based reporter for Arabidopsis protoplasts | Fort Collins, CO
Aug. – Dec. 2013 |
| Pennsylvania Department of Agriculture
<i>Plant Pathology Department</i>
<i>Laboratory Technician; Program Manager: Ruth A. Welliver</i> <ul style="list-style-type: none">- Monitored crop orchards for plum pox virus using ELISA and qRT-PCR | Harrisburg, PA
May – Aug. 2012 |
| North Carolina State University
<i>Department of Microbiology</i>
<i>REU Student in Synthetic Biology; Faculty Mentor: Amy M. Grunden</i> <ul style="list-style-type: none">- Characterized an archaeal lipase using molecular cloning and <i>in vitro</i> recombinant expression techniques | Raleigh, NC
Jun. – Aug. 2011 |

REFEREED PUBLICATIONS

- Cohen SP**, JM Jacobs, JE Leach. 2018. Spotlight: *In planta* bacterial transcriptomics predict plant disease outcomes. Trends in Plant Science. In Press. doi: 10.1016/j.tplants.2018.06.008
- Cohen SP**, H Liu, CT Argueso, A Pereira, C Vera Cruz, V Verdier, JE Leach. 2017. RNA-Seq analysis reveals insight into enhanced rice *Xa7*-mediated bacterial blight resistance at high temperature. PLOS ONE. 12(11): e0187625. doi: 10.1371/journal.pone.0187625.
- Triplett LR*, **SP Cohen***, C Heffelfinger, CL Schmidt, C Tekete, V Verdier, AJ Bogdanove, JE Leach. 2016. A resistance locus in the American heirloom rice variety Carolina Gold Select is triggered by diverse TAL effectors and is effective against African strains of *Xanthomonas oryzae* pv. *oryzicola*. Plant J. 87(5): 472-83. doi: 10.1111/tpj.13212. *co-first authors

PUBLICATIONS IN REVIEW

- Cohen SP**, JE Leach. 2018. Abiotic and biotic stress induce a core transcriptome response in rice. Research article. *In review*.
- Huerta AI, **SP Cohen**, V Verdier, JE Leach. Molecular genetics of bacterial blight and bacterial leaf streak and their impact on future control strategies. Book chapter. *In review*.

HONORS AND AWARDS

William M. Brown Professional Development Award Recipient <i>Department of Bioagricultural Sciences and Pest Management</i>	May 2018
Exploring Career Opportunities Initiative Grant Recipient <i>CSU Graduate School</i>	Feb. 2018
Frank Hawksworth Memorial Scholarship Recipient <i>Department of Bioagricultural Sciences and Pest Management</i>	Dec. 2017
Sustainability Leadership Fellow <i>CSU School of Global Environmental Sustainability</i>	Aug. 2017– May 2018
Phytobiomes Poster Award Recipient <i>Phytobiomes Journal, APS Annual Meeting 2017</i>	Aug. 2017
J. Artie and Arra Browning Student Travel Award Recipient <i>APS Foundation, APS Annual Meeting 2017</i>	Aug. 2017
NSF Travel Award Recipient for Rice: Research to Production Course <i>International Rice Research Institute, Los Baños, Philippines</i>	Aug. 2015
College of Arts and Sciences Highest QPA Award Recipient <i>Lock Haven University of Pennsylvania</i>	Jun. 2013
NSF Research Experience for Undergraduates Student <i>North Carolina State University</i>	Jun. – Aug. 2011
CRC Press Chemistry Achievement Award Recipient <i>Taylor & Francis Group</i>	Oct. 2010

CONFERENCE PRESENTATIONS

- Cohen SP**, Liu H, Verdier VM, Leach JE. 2018. Rice hormone response is involved in the temperature-dependent function of Xa7-mediated bacterial blight resistance. International Congress on Plant Pathology 2018, Boston, MA. [Invited Talk]
- Cohen SP**, Zeng Q, Jacobs JM. 2018. WORKSHOP: Effector-Detector Plants: Teaching & Research Tools for Monitoring Pathogen Virulence Live. International Congress on Plant Pathology 2018, Boston, MA. [Workshop]
- Cohen SP**, H Liu, CT Argueso, C Vera Cruz, V Verdier, JE Leach. 2017. Rice plants exhibiting bacterial blight resistance at high temperature suppress abiotic response. APS Annual Meeting, San Antonio, TX. [Poster Presentation]
- Cohen SP**, H Liu, V Verdier, CT Argueso, JE Leach. 2016. Transcriptomic analysis reveals key genetic responses involved in the rice response to simultaneous abiotic (high temperature) and biotic (bacterial blight) stresses. Keystone Symposium: Phytobiomes: From Microbiomes to Ecosystems, Santa Fe, NM. [Invited Talk]
- Huerta A, L Triplett, **S Cohen**, C Heffelfinger, C Schmidt, V Verdier, A Bogdanove, JE Leach. 2016. Exception to the norm: Resistance locus *Xo1* is triggered by inactive TAL effectors. Keystone Symposium: Phytobiomes: From Microbiomes to Ecosystems, Santa Fe, NM. [Poster Presentation]
- Cohen SP**, LR Triplett, JE Leach. 2016. A resistance mechanism from the American heirloom rice variety Carolina Gold Select is dependent on TAL effector central repeat region composition, but not the repeat variable diresidues. IS-MPMI XVII Congress, Portland, OR. [Poster Presentation]

CONFERENCE PRESENTATIONS (CONTINUED)

- Triplett L, V Verdier, M Alexander, **S Cohen**, J Craven, A Bogdanove, J Leach. 2014. A novel rice resistance phenotype to *Xanthomonas oryzae* TAL effectors does not require the effector transcriptional activation domain. APS-CPS Joint Meeting, Minneapolis, MN. [Poster Presentation]
- Cohen S**, R Killens, A Grunden. 2011. Recombinant Expression of a Thermostable Lipase from *Sulfolobus solfataricus* P2 to Augment Production of Microalgal-derived Biofuel. Summer NC State Undergraduate Research Symposium, Raleigh, N.C. [Poster Presentation]

TEACHING AND MENTORING

- Teaching Assistant Mentor**, Colorado State University
Peer mentor to new GTAs in the Biology Department Aug. – Dec. 2014
- Student Research Mentor**, Colorado State University
Mentored 6 undergraduate and 2 high-school students in the lab Jul. 2014 – Present
- Graduate Teaching Assistant Lab Instructor**, Colorado State University
Lab Instructor, Attributes of Living Systems, 3 semesters
Lab Instructor, Cell Biology, 1 semester
Recitation Instructor, Molecular Genetics, 1 semester Aug. 2013 – Jul. 2015

PROFESSIONAL MEMBERSHIPS AND ACTIVITIES

- International Congress on Plant Pathology**, Invited Speaker
International Society for Plant Pathology Jul. 2018
- Xanthomonas Genomics Conference**, Participant Jul. 2018
- Big Data Workshop**, Participant
CSU College of Agricultural Sciences Oct. 2017
- Graduate Student Liaison Committee**, Elected member
CSU Department of Bioagricultural Sciences and Pest Management 2017 – 2018
- APS Annual Meeting**, Participant
American Phytopathological Society Aug. 2017
- American Phytopathological Society**, Member 2017 – Present
- Phytobiomes: From Microbes to Plant Ecosystems**, Invited Speaker
Keystone Symposia on Molecular and Cellular Biology Nov. 2016
- IS-MPMI XVII Congress**, Participant
International Society for Molecular-Plant Microbe Interactions Jul. 2016
- International Society for Molecular Plant-Microbe Interactions**, Member 2016 – Present
- Rice: Research to Production Course**, Participant
International Rice Research Institute Aug. 2015
- NSF GAUSSI**, Inaugural Participant
Transdisciplinary Training Program in Biosensing and Computational Biology 2015 – 2016
- Cell and Molecular Biology Peer Mentor Club**, Co-founder and Member
Colorado State University, Cell and Molecular Biology Graduate Program 2014 – 2018

ADDITIONAL QUALIFICATIONS

Communicating Science to Journalists Training
COMPASS Science Communication Workshop

Aug. 2017

Rice: Research to Production Certificate
International Rice Research Institute

Aug. 2015

PUBLIC ENGAGEMENTS

Member of plant pathology outreach group (“Plants Get Sick Too”): from 2017–2018, I participated with an outreach group that gives interactive presentations with K-12 students to educate about plant diseases.

Blogger for the CSU School of Global Environmental Sustainability: Cohen SP. 2018. “Is the glass of orange juice half empty?” *Human Nature: Human Views on the Natural World*.
<http://blog.sustainability.colostate.edu/?q=cohen>

OTHER ACTIVITIES

Linux Server Administrator for CSU Department of Bioagricultural Sciences and Pest Management: I administrate the departmental server and help group members access and use our technological resources.

Department Representative in Bioinformatics Job Searches: In 2018, I assisted with interviews in job searches for bioinformatics positions in the CSU College of Agricultural Sciences, including Bioinformatics Consultant and IT Coordinator positions.

Organizer of Plant Pathology Journal Club: from 2015–2018, I helped organize and participated in a scientific paper discussion group with student and post-doc members.

Social Chair of the BSPM Graduate Student Liaison Committee: I served as the organizer of social events and professional development workshops for BSPM graduate students in the 2017–2018 school year.

Judge for CSU ERHS450 “Introduction to Radiation Biology” Poster Session: In 2017, I evaluated and gave feedback for student posters for an upper level undergraduate course at CSU.

Co-founder of the CSU Cell and Molecular Biology Peer Mentor Club: I co-founded a multi-disciplinary graduate student organization in 2014. This group brings together graduate students and post-docs from all colleges of the university for support, career development advice, and the exchange of scientific ideas. In 2018, I helped secure funds for the group with a proposal to the CSU Graduate School for the “Exploring Career Opportunities Initiative,” which earned \$1000 to fund student training/career development events.