

Stephen Cohen

Curriculum vitae

Colorado State University
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EDUCATION

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

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

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]

CONFERENCE PRESENTATIONS (CONTINUED)

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]

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 – Present

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

PROFESSIONAL MEMBERSHIPS AND ACTIVITIES (CONTINUED)

NSF GAUSSI , Inaugural Participant <i>Transdisciplinary Training Program in Biosensing and Computational Biology</i>	2015 – 2016
Cell and Molecular Biology Peer Mentor Club , Co-founder and Member <i>Colorado State University, Cell and Molecular Biology Graduate Program</i>	2014 – Present

ADDITIONAL QUALIFICATIONS

Communicating Science to Journalists Training <i>COMPASS Science Communication Workshop</i>	Aug. 2017
Rice: Research to Production Certificate <i>International Rice Research Institute</i>	Aug. 2015
Object Oriented Programming Certificate <i>Villa Julie College, Baltimore, MD</i>	2003
Network+ and A+ Certification <i>CompTIA, Baltimore, MD</i>	2001 – 2002

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>

Active Twitter user: I use a professional Twitter account (@spcohen2) to tweet about science and agriculture.

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 semester.

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.