

CURRICULUM VITAE

NAME

Pankaj Trivedi

ADDRESS

Bioagricultural Sciences and Pest Management
College of Agricultural Sciences

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University

PHONE

(970) 491-4019

EDUCATION

2005 Ph D, Kumaun University

2001 MS, GURUKUL KANGRI UNIVERSITY

1997 BS, KURUKSHETRA UNIVERSITY

ACADEMIC POSITIONS

October 6, 2016 - Present Assistant Professor, Microbiome of Plant System, Colorado State University, Fort Collins, Colorado, United States.

December 6, 2012 - October 4, 2016 Research Fellow, Soil Biology and Genomics, Hawkesbury Institute for the Environment, Western Sydney University, Richmond, NSW, Australia.

June 24, 2008 - December 5, 2012 Postdoctoral Research Associate, Microbial Ecology; Plant Pathology, UNIVERSITY OF FLORIDA, Lake Alfred, Florida, United States.

February 8, 2008 - June 8, 2008 Postdoctoral Research Associate, Microbial Ecology, Chungbuk National University, Chungbuk, South Korea.

June 6, 2005 - January 1, 2008 Young Scientist, Microbial Ecology, GB Pant Institute of Himalayan Environment and Development, Almora, India.

2017-2018 (College of Agricultural Sciences)

2016-2017 (College of Agricultural Sciences)

PUBLISHED WORKS

Refereed Journal Articles

Trivedi, P. (2017). Keystone microbial taxa regulate the invasion of a fungal pathogen in agro-ecosystems. *Soil Biology and Biochemistry.*, Peer Reviewed/Refereed

Trivedi, P. (2017). Soil aggregation and associated microbial communities modify the impact of agricultural

- management on carbon content. *Environmental Microbiology*., Peer Reviewed/Refereed
- Trivedi, P. (2017). Climate legacies drive global soil carbon stocks in terrestrial ecosystems. *Science Advance*., Peer Reviewed/Refereed
- Trivedi, P. (2017). Identity of biocrust species and microbial communities drives the response of soil multifunctionality to simulated global change. *Soil Biology and Biochemistry*., Peer Reviewed/Refereed
- Trivedi, P.** (2017). Microbiome and the future for food and nutrient security. *Microbial Biotechnology*., Peer Reviewed/Refereed
- Trivedi, P.** (2016). Harnessing host-vector microbiome for sustainable plant disease management of phloem-limited bacteria. *Frontiers in Plant Science*. <http://journal.frontiersin.org/article/10.3389/fpls.2016.01423/full>, Peer Reviewed/Refereed
- Trivedi, P. (2016). Carbon content and climate variability drive global soil bacterial diversity patterns. *Ecological Monographs*, 86, 373-390.. Soil bacterial diversity follows opposite patterns in Northern and Southern Hemispheres., Peer Reviewed/Refereed
- Trivedi, P. (2016). Response of soil properties and microbial communities to agriculture: Implications for primary productivity and soil health indicators. *Frontiers in Plant Science*.. <https://doi.org/10.3389/fpls.2016.00990>, Peer Reviewed/Refereed
- Trivedi, P. (2016). Microbial regulation of carbon cycle: evidence from gene-enzyme relationship. *The ISME Journal*, 10, 2593-2604. <http://www.nature.com/ismej/journal/v10/n11/full/ismej201665a.html>, Peer Reviewed/Refereed
- Trivedi, P. (2016). Species identity of biocrust-forming lichens drives the response of soil nitrogen cycle to altered precipitation frequency and nitrogen amendment. *Soil Biology and Biochemistry*(96), 128-136. <http://www.sciencedirect.com/science/article/pii/S0038071716000365>, Peer Reviewed/Refereed
- Trivedi, P. (2016). Effects of climate warming and elevated CO₂ on autotrophic nitrification and nitrifiers in dryland ecosystems. *Soil Biology and Biochemistry*, 92, 1-15. <http://www.sciencedirect.com/science/article/pii/S0038071715003284>, Peer Reviewed/Refereed
- Trivedi, P. (2016). Field evaluation of plant defense inducers for the control of citrus Huanglongbing. *Phytopathology*, 106, 31-46., Peer Reviewed/Refereed
- Trivedi, P. (2013). Microbial modulators of soil carbon storage: integrating genomic and metabolic knowledge for global prediction. *Trends in Microbiology*, 21(12), 641-651.. <http://www.sciencedirect.com/science/article/pii/S0966842X13001820>, Peer Reviewed/Refereed
- Trivedi, P. (2012). Identification of small molecule inhibitors against SecA of *Candidatus Liberibacter asiaticus* by structure based design. *European Journal of Medicinal Chemistry*., 54, 919-924. <http://www.sciencedirect.com/science/article/pii/S0223523412003467>, Peer Reviewed/Refereed
- Trivedi, P. (2012). Huanglongbing alters the structure and functional diversity of microbial communities associated with citrus rhizosphere. *The ISME Journal*, 6, 363-383. <http://www.nature.com/ismej/journal/v6/n2/abs/ismej2011100a.html>, Peer Reviewed/Refereed
- Trivedi, P. (2011). Isolation and characterization of beneficial bacteria associated with citrus roots in Florida. *Microbial Ecology*, 62, 324-336., Peer Reviewed/Refereed

Trivedi, P. (2010). Huanglongbing, a systemic disease, restructures the bacterial community associated with citrus roots. *Applied and Environmental Microbiology*, 76(11), 3427-3436. <http://aem.asm.org/content/76/11/3427.full>, Peer Reviewed/Refereed

Non-Refereed Journal Articles

Trivedi, P. (2017). Microbial nitrous oxide emissions in dryland ecosystems: mechanisms, microbiome and mitigation. *Environmental Microbiology*., Not Peer Reviewed/Refereed

Trivedi, P. (2017). Tiny microbes, Big yields: enhancing food crop production with biological solutions. *Microbial Biotechnology*., Not Peer Reviewed/Refereed

TRIVEDI, P. (2017). Candidatus *Liberibacter asiaticus*' encodes a functional salicylic acid (SA) hydroxylase that degrades SA to suppress plant defenses. *MOLECULAR PLANT MICROBE INTERACTIONS*., Not Peer Reviewed/Refereed

TRIVEDI, P. (2017). Microbial richness and composition independently drive soil multifunctionality. *FUNCTIONAL ECOLOGY*., Not Peer Reviewed/Refereed

Trivedi, P. (2017). Communication in the Phytobiome. *Cell*., Not Peer Reviewed/Refereed

Trivedi, P. (2014). Host immune responses accelerate pathogen evolution. *The ISME Journal*, 8, 727-731. <http://www.nature.com/ismej/journal/v8/n3/full/ismej2013215a.html>, Not Peer Reviewed/Refereed

Trivedi, P. (2013). Citrus Huanglongbing: a newly relevant disease presents unprecedented challenges. *Phytopathology*, 103, 652-665., Not Peer Reviewed/Refereed

Review

Leach, J. E., Triplett, L. R., Argueso, C., Trivedi, P. (2017). *Communication in the Phytobiome* (4th ed., vol. 169, pp. 587-596).: CELL., Not Peer Reviewed/Refereed

PAPERS PRESENTED/SYMPOSIA/INVITED LECTURES/PROFESSIONAL MEETINGS/WORKSHOPS

September 13, 2017, "Harnessing plant microbiome to fight citrus greening disease", Biotechnology/Life Science Seminar Series, University of Nebraska, (Presenter) Trivedi, P.

April 26, 2017, "Plant associated microbiome and its importance for disease control", NREL Departmental Seminar.

April 13, 2017, "Microbial modulators of soil carbon storage: integrating genomic and metabolic knowledge for global prediction", SOIL SCIENCE DEPARTMENT SEMINAR, CSU.

November 27, 2016, "Microbial modulators of Soil C cycling.", Ecology of Microorganisms Conferences, peer-reviewed/refereed.

November 8, 2016, "Unravelling the Sugarcane Microbiome to Resolve Yellow Canopy Syndrome", Keystone Symposium, Colorado State University, (Presenter) Trivedi, P.

September 8, 2015, "Identifying microbial modulators of soil carbon storage under crop rotations in Cotton producing agro-systems.", 2nd Australian Cotton Research Conference.

June 12, 2015, "The Koala (*Phascolarctos cinereus*) Faecal bacterial microbiome; does change in diet impact

community structure?", Australian Society of Microbiology Meeting.

March 15, 2015, "Candidatus Liberibacter asiaticus encodes a functional salicylic acid hydroxylase which degrades SA and contributes to the suppression of plant defense", Joint Academic Microbiology Seminars.

December 15, 2014, "Trends in manipulating Plant-Microbe Interactions for sustainable food production", Gurukul Kangri University.

June 8, 2014, "Identifying microbial drivers and key modulators of soil health in grain cropping systems", World Soil Science Congress, peer-reviewed/refereed.

February 14, 2014, "Microbial modulators of soil carbon storage: integrating genomic and metabolic knowledge for global prediction", Ecogenomics: From Data to Knowledge Seminar.

October 2, 2012, "Harnessing microbial diversity for improved plant growth and disease management", Plant Production Seminar.

August 4, 2012, "Modulation of plant defense responses by Salicylate hydroxylase of Candidatus Liberibacter asiaticus and its implication of canker pathogen Xanthomonas citri subsp. citri in Huanglongbing infected plants.", American Phytopathological Society Annual Meeting, peer-reviewed/refereed.

April 12, 2012, "Plant associated microbiome and its importance for ecosystem sustainability", Nanyang Technological University Seminars.

August 10, 2011, "Huanglongbing on the structure and functional diversity of microbial communities associated with citrus rhizosphere.", American Phytopathological Society Annual Meeting.

OTHER ACTIVITIES/ACCOMPLISHMENTS – PUBLICATIONS/SCHOLARLY RECORD

(May 3, 2017). Workshop, "NSF Day," University of Wyoming, Laramie, Wyoming, United States. Approximate Number of Hours Spent Per Year: 2.

(March 20, 2017 - March 23, 2017). Conference Attendance, "DOE JGI Genomics of Energy and Environment Meeting," DOE JGI, WALNUT CREEK, CALIFORNIA, United States. Approximate Number of Hours Spent Per Year: 24.

TEACHING:

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u>Cr. Hrs.</u>	<u>Enrollment</u>
2017	Fall	BSPM592 - Seminar	2	2
2017	Fall	BSPM792 - Seminar	9	9

Guest Lectures:

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u># of Guest Lectures</u>	<u>Delivery Mode</u>
2017	Fall	Fundamentals of BSPM (BSPM 500)	1	Face to Face
2017	Summer	The Summer Soil Institute	4	Face to Face

Tenure and Promotion Evidence of Teaching Effectiveness (Tenure and Promotion Input)

Development of New Courses

Development of New Teaching Techniques

Integration of Service Learning

Conference/Workshop Assessments

Participation in Professional Development Activities Related to Teaching

Participated in following short courses organized by the institute of learning and teaching:

- 1) Best Practices: Design and Develop Your Online Course (Course 3)
- 2) Digital Tools for Teaching and Research
- 3) Entering Mentoring
- 4) Presentation as Theatrical Art
- 5) Spatial Learning using Digital Tools
- 6) Best Practices: Building a Learning Community in an Online Course (Course 4)

Professional Consultation Related to Teaching

Other Evidence

EXTENSION/ENGAGEMENT ACTIVITIES/ACCOMPLISHMENTS

Presentation

Soil Carbon: Identifying Microbial Drivers and Key Modulators in Grain Cropping Systems. Adult, Dove creek, Colorado. Percent Responsible: 5%. 1st Quarter 2017.

Biostimulants in Agriculture. Adult, Fort Morgan, Colorado. Number of times program was made: 1. Total number of participants: 50. Percent Responsible: 100%. 4th Quarter 2017.

COMMITTEES

CSU Microbiome Network, (January 2017 - December 2017).

Graduate Student Showcase, (November 9, 2017).

Annual Cell and Molecular Biology/Molecular, Cellular & Integrative Neuroscience Poster Symposium, (March 21, 2017).

Graduate Student Showcase, (November 15, 2016).

Job search "Bioinformatics and computational biology consultant", (November 20, 2017 - December 10, 2017).

Job Search Soil Microbiome position at Soil and Crop Sciences, (November 15, 2017 - December 10, 2017).

BSPM Seminar Series, (September 13, 2017 - September 13, 2018).

Monthly Departmental Meetings, (October 2016 - December 2017).

Job Search Cutrale Citrus Greening Project, (November 1, 2017 - December 24, 2017).

Job search Vector Biologist Position, (December 7, 2017 - December 21, 2017).

BSPM Big Data proposal, (December 19, 2016).

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

International Society for Microbial Ecology: (June 6, 2014 - Present).

American Phytopathological Society. (August 10, 2008 - Present).

<https://agsci.source.colostate.edu/>.

Source CSU.

Reviewer, Journal Article, Nature Biotechnology. (August 21, 2017 - Present).

Reviewer, Journal Article, FEMS Microbial Ecology. (April 21, 2017 - Present).

Reviewer, Journal Article, Environmental Microbiology. (April 1, 2017 - Present).

Reviewer, Journal Article, The ISME Journal. (January 21, 2017 - Present).

Reviewer, Journal Article, Microbiome. (December 15, 2016 - Present).

Reviewer, Journal Article, Geoderma. (November 20, 2016 - Present).

Reviewer, Journal Article, Scientific Report. (November 10, 2016 - Present).

Reviewer, Grant Proposal, US-Israel Agricultural Research & Development Fund. (September 12, 2017).

Reviewer, Grant Proposal, Citrus Research Board. (June 14, 2017).

Reviewer, Grant Panel, JGI 2017 Small-Scale CSP Microbial/ Metagenome Review. (May 12, 2017).

OTHER ACTIVITIES/ACCOMPLISHMENTS – SERVICE/OUTREACH

Academic, UNCLE MATT'S ORGANIC, CLEARMONT, FLORIDA, United States. (June 21, 2017 - Present).

Academic, Sugarcane Research Australia, Indooroopilly, Queensland, Australia. (August 10, 2014 - Present).

Academic, Southwest Colorado Research Center, Yellow Jacket, Colorado, United States. (November 10, 2017).

Academic, Southwest Colorado Research Center, Yellow Jacket, Colorado, United States. (November 10, 2016).
