

Dr. Sana Hanif

PhD, (Charles Sturt University, Australia)

Assistant Professor

Department of Plant Pathology,

Faculty of Agricultural Sciences,

University of the Punjab

Contact: + 92-42-99231846-47

sana.iags@pu.edu.pk; sana.hanif10@gmail.com

Education and training

| | | |
|---|-----------|-------------------------------------|
| Doctor of Philosophy, Agriculture (Plant Pathology) | 2015-2021 | Charles Sturt University, Australia |
| MSc .(Hons)(Agriculture) Plant Pathology (University Gold medal) | 2007-2009 | University of the Punjab, Pakistan |
| BSc. (Hons)(Agriculture) Plant Pathology (University Gold medal) | 2003-2007 | University of the Punjab, Pakistan |

Work experience

| MONTH /YEAR | DESIGNATION | INSTITUTION |
|---------------------|--------------------------------|---|
| Dec 2021-Present | Assistant professor (Adhoc) | Department of Plant Pathology, University of the Punjab, Pakistan |
| Jul 2015- Apr 2020 | Research fellow | Charles Sturt University, NSW, Australia |
| Apr 2010 - Dec 2021 | Lecturer | Institute of Agricultural Sciences, University of the Punjab, Pakistan |
| Jul 2008 - May 2009 | Research scholar | Pesticide Residue Laboratory, Lahore, Pakistan |
| Oct 2005 - Jan 2006 | Internee | Pakistan Council Of Scientific Research & Industrial Research, Laboratories Complex, Lahore, Pakistan |

Awards, Prizes and other professional achievements

- Recipient of Graham Centre Support for Conference Participation, Australia of AU\$2500, for International Conference, 2019.
- Recipient of Graham Centre Support for Conference Participation, Australia of AU\$1000, for Australian local conference, 2019.
- Recipient of Charles Sturt University International Tuition Fee Payment (CSUITP) for PhD Degree (4 years), 2015.
- Recipient of Charles Sturt University Post Graduate Research Scholarship CSUPRS for full PhD studies (3.5 years), 2015.
- Research incentive award for year 2014 and 2015 from University of the Punjab, Pakistan.
- Performance evaluation award for teaching 2013 and 2014 from University of the Punjab, Pakistan.
- Merit scholarship awarded in 1st year of MSc. (Hons), 2007
- Research scholarship awarded in 2nd year of MSc. (Hons), 2008
- Distinction in MSc. (Hons) (first position) 2 years programme (Gold medal), 2009
- Merit scholarship was awarded throughout BSc. (Hons) (4 years), 2003-2007
- Distinction in BSc. (Hons) (First position) 4 years programme (Gold medal), 2007

Research / Technical projects

1. Efficacy and mechanisms of bacterial biocontrol agents against *Leptosphaeria maculans* (Desm.) causing blackleg disease of canola (*Brassica napus* L.), as PhD project.
2. Investigations on Biodiversity of Nematodes Associated with Potato in Major Potato Growing Regions of Punjab and their Biocontrol. Funded by University of the Punjab, Lahore, Pakistan, 2011-12 as Principle investigator.
3. Screening of bacterial bioagents for their ability to induce cold stress tolerance in tomato (*Lycopersicon esculentum* Mill.), funded by University of the Punjab, Lahore, Pakistan, 2012-13 as Principle Investigator.
4. Benzimidazol fungicides against late blight and residual analysis: efficacy and dissipative studies, MSc. (hons) research project.

Professional Associations

Member of Australasian Plant Pathology Society (2017-2019)

Conferences and workshops attended

1. **Oral presentation** in 22nd Biennial Australasian Plant Pathology Society (APPS) conference, 25-28, 2019, organized by: Australasian Plant Pathology Society, Melbourne, Australia. Title: Profiling volatile organic compounds produced by *Bacillus* species with biocontrol properties against *Leptosphaeria maculans*.
2. **Participation** in **Agricultural Microbiomes, full day workshop** on 25 November 2019, at AgriBio, La Trobe University, Bundoora, Melbourne.
3. **Poster presentation** in 15th International Rapeseed Congress, 16 to 19 Jun, 2019, organized by: International Consultative Group of Research on Rapeseed, Berlin, Germany. Title: Potential biocontrol agents for blackleg disease of Canola.
4. **Participation** in **Grains Research Update: Boosting Profitability – Resilient Solutions**, February 19-20, 2019, Grains Research & Development Corporation, Wagga Wagga, New South Wales, Australia.
5. **Poster presentation** in **International Conference on Science protecting plant health organized by** Australasian Plant Pathology Society Biennial Conference, 26-28 Sep 2017. Title: Characterization and screening of *Bacillus* spp. for lipopeptides and enzymes involved in biocontrol of *Leptosphaeria maculans*.
6. **Participation** in one day **Canola Pathology Workshop: National Meeting on Diseases of Canola** Wednesday, 2 March 2016 University of Melbourne, Parkville, Victoria, Australia.
7. **Participation** in **International Conference on Stress Biology and Biotechnology Challenges & Management, May 21-23, 2014**, organized by the Institute of Agricultural sciences, University of the Punjab, Lahore in collaboration with Higher Education Commission (HEC) Pakistan and ICARDA.
8. **Oral Paper presentation** in 1st International Conference on Safe Food and Human Health, 10-11 Jan, 2012, organized by: Department Of Food Science, Government College University, Faisalabad, Pakistan. **Title: Residual Analysis of Different Fungicides In/On Tomato Fruit.**
9. **Oral Paper presentation** in International Conference on Emerging Issues in Food Safety ,14-16,November, 2011,organized by National Institute of Food Sciences & Technology, University of Agriculture, Faisalabad ,Pakistan. **Title: Evaluation of Half Life and Withholding Period of Two Frequently Used Fungicides Viz., Thiophanate Methyl and Carbendazim On Tomato Fruit In Punjab, Pakistan.**
10. **Organized “3rd International Conference on Plant Pathology & 7th Biennial Meeting of Pakistan Phytopathological Society”** organized by the Institute of Agricultural sciences, University of the Punjab, Lahore in collaboration with Higher Education Commission (HEC) Pakistan; National Core Group in Life Sciences, Pakistan, National Commission on Biotechnology (NCB), Pakistan; Pakistan Science Foundation (PSF); Pakistan Agricultural

Research Council (PARC); & University of the Punjab, Lahore; Pakistan. 19th to 21st November, 2007.

Research publications

1. [Sana Hanif](#), Rahila Hafeez, Waheed Akram Muhammad Ashfaq, and Amna Ali, 2016, First report of Sclerotinia fruit rot of *Citrus paradisi* caused by *Sclerotinia sclerotiorum* in Pakistan, *Plant Disease*, Vol. 100(4):863 (impact factor= 3.173)
2. [Sana Hanif](#), Tehmina Anjum, Rahila Hafeez, Waheed Akram, Amna Ali, and Farukh Hassan, 2016, First Report of *Alternaria mali* causing core rot of apple in Pakistan, *Plant Disease*, Vol 100(8):1784 (impact factor= 3.173)
3. Amna Ali, Muhammad Ashfaq, Muhammad Saleem Haider, [Sana Hanif](#), Muhammad Ali & Rahila Hafeez, 2016, Allelopathic Potential of *Lantana camara* L. against Plant Pathogenic Bacteria, *Biologia (Pakistan)*, Vol. 62 (2): 357-361
4. [Sana Hanif](#), Tehmina Anjum, Sabin Fatima, Amna Ali, Asrar Mahboob and Waheed Akram, 2014, Potential of some native Bacillus strains to promote growth of tomato, *Pakistan Journal of Biotechnology*, Vol. 11 (2) 153- 162
5. Waheed Akram, Tehmina Anjum, [Sana Hanif](#), Sabin Fatima, Asrar Mahboob and Asmat Ali Javed, 2014, Screening of native and exotic tomato germplasm for their susceptibility to tomato Yellow leaf curl virus and its effect on their Agro-economic performance under field conditions. *Scholars Journal of Agriculture and Veterinary Sciences*, Vol. 1(4B):305-309.
6. Muhammad Ashfaq, Muhammad Saleem Haider , Amna Ali , Muhammad Ali , [Sana Hanif](#) and Urooj Mubashar , 2014, Screening of Diverse Germplasm for Genetic Studies of Drought Tolerance in Rice (*Oryza sativa* L), *Caryologia. International Journal of Cytology, Cytosystematics and Cytogenetics* Vol. 67(4): 296–304 (impact factor=0.864)
7. Mehreen Hassan and [Sana Hanif](#). 2014. Physical, chemical and microbiological analysis of the water quality of rawal lake, *International Journal Agricultural Research Innovation and Technology*. 4 (1): 28-31 (impact factor= 1.08)
8. [Amna Ali](#), [Muhammad Saleem Haider](#), [Sana Hanif](#) and Nosheen Akhtar, 2014, Assessment of the antibacterial activity of *Cuscuta pedicellata* Ledeb., *African journal of biotechnology*. 13(3): 430-433
9. Amna Ali, Muhammad Saleem Haider, Sana Hanif and Muhammad Ashfaq, 2014, Bacterial Diversity In Some Selected Agricultural Food Products, *Bangladesh journal of botany*. 43(2): 219-222 (Impact factor = 0.377).

10. Amna Ali, Muhammad Saleem Haider, [Sana Hanif](#) , Nosheen Akhtar, Muhammad Ashfaq, 2013, Bio-control of bacterial species isolated from diseased citrus fruits by methanolic extracts of weeds in vitro. *European journal of experimental biology*, 3(1): 1-9
11. Amna Ali, Muhammad Saleem Haider and [Sana Hanif](#), 2013, Biocontrol assays of plant pathogenic assays of plant pathogenic bacteria with different solvents of *Datura Alba* Nees *Pak. Journal of weed science research*. 19(3): 295 - 303. **(HEC Recognized)**
12. Amna Ali, M. Saleem Haider, Sobia Mushtaq, Ibatsam Khokhar, Irum Mukhtar, [Sana Hanif](#) and Nosheen Akhtar. 2012. In vitro controlling the establishment of *Xanthomonas campestris* with different bacterial biocontrol agents. *Global Advanced Research Journal of Microbiology*. 1(8):136-140.
13. Amna Ali, [Sana Hanif](#), Rukhsana Bajwa and Rasheda Jabeen. 2011. Assessing Enzyme Activity of *Trichoderma* Species. *International journal of biology and biotechnology*, 8(3): 377- 381(HEC Recognized)
14. Shazia Shafiq, Sobia Shafiq, Rukhsana Bajwa, Nosheen Akhtar and [Sana Hanif](#). 2011. Fungitoxic activity of aqueous and organic solvent extract of *Tagetes erectus* on phytopathogenic fungus *Ascochyta rabiei*. *Pakistan journal of Botany*, 43(1): 59-64.(**impact factor= 0.947**)

Abstracts published (in conferences)

1. Title: **Profiling volatile organic compounds produced by *Bacillus* species with biocontrol properties against *Leptosphaeria maculans***, in abstract book of 22nd Biennial Australasian Plant Pathology Society (APPS) conference, 25-28, 2019, organized by: Australasian Plant Pathology Society, Melbourne, Australia.
2. Title: **Potential biocontrol agents for blackleg disease of Canola**, in abstract book of 15th International Rapeseed Congress, 16 to 19 Jun, 2019, organized by: International Consultative Group of Research on Rapeseed, Berlin, Germany.
3. **Title: Characterization and screening of *Bacillus* spp. for lipopeptides and enzymes involved in biocontrol of *Leptosphaeria maculans***, in abstract book of Australasian Plant Pathology Society Biennial Conference, 26-28 Sep 2017.
4. **Title: Evaluation of Half Life and Withholding Period of Two Frequently Used Fungicides Viz., Thiophanate Methyl and Carbendazim On Tomato Fruit In Punjab, Pakistan** in abstract book of International Conference on Emerging Issues in Food Safety organized by National Institute of Food Sciences & Technology, University of Agriculture, Faisalabad-38040, Pakistan.
5. **Title: Residual Analysis Of Different Fungicides In/On Tomato Fruit** in abstract book of 1st

International Conference on Safe Food and Human Health, 10-11 Jan, 2012, organized by:
Department Of Food Science, Government College University, Faisalabad, Pakistan

6. **Title: Disease suppression of bacterial leaf blight(BLB) of rice by plant growth promoting Rhizobacteria (PGPR)- *In Vitro*** in abstract book of 5th International conference on Agriculture, Food security and Climate change, 9-11 Sept, 2014, organized by the University of Poonch Rawalakot and Pakistan Agricultural Scientists Forum.

Subjects taught

Postgraduate level

- Phytobacteriology
- Phytonematology
- Insect in relation to Plant Diseases

Under graduate level

- Introductory Mycology
- Plant Disease Diagnostics
- Lower Fungi
- Abiotic Diseases of Plants
- Introduction to Plant Parasitic Nematodes
- Plant Disease Epidemiology
- Beneficial Microorganisms for Sustainable Agriculture
- Plant Resistance to Diseases

Research supervision of undergraduate students

1. **Muhammad Usman Chaudhary, 2022** Serological detection of Potato Virus X (PVX) in tissue cultured potato plants.
2. **Rameen Rafique, 2022**, *In vitro* biological of *Aspergillus niger* and *Alternaria alternata* through *Trichoderma harzianum*.
3. **Kainat Kiran, 2022** *In vitro* biocontrol of *Aspergillus niger* and *Alternaria alternata* by using *Trichoderma viridae*
4. **Misbah Sultan Ajmal, 2015**, Screening of Different Tomato (*Solanum lycopersicum*) germplasm lines for selection against early blight disease.
5. **Intezar Hussein, 2015**, Screening of F3 single plant progeny rows of tomato (*Solanum lycopersicum*) against early blight diseases.

Research supervision of Postgraduate students

1. Muhammad Javed 2021-2022 Herbicidal potential of organic extracts of *Lantana camara L. (Verbenaceae)* against weeds of Maize, ongoing
2. Komal Habib 2022-2023 ongoing
3. Muhammad Iqbal 2022-2023 ongoing

Research skills

Extensive experience of working with isolation, culturing, storage/preservation of fungi, bacteria and nematodes. I have worked on advanced molecular and analytical chemistry techniques i.e., DNA extraction, purification and sequence analysis, MLST, HPLC, GC-MS, MALDI-TOF-MS etc., Proficient user of referencing software tools like endnote. Presentation and publication of research. Experience in handling big data, statistical data analysis using GenStat and basic skill level of R statistical software for data presentation.

Professional References:

Dr. Sandra Savocchia

Associate Professor

School of Agricultural and
Wine Science

Charles Sturt University,
Wagga Wagga, Australia

Email: ssavocchia@csu.edu.au

Dr. Ben. Stodart

Lecturer

School of Agricultural and Wine
Science

Charles Sturt University, Wagga
Wagga, Australia

Email: bstodart@csu.edu.au

Prof. Dr. Gavin Ash

Executive Director

Institute for Life Sciences and the
Environment

University of Southern Queensland,
Toowoomba, Australia

Email: gavin.ash@usq.edu.au