

DR. WAHEED ANWAR

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RESEARCH INTERESTS:

My research interests are mainly on Biocontrol of plant diseases as well as insect pests and Integrated Pest Management (IPM) using different biological agents.

Professional Experience

- Working as Assistant Professor at Faculty of Agricultural Sciences, University of the Punjab, Lahore Pakistan since May, 2022.
- Worked as Research Officer at First Fungal Culture Bank of Pakistan, Faculty of Agricultural Sciences, University of the Punjab from January, 2013 to May, 2022.
- Research Trainee at Sanya NanFan Science and Technology Institute, China from Oct 05, 2019 to Oct 26, 2019.
- Worked as Visiting Assistant Professor, Department of Plant Pathology, Faculty of Agricultural Sciences, University of the Punjab since 2014.
- Worked as Research Scholar at Fungal Culture Bank of Pakistan, Institute of Agricultural Sciences, University of the Punjab from April, 2011 to January 2013
- Worked as Visiting Scholar at Brown's Lab, University of Arizona, USA from August 2015 to January, 2016.
- Worked as Internee through National Internship Program in Directorate of Pest Warning and Quality Control of Pesticides, Government of the Punjab, Lahore from Feb, 2007 to Feb 2018.
- Assistant Superintendent, Boys Hostel No. 17 from February, 2011 to July, 2017.

EDUCATION:

PhD Agriculture (Plant Pathology)	2017
Institute of Agricultural Sciences, University of the Punjab, Pakistan	
M.Sc. (Hons.) Agriculture (Plant Pathology)	2010
Institute of Agricultural Sciences, University of the Punjab, Pakistan	
B.Sc. (Hons.) Agriculture (Plant Pathology)	2007
Institute of Agricultural Sciences, University of the Punjab, Pakistan	

RESEARCH EXPERTISE:

- Performed field surveys and sample collection for disease incidence and disease severity.
- Conducted laboratory, greenhouse, and field experiments in Plant disease diagnostics.
- Acquired training and practically performed Microscopy, DNA & RNA extraction, Primer designing, PCR, Cloning, VIGS, *Agrobacterium*-Mediated Gene Transformation.
- Experienced in Morphological and primer assisted identification of plant pathogens.
- Experience in microbiomes, metagenomics and plant endophytic microbial communities.
- Experienced in Maintenance of microbial conservatory.
- Expert in Bioinformatics tools and Statistics analysis using Statistix 8.1.
- Accomplished expertise in writing and formatting research grants and manuscripts.

PROFESSIONAL TRAININGS/WORKSHOPS

- Three-days training workshop ON “Kazakhstan-Pakistan-Turkey Youth Forum on Biotechnology” held on 13th to 15th September, 2022 at Comstech Secretariat, Islamabad.
- One month *Plant Hazard Protection Course* Presented by the Office of Radiation, Chemical & Biological Safety, The University of Arizona, Tucson, Arizona from August, 14, 2015 to September, 14, 2016.
- One month *General Laboratory Chemical Safety Course* Presented by the Office of Radiation, Chemical & Biological Safety, the University of Arizona, Tucson, Arizona from August, 14, 2015 to September, 14, 2016.
- Three-days training workshop on “*Cotton Leaf Curl Disease (CLCuD) Diagnostics & Resistance*” held from August 26-28, 2013 at Institute of Agricultural Sciences (IAGS), University of the Punjab, Lahore Pakistan.
- Two days workshop on *Faculty Professional Training on the core modules: Teaching as a profession & Communication skills* organized by Institute of Agricultural Sciences, University of the Punjab, Lahore in collaboration with Learning Innovation Division HEC, Pakistan during June 19-20, 2013.
- International Workshop entitled “*Pak-US Productivity Enhancement Workshop, 2012*” organized by International Centre for Agriculture Research in the Dry Areas (ICARDA), held on 03-04 September 2012 at National Agriculture Research Centre (NARC), Islamabad, Pakistan.
- National Workshop entitled “*2nd one day Workshop on young researchers Skill Development*” organized by national Academy of Young Scientist (NAYS), Pakistan held on 7 January, 2012 at Islamic Centre, University of the Punjab, Lahore, Pakistan.
- The International Workshop on “*Promotion of Farmer Field School based Integrated Pest Management Approach for OIC member states*” organized by COMSTECHE and NARC, PARC, Islamabad, Pakistan held from 4 to 6 July, 2011 at COMSTECHE Islamabad, Pakistan.
- Short training course on “*Land Resource Surveys using GIS/RS Techniques*” from 07-12-2009 to 02-01-2010 under the project “National Institute of research in Soils and Geomatics. Soil Survey of Pakistan, Ministry of Food & Agriculture.

RESEARCH PROJECTS

1. Completed a bilateral project (*Assessment of biocontrol efficiency of entomopathogenic fungi against Spider Mites*) of 1.5 million as **Principal Investigator** in collaboration with the Plant Protection Department, Ankara University, Turkey, under “2019-2020 Project Based Mevlana Programme”.
2. Completed a project (*Control of Whitefly through Entomopathogenic fungi*) of 3 million in 2017 under the supervision of Prof. Dr. Muhammad Saleem Haider **as Researcher**. Working on this project, an insectary for the homogenous culture of whitefly has been developed. Insect cages, clip cages, aspirator and complete infrastructure has been designed scientifically.
3. Completed a Project (*Biopesticide formulation for Pythium and Phytophthora diseases of tomato and chilli*) of 6 million in 2019 **as Researcher**, sponsored by Pakistan Agriculture Research Council (PARB) under the supervision of Prof. Dr. Muhammad Saleem Haider and Dr. Ahmad Ali Shahid.

RESEARCH SUPERVISION

I have supervised/assisted 19 research students of B.Sc. (Hons), M.Sc. (Hons) and PhD. so far. I am enlisting herewith their Research topics alongwith Names of students and their sessions.

Sr. No	Class	Name of Student	Title of Research
01	M.Sc. (Hons)	Rahat Ghaffar (2104)	Morphological and Molecular Characterization of Genera <i>Fusarium</i> from Pakistan
02	M.Sc. (Hons)	Khateeja Imtiaz (2014)	Morphological and Molecular Characterization of Genera <i>Alternaria</i> from Pakistan
03	B.Sc. (Hons)	Zohaib Ijaz (2014)	Fungal and bacterial flora associated with <i>Oeniculum vulgare</i>
04	B.Sc. (Hons)	Hamid Mushtaq (2015)	Infectious process of <i>Fusarium</i> and <i>Aspergillus</i> against <i>Bemisia tabaci</i>
05	M.Sc. (Hons)	Qamar Yousif (2016)	Isolation and Identification of <i>Phthorhiza palmivora</i> from Chinese Fan Palm and analysis of chemical and biological control
06	M.Sc. (Hons)	Imran Bashir (2016)	Isolation and identification of <i>Fusarium</i> from <i>Gladiolus</i> and analysis of biological and chemical control.
07	B.Sc. (Hons)	Wajeeha Aslam (2017)	Chitinase activity of entomopathogenic fungi against <i>Alternaria</i> and <i>Fusarium</i> pathogens
08	B.Sc. (Hons)	Sahaab Masood (2017)	Coat Protein detection of Begomoviruses in weeds
09	M.Sc. (Hons)	Hamid Mushtaq (2017)	Fungal diseases of Strawberry and their Biological Control
10	M.Sc. (Hons)	Yousif Ali Abdulli (2017)	Fungal Diseases of Mango and their Biological Control
11	Ph.D UVAS	Huma Naeem (2017)	Distribution and In vitro biological control of bovine Tick fauna
12	M.Sc. (Hons)	Iqra Asharaf (2018)	Isolation and Purification of <i>Coriulus versicolor</i> against early blight of Tomato
13	M.Sc. (Hons)	Hafeez Ul Haq (2019)	Evaluation of the effect of Biochar and compost as soil organic amendment against early blight (<i>Alternaria solani</i>) in Tomato
14	M.Sc. (Hons)	Huma Amin (2019)	Evaluation of Fungal Chitinases for the control of <i>Aphis gossypii</i>
15	M.Sc. (Hons)	M. Asim Javed (2019)	Assessment of Wheat (<i>Triticum aestivum</i> L.) associated Microbimes and their Impact on Plant Health.
15	M.Sc. (Hons)	Haleema Saeed (2020)	Effect of low Temperature Preservation on different Bacterial Strains
16	M.Sc. (Hons)	Ramsha Basit (2020)	Production of total secondary metabolites of <i>Trichoderma</i> spp. and their evaluation against different plant pathogens
17	M.Sc. (Hons)	Habiba Sarwar (2020)	Effect of low Temperature Preservation on different species of <i>Penicillium</i>
18	M.Sc.	Anam Rashid	Enhancement Oyster Mushrooms Production through different

	(Hons)	(2020)	substrates
19	M.Sc. (Hons)	Aniqa Ahmad (2020)	Effect of low Temperature Preservation on different species of <i>Fusarium</i>
20	M.Sc. (Hons)	Muhammad Faizan Sajid (2022)	Assessment of Microbiomes associated with Soyabean Germplasm
21	M.Sc. (Hons)	Habiba Shahid (2022)	Determination of Fungicidal Resistance in different Field Crops Plant Pathogens
22	M.Sc. (Hons)	Mah-e- Zahra (2022)	Determining Transgene Flow of Herbicide and CLCuV Resistance in Cotton

TEACHING ASSISTANCE TO THE POSTGRAD/UNDERGRAD STUDENTS

I have taught approx 15 different courses (Individual/combine with senior teacher) related to Agriculture/Plant pathology. Herby, I am enlisting the courses according to the years.

- B.Sc (Hons) 1st semester (Morning) in 2021. Basic Agriculture (Theory + Lab).
- B.Sc (Hons) 6th semester (Morning + Replica) in 2020. Post Harvest Pathology Lab.
- B.Sc (Hons) 5th semester (Morning + Replica) in 2019. Introductory Mycology.
- Ph.D (Plant pathology) 2nd semester in 2018. Insects in relations to Plant Diseases.
- B.Sc (Hons) 6th semester (Morning + Replica) in 2018. Biotechnology and its applications in Plant Pathology
- B.Sc. (Hons) 7th Semester (Morning+Replica) in 2017; Introductory Molecular Plant Pathology (Theory+ Lab).
- M.Sc. (Hons) 3rd Semester (Morning + Replica) in 2017. Insects in relations to Plant Diseases.
- B.Sc. (Hons) 6th Semester (Morning + Replica) in 2017. Plant Disease Epidemiology.
- B.Sc. (Hons) 7th Semester (Morning+Replica) in 2016; Introductory Molecular Plant Pathology (Theory+ Lab).
- B.Sc. (Hons) 5th Semester (Morning+Replica) in 2016; Abiotic Diseases of Plants (Theory+ Lab).
- B.Sc. (Hons) 6th Semester (Morning) in 2016; Course: Fungal Biotechnology (Theory + Lab).
- B.Sc. (Hons) 6th Semester (Morning) in 2015; Course: Resistance to plant Diseases (theory + lab).
- B.Sc. (Hons) 6th Semester (Replica) in 2015; Course: Resistance to plant Diseases (theory + lab).
- B.Sc. (Hons) 6th Semester (Morning) in 2014; Course: Introductory Plant Pathology (theory + lab).
- B.Sc. (Hons) 6th Semester (Replica) in 2014; Course: Introductory Plant Pathology (theory + lab)

PUBLICATIONS:

I have published a total of 03 Books, 03 Book Chapters and 44 research articles in peer reviewed National and international Journals. . Herby, I am enlisting the details.

TEXTS BOOKS

- Bibi A., **Anwar W.**, and Hassan F., (2012). Bacteriocin production from *Pseudomonas* sp. : Spite and Virulence. **ISBN:** 978-3-659-16306-7, paperback, 95 Pages. **Publisher:** VDM Verlag Dr. Muller GmbH & Co. KG Dudweiler Landstr.99,66123 Saarbrucken, Germany.
- **Anwar W.**, Khan S. N., and Bibi A., (2011). Agroecological Diveristy of Entomopathogens in Pakistan. **ISBN:** 978-3-639-37472-8. **Publisher:** VDM Verlag Dr. Muller GmbH & Co. KG Dudweiler Landstr.99,66123 Saarbrucken, Germany.
- **Anwar W.**, Bibi A., and Manzoor M. T., (2011). Production of Alpha Amylase from *Aspergillus niger*. **ISBN:** 978-3-639-38016-3, paperback, 52 Pages. **Publisher:** VDM Verlag Dr. Muller GmbH & Co. KG Dudweiler Landstr.99,66123 Saarbrucken, Germany.

BOOK CHAPTERS

- **Anwar W.**, Shahid A.A. and Haider M.S. (2017). “**Entomopathogenic Fungi: Introduction, History, Classification, Infection Mechanism, Enzymes, and Toxins**” in a book entitled, “**Biopesticides-and-bioagents-novel-tools-for-pest-management**”. The book is published by Apple Academic Press partnered with CRC Press, a member of the Taylor & Francis Group. Published in September, 2017.
- Nawaz K., Bengyella L., **Anwar W.**, Iftikhar S., Subhani M.N. and Shahid A.A. (2017). Chapter entitled, “ **Comparative analysis of pathogenicity-related proteins of *Cochliobolus*–plant interactions in post-genomic era**” in Book entitled, “**Pathogenicity of *Cochliobolus* species in post-genomic era**” 1st Edition, Studium Press LLC, U.S.A. Published in August, 2017.
- Nawaz K., Bengyella L., **Anwar W.**, Iftikhar S., Subhani M.N. and Shahid A.A. (2017). Chapter entitled, “**Current *Cochliobolus* Metabolites Involved in Plant Disease Development in Post-Genomic era**” in Book entitled, “**Pathogenicity of *Cochliobolus* species in post-genomic era**” 1st Edition, Studium Press LLC, U.S.A. Published in August, 2017.

RESEARCH PAPERS (Impact factors)

- **Anwar W.**, Akhter A., Bashir U., Khan HAA., Zohaib KA. and Haider MSH. (2022). *Penicillium* and *Cladosporium*; potential entomopathogenic fungi against *Bemisia tabaci*. *The Fungi, MPDI (in press)*. (**Impact Factor: 5.816**).
- **Anwar W.**, Akhter A., Bashir U., Khan HAA., Rashid A., Asim MA., Zohaib KA., Basit R. and Haider MSH. Mycobiomes associated with Insect of *Sternorrhyncha* (Hemiptera). *PLOS ONE. (in press)*. (**Impact Factor: 3.24**).
- Cobalanglu S., **Anwar W.**, Asim MA. and Khan HAA. (2022). Biocontrol potential of entomopathogenic fungi against *Tetranychus urticae* Koch (Acari: *Tetranychidae*). *Pakistan Journal of Zoology. (in press)*. (**Impact Factor: 0.831**).
- Mushtaq, Z., Liaquat, M., Nazir, A., Liaquat, R., Iftikhar, H., **Anwar, W.**, & Itrat, N. (2022). Potential of plant growth promoting rhizobacteria to mitigate chromium contamination. *Environmental Technology & Innovation*, 102826.
- Iftikhar S., Bengyella L., Shahid AA., Nawaz K., **Anwar W** and Khan HAA. (2022). Discovery of succinate dehydrogenase candidate fungicides via lead optimization for effective resistance

management of *Fusarium oxysporum* f. sp. *capsici*. *3Biotech.* (2022) 12:102. <https://doi.org/10.1007/s13205-022-03157-8>. **(Impact Factor: 2.406)**

- Zahra MB., Fayyaz B., Huma ZHA., Akhter A., Bahar T., **Anwar W** and Haider MS. (2022). Characterization and utilization of cow manure biochar as soil amendment for the management of Northern corn leaf blight. *Journal of Soil Science and Plant Nutrition.* (in press). **(Impact Factor: 3.872).**
- **Anwar W**, Nawaz K, Javed MA, Akhter A, Shahid AA, Haider MS, Rehman MZU & Ali S. (2020). Characterization of fungal flora associated with *Sternorrhyncha* insects of cotton plants. *Biologia* (2020). <https://doi.org/10.2478/s11756-020-00549-0> **(Impact Factor: 0.875).**
- **Anwar, W.**, Javed M.A., Shahid A.A., Nawaz K., Akhter A., Rehman M.Z.U., Hameed U., Iftikhar S. and Haider M.S., (2019). Chitinase genes from *Metarhizium anisopliae* for the control of whitefly in cotton. *Royal. Society. open science.*6 :190412. <http://dx.doi.org/10.1098/rsos.190412>. **(Impact Factor: 2.50).**
- Akhtar N., Hanif K., Shafiq M and **Anwar W**. (2018). New report of *Aspergillus awamori* fruit rot of guava in Pakistan. *Journal of Animal and Plant Sciences* 28(5):1537-1541. **(Impact Factor:0.50).**
- **Anwar, W.**, Ali, S., Nawaz, K., Iftikhar, S., Javed, M. A., Hashem, A., & Akhter, A. (2018). Entomopathogenic fungus *Clonostachys rosea* as a biocontrol agent against whitefly (*Bemisia tabaci*). *Biocontrol Science and Technology*, 1-11. **(Impact Factor: 0.919).**
- Nawaz K., Shahid A.A., Bengyella L., Subhani M.N. , Ali M. , **Anwar W.**, Iftikhar S., Ali S.W. (2018). Evidence of genetically diverse virulent mating types of *Phytophthora capsici* from *Capsicum annum* L. *World Journal of Microbiology and Biotechnology* (2018) 34:130. **(Impact Factor 2.10).**
- Nawaz K., Shahid A.A., Bengyella L., Subhani M.N. , Ali M. , **Anwar W.**, Iftikhar S., Ali S.W. (2018). Diversity of *Trichoderma* species in chili rhizosphere that promote vigor and antagonism against virulent *Phytophthora capsici*. *Scientia Horticulturae* . 239; 242–252. **(Impact Factor: 1.624)**
- Nawaz K., Shahid A.A., Subhani M.N., Iftikhar S. & **Anwar W**. (2018). First report of leaf spot caused by *Phytophthora capsici* on chili pepper (*Capsicum frutescens* L.) in Pakistan. *Journal of Plant Pathology.* <https://doi.org/10.1007/s42161-018-0018-x>. **(Impact Factor: 1.27)**
- Iftikhar S., Shahid A.A., Nawaz K., Zahid A., **Anwar W**. and Haider M.S. (2018). First report of black pit of potato caused by *Alternaria alternata* in Pakistan, *Journal of Plant disease* **(Impact Factor 3.20).**
- **Anwar W.**, Nawaz K., Iftikhar S and Subhani M.N. (2017). First report of fruit rot of tomato caused by *Pythium ultimum* in Pakistan. *Journal of Plant Pathology* Vol. 99, No.2. **(Impact Factor: 1.27)**
- A.A. Shahid, K. Nawaz, S. Iftikhar, **W. Anwar** and M.N. Subhani.(2017). New record of fruit rot of bitter melon (*Momordica charantia*) caused by *Phytophthora*. (*Plant Disease*, **Impact Factor- 3.20**, <http://dx.doi.org/10.1094/PDIS-01-17-0049-PDN>).
- Javed S., Javaid A., **Anwar W.**, Majeed R.A., Akhtar R. and Naqvi S.F.(2017). First Report of Botrytis Bunch Rot of Grapes Caused by *Botrytis cinerea* in Pakistan. (*Plant Disease*, **Impact Factor- 3.20**, <http://dx.doi.org/10.1094/PDIS-05-16-0762-PDN>).

- Shahid A.A., Iftikhar S., Nawaz K., **Anwar W.** and Ali M. (2017). First report of *Alternaria alternata* causing Brown spot of potato in Pakistan. Journal of Plant Pathology; Vol 99, No 1. **(Impact Factor: 1.27)**.
- Bashir, U., Javed S., **Anwar W.**, Nawaz K and Hafeez R. (2017). First Report of *Penicillium polonicum* causing Blue Mold on Stored Garlic (*Allium sativum* L.) in Pakistan. (Plant Disease- **Impact Factor 3.20**, <http://dx.doi.org/10.1094/PDIS-07-16-1069-PDN>)
- Khan A., Chattha M.B., **Anwar W.**, Nawaz K and Subhani M.N. (2017). First report of whisker mold of citrus (*Citrus sinensis*) caused by *Penicillium ulaiense* in Pakistan. (Plant Disease- **Impact Factor, 3.20**, <http://dx.doi.org/10.1094/PDIS-10-16-1511-PDN>).
- **Anwar W.**, Hameed U., Mushtaq H., Shahid A.A., Haider M.S., Rehman M. Z. and Iqbal M. J. (2016). Genetic diversity of *Fusarium* isolated from members of *Sternorrhyncha* (*Homoptera*); entomopathogens against *Bemisia tabaci*. (Pakistan Journal of Zoology. **Impact Factor- 0.478**, DOI: <http://dx.doi.org/10.17582/journal.pjz/2017.49.2.639.645>)
- Chaudhary T., Shahid A.A., Asif M. Majeed R.A., Asghar F., Ali M. and **Anwar W.** (2016). First Report of *Curvularia lunata* causing Leaf Spot Disease of *Solanum melongena* (Eggplant) in Lahore, Pakistan. Plant Disease. Volume 100, Number 11 Page 2326. **(Impact Factor: 3.20)**.
- Ghafar R., **Anwar W.**, Shafiq M., Imtiaz K and Haider M.S. (2016). Diversity of Internal Transcribed Spacer (ITS) region of *Fusarium* isolates in Pakistan. The Journal of Animal & Plant Sciences, 26(5): 2016, Page: 1368-1373. **(Impact Factor- 0.448)**.
- Nawaz, K., Shahid, A. A., Subhani, M. N., **Anwar, W.**, & Aslam, M. (2016). First Report of *Pythium spinosum* Causing Root Rot of Chili (*Capsicum annum*) in Pakistan. Plant Disease, 100(2), 526-526. **(Impact Factor- 3.20)**.
- **Anwar W.**, Shafiq M., Haider M. S., Bibi A., and Khan S. N. (2013). First report of *Cochliobolus australiensis* causing leaf spot of Turfgrasses in Pakistan. Journal of Plant Pathology (2013), 95 (2), 447-452. **(Impact Factor 0.70)**.
- Farooq A. M., Tabassum B , Idrees Ahmad Nasir I. A., Haider M. S., **Anwar W.**, Javed M.A. and Husnain T. (2012). Development and comparative studies of double cross Tomato hybrids. African Journal of Agricultural Research Vol. 7(37), pp. 5259-5264, Available online at <http://www.academicjournals.org/AJAR>. ISSN 1991-637X © 2012 Academic Journals. **(Impact Factor 0.10)**.
- **Anwar W.**, Khan S. N., and Haider M. S. (2012). Occurrence of Insect associated Fungi in Hot Arid Zone, African Journal of Microbiology Research Vol. 6(41), pp. 6878-6883. Available online at <http://www.academicjournals.org/AJMR>. **(Impact Factor 0.533)**.
- Tahira J.J., , Khan S. N., Suliman R and **Anwar W.** (2011). Evaluation of soil quality on the basis of chemical and microbial health for potential use in agriculture. African Journal of Agricultural Research Vol. 6(16), pp. 3713-3717, 18 June 2011. Available online at <http://www.academicjournals.org/AJAR>. ISSN 1991-637X © 2011 Academic Journals. **(Impact Factor 0.10)**.

RESEARCH PAPERS (HEC Recognized/ ISSN Journals)

- Iftikhar S., **Anwar W.**, Akhter A., Ali S., Khan H.A.A , Khurshid M. and Haider M.S. (2021). Genetic analysis and pathogenic characterization of *Alternaria tenuissima* induced fruit rot of bitter gourd. Biodiversitas ISSN: 1412-033X Volume 22, Number 2, February 2021 E-ISSN: 2085-4722 Pages: 615-623.

- Rasool M., Ahmad F., Akhter A., Khan H.A.A., Khurshid M., **Anwar W.**, Asif M.S., Waqar M., Haider M.S. (2019). Biochemical and molecular analysis of *Alstonia scholaris* leaf galls induced by *Pauropsylla tuberculata* (Psyllidae). *Mycopath* 17(2): 79-88.
- Ahmad F., **Anwar W.**, Javed M.A, Basit R., Akhter A., Ali S., Khan H.A.A., Amin H. and Haider M.S. (2019). Infection mechanism of *Aspergillus* and *Fusarium* species against *Bemisia tabaci*. *Mycopath* 17(2): 63-72.
- Imtiaz, K., Subhani, M. N., Shafiq, M., **Anwar, W.**, Ghaffar, R., & Haider, M. S. (2018). Genetic Diversity Of *Alternaria* Isolates In Pakistan. *Bionature*, 38(6), 355-365.
- Akhtar, N., Hafeez, R. and **Anwar, W.** (2017). *Combretum indicum* – A new host record of *Alternaria brassicae* leaf spot disease from Pakistan. *Pak. J. Phytopathol.*, Vol. 29 (01) 2017. 171-173.
- **Anwar W.**, Haider M.S., Shahid A.A., Mushtaq H., Rehman Z.U., Hameed U. and Javed S. (2016). First record of *Trichoderma longibrachiatum* as entomopathogenic fungi against *Bemisia tabaci* in Pakistan. *Pak. J. Phytopathol.*, Vol. 28 (02) 2016. 287-294.
- **Anwar W.**, Haider M.S., Aslam M., Shahbaz M., Khan S.N. and Bibi A. (2015). Assessment of Antifungal potential of some Aqueous plant extracts and fungicides against *Alternaria alternata*. Assessment of antifungal potential of aqueous plant extracts fungicides. *J. Agric. Res.*, 2015, 53(1) :75-82.
- **Anwar, W.**, S.N. Khan, M. Aslam, M.S. Haider, A.A. Shahid and Muhammad Ali. (2015). Exploring fungal flora associated with insects of cotton agroecological zones of Punjab, Pakistan. *Pak. Entomol.*, 37(1):27-31.
- **Anwar W.**, Saleem M.J. and Ali M. (2014). Changing Pattern of *Mycena polygramma* in Pakistan. *Journal of Biology, Agriculture and Healthcare*. Vol.4, No.25, 2014, pp. 268-271.
- Tahira J.J., Khan S.N., **Anwar W.** and Suliman R. (2012). Mycorrhizal association in some weeds of curcuma longa fields of district Kasur, Pakistan. *Pak. J. Weed Sci. Res.* 18(3): 331-335.
- **Anwar W.**, Khan S. N., Tahira J. J., and Suliman R., (2012). *Parthenium hysterophorous*: an Emerging Threat for *Curcuma longa* Fields of Kasur District, Punjab (Pakistan). *Pak. J. Weed Sci. Res.* 18 (1): 91-97, 2012.
- Khan S. N., **Anwar W.**, and Haider M. S. (2011). Effect of Planting Environment and Input Application on Natural Distribution Pattern of Entomopathogens..Proceedings Book of International Science and Technology Conference 2011. ISSN: 2146-7382.
- Tahira J. J., Khan S. N., Suliman R., and **Anwar W.**, (2010). Weed Flora of *Curcuma longa* Fields of District Kasur, Pakistan. *Pak. J. Weed Sci. Res.* 16 (2): 241-246, 2010.
- Shah, M. H., Khan S. N., Tahira J. J., Suliman R., **Anwar W.**, Sadaf Nasrullah S., and Moazzam Z. (2010). Impact of Pathogenic Fungi and Bacteria on Fenugreek (*Trigonella Foenum-Graecum* L) Plant Stand Quality under Natural Condition. *Pak. J. Phytopathol.*, Vol 22(2):130-134.
- Suliman R., Khan S. N., Ahmad W., **Anwar W.**, Umam M. and Tahira J. J., (2010). In vitro evaluation of *Daucus carota* against bacterial stress for potential of deteriorating plant stand and Quality. *Pak. J. Seed Technology (PJST)* Vol. II, No. 15 & 16: 86-90.
- **Anwar W.**, Khan S. N., Suliman R., Tahira J. J. And Naz S. (2010) Quality Deterioration from Fungi Associated with Spinach (*Spinacia oleracea*) Seeds collected from vegetable Market of Lahore. *Pak. J. Seed Technology (PJST)* Vol. II, No. 15 & 16: 58-62.

ABSTRACTS/ARTICLES PUBLISHED IN CONFERENCE PROCEEDINGS

I have shared my research work in different National and international conferences/symposium with scientific community. I have presented in approx 40 international and 12 National Conferences. The details are shared below.

INTERNATIONALS

- **Anwar W.**, Javed, S., Akhter, A. Khan HAA., Kalsoom R. and Haider MS. (2022). *Boeremia exigua* leaf spot; a new emerging threat to *Gossypium hirsutum* L. Oral Presentation in The World Cotton Research Conference (WCRC) Held on 4-7 October 2022 at Steigenberger Hotel, El Tahrir, Cairo, Egypt.
- **Anwar, W.**, Khan, HAA., Ali, Bashir, U., Akhter, A., Ali S., Zahid A. Zohaib, KA., Kalsoom R. and Haider MS. (2022). Chitinase of *Trichoderma longibrachiatum* for the Control of *Aphis gossypii*. Oral Presentation in fourth International Conference on Emerging Trends in Bioinformatics and Biosciences held on September 15-17, 2022 organized by Department of Bioinformatics, Hazara University, Mansehra, Pakistan.
- Akhter, A., **Anwar, W.**, Khan, HAA., Ali, S., Nisar, WB., Abbas MT. and Saeed A. (2022). Characterization and Evaluation of Antifungal Potential of Bacterial Endophytes of Rice against *Fusarium moniliforme* and *Rhizoctonia solani*. Oral Presentation in fourth International Conference on Emerging Trends in Bioinformatics and Biosciences held on September 15-17, 2022 organized by Department of Bioinformatics, Hazara University, Mansehra, Pakistan.
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SERVICES TO THE SCIENTIFIC COMMUNITY

- **Serving as Reviewer for following peer reviewed Journal;** Applied Sciences (MPDI), International Journal of Molecular Sciences – MDPI, Scientific African, Life-MDPI, Plosone, sustainability-MDPI, Plant Disease, Turkish Journal of Entomology, Journal of Economic entomology, African Journal of Microbiology Research, African Journal of Agricultural Research, Microbial Ecology, Springer-Verlag New York Inc, Pakistan Journal of Phytopathology.
- **Editor**, International Journal of Plant Sciences and Phytomedicines (IJPSP)
- **Sub-Editor, Agri News.** An official Publication of First Fungal Culture Bank of Pakistan, Faculty of Agricultural Sciences, University of the Punjab, Lahore, Pakistan.
- **Member**, Student Alumni Committee, Department of Plant Pathology, University of the Punjab, Lahore, Pakistan.
- **Member**, Seminar/Webinar Committee, Department of Plant Pathology, University of the Punjab, Lahore, Pakistan.
- **Convener**, Department Website Management Committee, Department of Plant Pathology, University of the Punjab, Lahore, Pakistan.
- **Member**, Placement Bureau Committee, Faculty of Agricultural Sciences, University of the Punjab, Lahore.