

CURRICULUM VITAE 2025

UMMAD UD DIN UMAR

Professor,
Department of Plant Pathology,
Faculty of Agricultural Sciences & Technology,
Bahauddin Zakariya University (BZU), Multan, Pakistan
Contact No. 92-333-5235939, 92-300-6890412
ummad.umar@bzu.edu.pk
CNIC No. 36103-1654233-7
Passport No. AT2222332
Date of Birth: 05-10-1980 Professional
Nationality: Pakistan.



PROFESSIONAL PROFILE

I am currently serving as Professor of Plant Pathology, with 13 years of post-Ph.D. experience in teaching and research. Published 58 research articles in peer-reviewed International and National Journals with an impact factor of 80 and 6 book Chapters. Supervised 03 Ph.D and 24 M.Phil. Students. (Currently 3 Ph.D and 4 M.Phil. Students are under supervision.

EDUCATION

Oct-2011	Ph.D in Plant Pathology. Department of Plant Pathology, University of Agriculture, Faisalabad, Pakistan.
May 2006	M.Sc (Hons.) in Plant Pathology. Department of Plant Pathology, University of Agriculture, Faisalabad, Pakistan. 1 st Div.
Sep-2004	B.Sc (Hons.) Agriculture, Major Plant Pathology. Department of Plant Pathology, University of Agriculture, Faisalabad, Pakistan. 1 st Div.
1999	F.Sc. (Pre-medical) BISE, Multan, Pakistan. 1 st Div.
1996	Matriculation. BISE, Multan, Pakistan. 1 st Div.

PROFESSIONAL EXPERIENCE

Aug-2024-Present	Professor in The Department of Plant Pathology, Faculty of Agricultural Sciences & Technology, BZU, Multan.
Aug-2020-Aug-2024	Associate Professor in The Department of Plant Pathology, Faculty of Agricultural Sciences & Technology, BZU, Multan.
Mar-2012-Aug-2020	Assistant Professor in The Department of Plant Pathology, Faculty of Agricultural Sciences & Technology, BZU, Multan.
Oct-2006-Jan-2007	Assistant Research Officer , Agri-Biotech. Research Institute, Ayyub Agriculture Research Institute, Faisalabad, Pakistan.
May-2006-Oct-2026	Researcher , National Institute of Biotechnology and Genetic Engineering, Faisalabad, Pakistan.

PUBLICATIONS

* As corresponding author

Umar, U.D., Zaka, S.M., Tahir, M.N., Kashif, M., Rehman, A.U., Atta, Sagheer and Naqvi, S.A.H. 2025. High-Sensitivity RT-LAMP Assay Enables Rapid, Field-Deployable Detection of *Candidatus Liberibacter Asiaticus* in Crude DNA Extracts from Citrus Phyllosphere and Psyllid Vectors. *Appl. Fruit Sci.* (67):195.

Naqvi, S.A.H., **Umar, U.D.**, Rehman, A.U.. 2025. Beneficial communities from core bacterial microbiota of *Oryza sativa* L. soil and leaves perform dynamic role in growth promotion and suppression of bacterial leaf blight. *World J. Microbiol. & Biotech.* (41):285

Naqvi, S.A.H., Malik, M.T., ***Umar, U.D.**, Rehman, A.U., *et.al.* 2025. Mango Tree Sudden Decline disease: 65-years global perspective of ecology, biology, epidemiology, and management - Challenge of tropical landscape pathology. *Physiol. Mol. P. Pathol.*, (138): 102713

Khan, M.F., Naqvi, S.A.H., Iqbal, A., Steichen, S.A, Ali, A., Gulzar, R.M.A., Brown, J.K., and *Umar, U.D. 2025. Quantitative analysis of pathogenesis-related protein expression in *Gossypium hirsutum* L. to elicitor-induced resistance against cotton leaf curl disease and predicted *In-silico* protein-protein interactions. *Physiol. Mol. P. Pathol.*, (137): 102611.

Naqvi, S.A.H., Rehman, A.U., and Umar, U.D. 2025. Synergistic interplay of microbial probiotics in rice rhizosphere: A sustainable strategy for bacterial blight management through microbiome engineering. *Physiol. Mol. P. Pathol.*, (136): 102568.

Haq, Zia Ul., Ali, Amjad, Naqvi, S.A.H., Baloch, F.S. and *Umar, U.D. 2024. Primary distribution and RT-PCR-based detection of citrus dwarfing viroid (CDVd) in citrus cultivars of Pakistan. *Turk. J. Bot.*, (48): 521-531.

Ali, A., Shahbaz, M., Ölmez, F., Fatima, Noor., Umar, U.D., Ali, M.A., Akram, M., Seelan, J.S.S., Baloch, F.S. 2024. RNA interference: a promising biotechnological approach to combat plant pathogens, mechanism and future prospects. *World J. Microbiol. Biotechnol.*, (40): 339.

Altaf, M.T., A.Tarar, M., Ali, A., Liaqat, W., Mortazvi, P., Kayihan, C., Ölmez, F., Nadeem, M.A., Javed, J., Gou, J.Y., Wang, M., Umar, U.D., Daşgan, H.Y., Kurt, J., Yıldız, M., Mansoor, S., Dababat, A.A., Celiktaş, N., and Baloch, F.S. 2024. Advancements in QTL mapping and GWAS applications in plant improvement. *Turk. J. Bot.*(48): 376-426.

Nazir, W., Naqvi, S.A.H., Ahmed, N., Rehman, A.U., Alrefaei, A.F., Zulfiqar, M.A., *Umar, U.D. 2024. Optimizing Micronutrient Supplementation in Mango Orchards for the Suppression of Mango Anthracnose (*Colletotrichum gloeosporioides*). *Appl. Fruit Sci.* 66:1417–1430.

Azeem, H., Ali, A., Perveen, R., Umar, U.D. , Zakria, M., Ölmez, F., Azeem, M. U. 2024. Molecular characterization of cotton leaf curl Multan beta-satellite occurrence on chili plants in Multan, Pakistan. *J. Pl. Prot.Rech.* 64: (2): 139–148.

Khan, M. F. and *Umar, U.D., Alrefaei, A.F. and Rao, M.J. 2023. Elicitor driven defense mechanisms: Shielding cotton plants against onslaught cotton leaf curl Multan virus (CLCuMuV) disease. *Metabolites*. 13: 1148.

Rehman AU., Rauf, A., Ali, A., Shakeel, MT, Naqvi, SAH., Shahid, M. and *Umar, U.D. 2023. First report of *Fusarium equiseti* causing leaf spots of Bitter gourd (*Momordica charantia*) in Pakistan. *Pl. Dis.* 107:584.

Nauman, M., Mushtaq, S., Khan, FM., Ali, A., Naqvi, SAH., Haq, ZU., Zulfiqar, MA., Reman, A.U., Moustafa, M. and *Umar, U.D. 2023. Morphological, biochemical, and molecular characterization of *Xanthomonas citri* subsp. citri, cause of citrus canker disease in Pakistan. *Pak. J. Bot.*, 55(6): 2409-2421.

Ali, A., *Umar, U.D., Naqvi, SAH., Shakeel, Tahir, MT., Khan MF., Altaf, MT., Ölmez, Ölmez F., Dababat, AA., Haq, ZU., Nadeem, MA., Hatipoğlu, R., Baloch, FS. and Chung, YS. 2023. Molecular characterization of divergent isolates of *Citrus bent leaf viroid* (CBLVd) from citrus cultivars of Punjab, Pakistan. *Front. Genet.* 13:1104635

Umar, U.D., Ahmed, N., Zafar, M.Z., Rehman, A.U, Naqvi, S.A.H., Zulfiqar, M.A., Malik, M.T., Ali, B., Saleem, M.H. and Marc, R.A. 2022. Micronutrients Foliar and Drench Application Mitigate Mango Sudden Decline Disorder and Impact Fruit Yield. *Agronomy*. 12: 2449.

Ali, A., *Umar, U.D., Akhtar, S., Shakeel, M.T., Rehman, A.U., Tahir, M.N., Atta, S., Moustafa, M., Ölmez, F. and Parveen, R. 2022. Identification and primary distribution of *Citrus viroid* V in citrus in Punjab, Pakistan. *Mol. Biol. Rep.* 49, (12):11433–11441

Azeem, H., Perveen, R., Tahir, M.N., Umar, U.D., Ölmez, F. and Ali, A. 2022. Prevalence, transmission and molecular characterization of *Cotton leaf curl Multan virus* infecting hollyhock plants in Pakistan. *Mol. Biol. Rep.* 49, (6): 5635–5644

Nouman, M., Farooq, T., Parveen, R., Umar, U.D., Aslam, M.N., Moustafa, M. and Shakeel, M.T. 2022. First report of cucumber-infecting *Cucurbit Chlorotic Yellows Virus* (CCYV) associated with cucurbit yellows disease in Pakistan. *J. Pl. Pathol.* 105:323–324.

Gulzar, R.M.A., Rehman, A.U., *Umar, U, Shahid, M. and Khan, M.F. 2022. Evaluation of genetic and induced resistance phenomena in cucumbers against the root-knot nematode (*Meloidogyne incognita*) *Pl. Prot. Sci.*, 58, 2022 (4): 338–350.

Khan, A.A., Umar, U.D. Ejaz, S., Riaz, H., Batool. M., Chen, T., Ahmad, F. and Saeed, Q. 2022. Insect-facilitated propagation of mycotoxic fungi in grain storages: association of *Sitotroga cerealella* Olivier with *Aspergillus flavus* link. *Int. J. Envir. Sci. Technol.* 20:231–238

Naqvi, SAH., Wang, J., Malik, MT., Umar, U.D., et al. 2022. Citrus Canker—Distribution, Taxonomy, Epidemiology, Disease Cycle, Pathogen Biology, Detection, and Management: A Critical Review and Future Research Agenda. *Agronomy*. 12:1075.

Khan, M. F. and *Umar, U.D. 2021. Application of a robust microplate assay to determine induced β -1,3-glucanase and chitinase activity in the cotton plant. *BioTechniq.* 70 (4): 203-208.

Anwaar, H.A., Mansha, M.Z., Ahmed, M.Z., Abid, M., Sajid, M., Sarwar, Z.M., **Umar, U.D.**, Alam, M.M., Perveen, R, Chohan, S. and Shafique, M.S. 2021. Potential of fungal endophytes to antagonise *Puccinia striiformis* causing wheat yellow rust. *J. Anim. Pl. Sci.*, 31(3): 894-899.

Malik, M.T., Rehman, A.U., Naqvi, S.A.H., Hasnain, A., **Umar, U.D.**, Azeem, H., Shahid, M. and Umair, M. 2021. Biological mediated management of Bacterial diseases in crop plants; A review. *Pak. J. Phytopathol.*, 33(1): 217-232.

Nauman, M., **Umar, U.D.**, Naqvi, S.A.H., Rehman, A.U., Malik, M.T., Shahid, M., Akbar, M. and Umair, M. 2021. Impact of improved DNA extraction method from citrus leaves midrib and PCR for the detection of citrus greening (*Candidatus liberibacter*). *Pak. J. Phytopathol.*, 33(1): 161-170.

Raza, A., Shakeel, M.T., **Umar, U.D.**, Tahir, M.N., Hassan, A.A., Katis, N.I. and Wang, X. 2020. First Report of Tomato Chlorosis Virus Infecting Tomato in Pakistan. *Pl. Dis.* 104(7): 2036.

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Naeem-Ullah, U., Ramzan, M., Saeed, S., Iqbal, N., **Umar, U.D.**, Sarwar, Z. M., Ali, M., Saba, S., Abid, A. D., Khan, K. A. and Ghramh, H.A. 2020. Toxicity of four different insecticides against *Triloche varians* (*Bombycidae: Lepidoptera*). *J. King Saud Uni., Sci.* 32(3): 1853-1855.

Anwaar, H. A., Perveen, R. Mansha, M. Z., Abid, M., Sarwar, Z. M., Aatif, H. M., **Umar, U.D.**, Sajid, M., Aslam, H. M.U., Alam, M. M. Rizwan, M., Ikram, R. M., Alghanem, S. M. S., Rashid, A. and Khan, K. A. (2019). Assessment of grain yield indices in response to drought stress in wheat (*Triticum aestivum* L.). *Saudi J. Biol., Sci.* 27(7): 1818-1823.

Atta, S., ***Umar, U.D.**, Bashir, M.A., Hanan, A. Rehman, A.U., Naqvi, S.A.H., and Zhou, C. 2019. Application of Biological and Single-Strand Conformation Polymorphism Assays for Characterizing Potential Mild Isolates of *Citrus Tristeza Virus* for Cross Protection. *AMB. Expr.* 9: 174-180.

Manzoor, M., Ahmad, J. N., Samina, J. N., Naqvi, S.A., **Umar, U.D.**, Rasheed, R. and Haider, M. S. 2020. Population dynamics, abundance and infestation of the Red Palm Weevil, *Rhynchophorus Ferrugineus* (Olivier) in different geographical regions of date palm in Pakistan. *Pak. J. Agri. Sci.*

Arif, M., Atta, S., Bashir, M. A., Hussain, A., Khan, M.I., Farooq, S., Hannan, A., Islam, SU., **Umar, U.D.**, Khan, M., Lina, W., Hashem, M., Alamri, S.j, and Wua, Z. 2019. Molecular characterization and RSV Co-infection of *Nicotiana benthamiana* with three distinct begomoviruses. *Methods.* doi.org/10.1016/j.ymeth.2019.11.010.

Akmal, M., Freed, S., Schäfer, M.A., Blankenhorn, W.U., Razaq, M. and **Umar, U.D.** 2019. Population genetic and phenotypic differentiation of cotton leafhoppers (*Hemiptera: Cicadellidae*) from Pakistan. *Ecoscience*

Sattar, A., Sher, A., Ijaz, M., Ullah, M.S., Ahmad, N and **Umar, U.D.** 2020. Individual and combined effect of terminal drought and heat stress on allometric growth, grain yield and quality of bread wheat. *Pak. J. Bot.*, 52(2): Accepted. Oct. 2019. DOI: [http://dx.doi.org/10.30848/PJB2020-2\(5\)](http://dx.doi.org/10.30848/PJB2020-2(5)).

Hussain, S., Rao, M.J., Anjum, M.A., Ejaz, S., ***Umar, U.D.**, Ali, M.A., Khalid, M.F., Sohail, M., Ercisli, S., Haq, M.Z.Ul., Ahmad, M.S. and Naqvi, S.A.H. 2019. Effect of different combinations of antibiotics on fruit quality and antioxidant defense system in Huanglongbing infected Kinnow orchards. *AMB Expr.* 9:147.

Umar, U.D., Burhan, D.S., Khan, M.F., Rehman, A., U., Naqvi, S.A.H., Zulfiqar, M.A. Khan, A.A. and Alyas, N. 2019. Enhancing resistance level against Mungbean Yellow Mosaic Virus by inducing defense related enzymes in Mungbean. *Pak. J. Agri. Res.*, 32(2):241-251.

Naqvi, S.A.H., Mushtaq, S., Malik, M.T., **Umar, U.D.**, Rehman, A.U., Fareed, S. Zulfiqar, M.A. 2019. Factors Leading Towards *Dalbergia Sissoo* Decline (Syndrome) in Indian Sub-Continent: A Critical Review and Future Research Agenda. *Pak. J. Agri. Res.*, 32(2):302-316.

Rehman, A., U., Naqvi, S.A.H., **Umar, U.D.**, Zafar, M.I., Hussain, F., Zulfiqar, M.A. and Khan, A.A. 2019. Identification of resistance sources in wheat to brown and yellow rust. *Paki. J. Agri. Res.*, 32(1): 185-196.

Sajid, A.R., Rehman, A.U., Naqvi, S.A.H., **Umar, U.D.**, Sherwani, H.U.K., and Bhatti, M.R. 2019. Identification of sources of resistance and biochemical management of late blight of potato (*Phytophthora infestans*). *Plant Protection*, 3(3):141-150.

Raza, S. **Umar, U.D.**, Faqeer, M., Rehman, A.U., Naqvi, S.A.H. and Sherwani, H.U.K. 2019. Efficient approaches for the management of Karnal bunt of wheat caused by *Nevossia indica*. *Pak. J. Phytopathol.*, 31(02): 177-188.

Naqvi, S.A.H., **Umar, U.D.**, Hasnain, A., Rehman, A.U and Perveen, R. 2019. Effect of botanical extracts: A potential biocontrol agent for *Xanthomonas oryzae* Pv. *Oryzae*, causing bacterial leaf blight disease of rice. *Paki. J. Agri. Res.*, 32(1):59-72.

Akram, S., **Umar, U.D.**, Atiq, R., Tariq, A., Mahmood, M.A., and Rehman, A.U. 2018. Emerging Resistance in *Alternaria solani* Against Different Fungicides in Southern Punjab, Pakistan. *Pak. J. Life Sci. Sci.* (2018), 16(2): 117-123.

Akram, S., Khan, S.M., Khan, M.F., Khan, H.U., Tariq, A. **Umar, U.D.** and Gill, Amir. 2018. Antifungal activity of different systemic fungicides against *Fusarium oxysporum* f. sp. *Lycopersici* Associated with tomato wilt and emergence of resistance in the pathogen. *Pak. J. Phytopathol.*, 31(2):169-176.

Naqvi, S.A.H., ***Umar, U.D.**, Atta, S., Liu, H., Rehman, A.U. and Khan, A. A. 2017. Serological and molecular based detection of graft transmissible pathogens associated with citrus from non-core areas of Pakistan. *Pak. J. Agri. Sci.*, Vol. 54(4), 793-799.

Rehman, A.U., Naqvi, S.A.H., **Umar, U.D.** and Ahmed, R. 2017. Evaluation of various wheat lines against loose smut (*Ustilago tritici*) and its epidemiological studies. *Pak. J. Phytopathol.*, 29(2); 219-225.

Atta, S., Cao, M., **Umar, U.D.**, Zhou, Y., Yang, F. and Zhou, C. 2017. Biological indexing and genetic analysis of Citrus tristeza virus in Pakistan. *J. Gen. Plant Pathol.*, 83(6):382-389.

Naqvi, S.A.H., Perveen, R., **Umar, U.D.**, Rehman, A.U., Chohan, S. and Abbas, S.H. 2016. Bacterial Leaf blight of rice; A disease forecasting model based on meteorological factors in Multan, Pakistan. *J. Agric. Res.*, 54(4): 707-718.

Umar, U., Khan, M.A., Rehman A.U., Hannan, A., Naqvi, S.A.H., Khan, A.A. and Zulfiqar, M.A. 2016. Development and validation of *Potato leaf roll virus* disease prediction model based on environmental factors for Faisalabad, Pakistan. *Pak. J. Agric. Res.*, 29(4): 331-339.

Naqvi, S.A.H., Perveen, R., **Umar, U.D.**, Abid, M., Chohan, S. and Hasnain, A. 2016. Effectiveness of YSCNA modified culture medium for luxurious growth of *Xanthomonas oryzae* pv. *oryzae*, associated with rice plants. *Pak. J. Phytopathol.*, 28(2); 263-268.

Umar, U.D., Naqvi, S.A.H., Khan, A.A., Khan, S.M., Rehman, A.U., Perveen, R. and Haq, M.E.U. 2016. Management of *Zucchini Yellow Mosaic Virus* in cucumber through genetic and salicylic acid induced resistance. *Pak. J. Agri. Sci.*, Vol. 53(1), 187-194.

Rehman, A.U., **Umar, U.D.**, Naqvi, S.A.H., Latif, M.R., Khan, S.A., Malik, M.T. and Fareed, S. 2015. Emerging resistance against different fungicides in *Lasiodiplodia theobromae*, cause of mango die-back in Pakistan. *Arch. Biol. Sci.*, Belgrade, 67: 241-249.

Ali, A.M., Khan, S.M., Nawaz, A., Iqbal, Q., Ahmed, T. and **Umar, U.D.** 2015. Mycelial growth and primordial initiation of *Agaricus bitorquis* and related species on agar media. *Pak. J. life soc. Sci.*, 13(1): 42-48.

Haq, I.U., Sarwar, M.K., Khan, S.A., Javed, N., Khan, N.A., Iqbal, M. and **Umar, U.D.** 2014. Seedling root rot of rough lemon (*Citrus jambhiri* Lush) and its chemical management. *Pak. J. Phytopathol.*, 26(2); 233-240.

Naqvi, S.A.H., Perveen, R., Malik, M.T., Malik, O, **Umar, U.D.**, Wazeer, M.S., Rehman, A.U. and Abbas, Z. 2014. Characterization of symptoms severity on various mango cultivars to quick decline of mango in district Multan. *Int. J. Bio. Sci.* 11: 157- 163.

Naqvi, S.A.H., Perveen, R., **Umar, U.D.**, Malik, O., Rehman, A.U., Wazeer, M.S. and Majid, T. 2014. Determination of antibacterial activity of various broad spectrum antibiotics against *Xanthomonas oryzae* pv. *oryzae*, a cause of bacterial leaf blight of rice. *Int. J. Microbiol. & Mycol.* 2: 12-19.

Umar, U.D. and Khan, M.A. 2011. Characterization of environmental conditions conducive for the development of *Potato leaf roll virus* disease. *Pak. J. Phytopathol.*, 23: 92-97.

Umar, U.D., Khan, M.A., Javed, N. and Sadia, B. 2011. Evaluation of resistance against PLRV in potato cultivars. *Pak. J. Phytopathol.*, 23: 14-19.

Mustafa, A., Khan, M.A., Haq, M.I., Pervez, M.A. and **Umar, U.D.** 2009. Usefulness of different culture media for in-vitro evaluation of *Trichoderma* spp. against seed-borne fungi of economic importance. *Pak. J. Phytopathol.*, 21(1): 83-88.

BOOKS/ BOOK CHAPTER

Balban, A., Nazir, W, **Umar, U.D.**, Ahmed, N., Rehman, A.U. and Mustafa, G. 2025. Impact of Micronutrients for Mitigating Mango Malformation Disease Under Changing Climate. In: Naqvi, S.A.H., Ahmed, S. and Ahmed, M. (eds) Climate Change and Mango Production. Springer. Singapore. Pp. 469-497.

Ali, A., Ölmez, F., Altaf, M.T., Liaqat, W., **Umar, U.D.**, Iqbal, J. (2023). Advanced and Sustainable Approaches in Sugarcane Crop Improvements with Reference to Environmental Stresses. In: Aasim, M., Baloch, F.S., Nadeem, M.A., Habyarimana, E., Ahmed, S., Chung, G. (eds) Biotechnology and Omics Approaches for Bioenergy Crops. Springer, Singapore. Pp. 155-182.

Naqvi, S.A.H., Reman, A.U., Chohan, S. **Umar, U.D.**, Mehmood, Y. and Mustafa, G. (2023). Sustainable Development in Agriculture Beyond the Notion of Minimizing Environmental Impacts. In: Ahmed, M., Ahmad, S. (eds) Disaster Risk Reduction in Agriculture. Disaster Resilience and Green Growth. Springer, Singapore. Pp.147-168.

Shah F. M. and Razaq, M. F. Ahmad, A., Rehamn, A.U and **Umar, U.D.** 2023. Crop protection under climate change: the effect on tri-trophic relations concerning pest control. In: Jatoi, W.N., Mubeen, M., Hashmi, M.Z., Ali, S., Fahad, S., Mahmood, K. (eds) Climate Change Impacts on Agriculture. Springer, Cham. Pp. 329-354.

Rehman, A.U., Alam, M.M., **Umar, U** and Naqvi, SAH. 2019. Cotton Diseases and Disorders under Changing Climate. In: Ahmad, S. and Hasan Zaman, M. (eds). Cotton Production and Uses – Agronomy, Crop Protection, and Postharvest Technologies. Springer Nature, Singapore.

Afzaal, M., Mirza, S.A, Mir, M., Ahmed, S., Rasul, A., Nasir, S., Waqas, M.Y. and **Umar, U.** 2018. Antibiotics and Resistant Genes in Paddy Soils. In: Hashmi, M.Z. and Varma, A. (eds). Environmental Pollution of Paddy Soils. Springer Nature, Switzerland. pp. 99-112.

PROJECTS AND FUNDINGS

2022 Implementation of GIS models in the movement pattern of Whitefly species and Biotypes and associated Plant Viruses along the CPEC route. ALP, Pakistan Agriculture Research Council, Islamabad. **Rs 5.777 Million.**

2019 Induction and Expression of Systemic Acquired Resistance to *Cotton Leaf Curl Virus* (CLCuV). Directorate of Research and External Linkages, BZU, Multan. **Rs 0.295 Million.**

2017 Molecular characterization of Citrus Huanglongbing (HLB) Bacterium based on the sequences of intergenic spacer regions and outer membrane protein (omp) gene regions among the isolates in Pakistan. Directorate of Research and External Linkages, BZU, Multan. **Rs 0.140 Million.**

2016 Induction of systemic acquired resistance with chemicals in cotton against *cotton leaf curl virus*. Directorate of Research and External Linkages, BZU, Multan. **Rs 0.150 Million.**

2014 Management of *Zucchini Yellow Mosaic Virus* in Cucumber through Genetic and Induced Resistance. Directorate of Research and External Linkages, BZU, Multan. **Rs 0.098 Million.**

2013 Identification, distribution, and characterization of virus and virus like diseases of citrus in Southern Punjab. Higher Education Commission of Pakistan. **Rs. 0.50 Million.**

TRAININGS, WORKSHOPS, CONFERENCE AND SEMINARS ATTENDED/ DELIVERED

2025 **Poster Presentation** at the International Conference “Plant Health 2025” Organized by American Phytopathological Society (APS) at Honolulu Hawai, USA, August 2nd to 5th 2025.

2024 **One-day field Seminar** on awareness of Vivipary in Mango orchards at Korai Mango Farm, Sheikh Wahn Distt. Rahim Yar Khan. December 29, 2024.

2024 **One-day field Seminar** on awareness of Vivipary in Mango orchards at Chichra Farm, Mauza Doaaba, Muzafargarh Distt. Rahim Yar Khan as the resource person. September 23, 2024.

2023 **8th International Conference** of Pakistan Phytopathological Society. “Sustainable Agriculture & Food Security. “ A nexus of Plant Pathogens, Climate Change and Water Challenges” Nov. 20-22. Organized by the Department of Plant Pathology, The Islamia University of Bahawalpur.

2023 **Poster Presentation** at Presented at 8th International Conference of Pakistan Phytopathological Society. Nov. 20-22 “Isolation and Characterization of *Xanthomonas citri* pv. *mangiferae* associated with Blackspot of mango”. Organized by the Department of Plant Pathology, The Islamia University of Bahawalpur.

2023 **Participation** in National Seminar on “Scientific writing” November 7th 2023. Organized by The Department of Biochemistry, Bahauddin Zakariya University, Multan.

2023 **Organized One-day Training Seminar** on GIS-Based Modeling and its uses in Natural Sciences on May 11, at the Department of Plant Pathology, BZU, Multan.

2021 **7th International Conference** of Pakistan Phytopathological Society “Plant Health for Sustainable Agriculture” Nov. 20-22. Organized by the Department of Plant Pathology, University of Agriculture Faisalabad.

2018 **Oral presentation** of research work in “Plant Protection Congress with International participation, 14-17 November, at Mugla, Turkey.

2017 **6th International Conference** of Pakistan Phytopathological Society “Plant Health for Sustainable Agriculture” A focused Approach for food security under changing climate. Nov. 20-22. Organized by the Department of Plant Pathology, BZU, Multan & CCRI, Multan.

2017 **Organizer** in the 6th International Conference of Pakistan Phytopathological Society “Plant Health for Sustainable Agriculture” A focused Approach for food security under changing climate. Nov. 20-22. Organized by the Department of Plant Pathology, BZU, Multan & CCRI, Multan.

2017 **Poster presentation/ Abstract** in the 6th International Conference of Pakistan Phytopathological Society “Plant Health for Sustainable Agriculture” at BZU, Multan & CCRI, Multan.“Enhancing resistance in mungbean against *Mung bean Yellow Mosaic Begomovirus* by the exogenous application of Salicylic acid and Benzothiadiazole” Nov. 20-22

2017 **Mango Workshop & Exhibition.** Organized by the Department of Horticulture, BZU, Multan. Held on 13-14 July.

2017 **Training** by Learning Innovation Division of Higher Education Commission on“Professional Development for Teachers Teaching through Medium of English under Transforming English Language Skills. Held at MNS, University of Agriculture, Multan on May 02-06.

2016 **Hands-on Training Workshop** on Clinical Diagnostic by Real-Time PCR, Western Blot, and cell Culturing. October, 18-21. Jointly organized by the Institute of Biochemistry and Biotechnology & Center for Applied Molecular Biology, University of Punjab.

2016 **One-day training seminar** on “Cotton diseases and their Management held on 03 October 2016 at the Department of Plant Pathology, BZU, Multan Organized by Department of Plant Pathology.

2016 **One-day Workshop** on intellectual property rights and patent drafting, A joint venture of PASTIC-PSF, FVS-BZU & IPO. 11th May at Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan.

2016 **Three-Day Workshop** on “Basic Bioinformatics” AT Bahauddin Zakariya University, Multan. Organized by the Institute of Molecular Biology and Biotechnology. 19-21 April.

2016 **Awareness Seminar** on the Significance of Micronutrients in Crop Production on April 11. Organized by the Department of Soil Science & Department of Agronomy, BZU, Multan.

2015 **5th International/ 10th National Conference** of Pakistan Phytopathological Society. Crop Protection for Sustainable Agriculture. Nov. 23-25.

2015 **International Conference** on Citriculture, Challenges & Management at BZU, Multan.11 Feb.Organized by Department of Horticulture, BZU, Multan.

2015 **Poster presentation** at International Conference on Citriculture, Challenges & Management at BZU, Multan. “Prevalence and detection of CTV, HLB and CVC in citrus groves of southern Punjab” 11-13 Feb.

2015 **Biosafety Training Workshop:** Biosafety in Pakistan-Challenges and Solutions. At BZU, Multan. 24 Sep. Organized by the American Society of Microbiology, Biological Safety Association of Pakistan, and the Department of Food Sciences & Technology, BZU, Multan.

2014 **An Irrigation Management Training Workshop** at BZU, Multan. 09-04-2014.Organized by NSW Department of Primary Industries, Australia.

2014 **One-day training seminar** on nursery hygiene and transplantation of new nursery plants, at FAS&T, BZU, Multan. 08-02-2014. Organized by ASLP.

2013 **National workshop** on sustainable and integrated management of insects, pests, and diseases of crops. Sep.24-26, 2013. Organized by NIAB, Faisalabad.

2012 **Project Formulation Workshop** from June 20 to 21, 2012. at B.Z.U, Multan. Organized by Pakistan Science Foundation.

INTERNATIONAL EXPOSURE

2025 Selected for APS International Travel Award to present research at the International Conference "Plant Health 2025" at Honolulu, Hawaii USA.

2018 Selected as academic staff to deliver lectures at the Department of Plant Protection, Abant Izzet Baysal University, Bolu, Turkey, under the Mevlana Exchange Program of faculty members.

TEACHING COURSES

PLP-201 Introduction to Plant Pathogens

PLP-202 Introductory Plant Pathology

PLP-402 Plant Disease Epidemiology

PLP-407 Resistance to Plant Diseases

PLP-712 Integrated Plant Disease Management

PLP-708 Ecology and Epidemiology of Plant Diseases

ADMINISTRATIVE ASSIGNMENTS

2025- Present Member, Mango and Citrus orchards management committee.

2022-Present Member/Secretary, Library Committee of the Department of Plant Pathology.

2021-Present Member, Synopsis Evaluation Committee of Department of Plant Pathology, BZU, Multan.

2017-Present Member Purchase Committee of Department of Plant Pathology, BZU, Multan.

EXAMINER/ MEMBER BOARD OF STUDIES

2023-Present Member Board of Studies, Department of Plant Protection, Faculty of Agricultural Sciences, Ghazi University, Dera Ghazi Khan.

2023-Present Member Board of Faculty, Department of Plant Pathology, Faculty of Agricultural Sciences & Technology, Bahauddin Zakariya University, Multan.

2022-Present Incharge Departmental Library, Department of Plant Pathology, Faculty of Agricultural Sciences & Technology, BZU, Multan.

2020-Present Member Board of Studies, Department of Plant Pathology, Faculty of Agricultural Sciences & Technology, Bahauddin Zakariya University, Multan.

2021-Present External Examiner & Member DTRC, Department of Plant Pathology, The Islamia University, Bahawalpur.

2020-Present External Examiner. Department of Plant Pathology, Sub Campus Beurewala, University of Agriculture, Faisalabad.

2021-Present Member DTRC, Department of Plant Pathology, MNS University of Agriculture, Multan.

2019-2020 External Examiner, Department of Plant Molecular Biology and Bio-technology, Center for Applied & Molecular Biology (CAMB), Punjab University, Lahore.

2016-2018 Member board of studies, Department of Plant Pathology, MNS University of Agriculture, Multan.

MEMBERSHIP OF PROFESSIONAL SOCIETIES

2011-Present Pakistan Phytopathological Society

2013- Present American Phytopathological Society

2018- Present International Society of Plant Pathology

SPECIAL TASK

2014 Established a molecular Diagnostic Laboratory in the Department of Plant Pathology and optimized the protocols for DNA and RNA Extraction, PCR, Electrophoresis, Cloning, Transformation, SDS PAGE, ELISA, and Biochemical analysis.

REFERENCES

Dr. S. Anwar Rizvi (Ph.D)
Rtd. Senior Staff Officer, USDA-APHIS-PPQ-PHP, Former Area Director,
South America, 4700 River Road, River Dale, MD. 207237, USA.
Cell +1(301) 278-2947
E-mail. anwarrizvi101@gmail.com

Prof. Dr. M. Aslam Khan (Rtd.)
Department of Plant Pathology,
University of Agriculture Faisalabad, Pakistan.
Ph.No. +92-3006681109,
E-mail. aslamkhanuaf@yahoo.com

Prof. Dr Rashida Atiq
Ex-Chairperson, Department of Plant Pathology,
Bahaiddin Zakariya University, Multan
Cell No. +92-3007302533
E-mail. rashidaatiq@bzu.edu.pk

Dr. Sajjad Hussain
Associate Professor, Horticulture/Plant Breeding,
Texas A&M University-Kingsville Citrus Center
312 N. International Blvd., Weslaco, TX 78596.
Contact: +1(956) 447-3367
Email: sajjad.hussain@tamuk.edu

Prof. Dr Fahim Shahzad Baloch
Department of Biotechnology, Faculty of Science,
Mersin University, Yenişehir, 33343, Mersin, Turkey
Contact: +905455404239
Email: faheem.baloch@mersin.edu.tr
balochfaheem13@gmail.com