

CURRICULUM VITAE

SOHAIL AKHTAR, PhD

Assistant Professor (Plant Pathology)

University of Agriculture, Faisalabad, Sub-Campus Burewala, Pakistan

Cell: +92 300 5047053, Email: msohailakhtar1081@gmail.com

Country of residence: Pakistan



EDUCATION

Quaid-i-Azam University Islamabad, Pakistan; NIBGE Faisalabad, Pakistan

- PhD Biotechnology, 2014 (Plant Biotechnology, Molecular Virology)
Dissertation: Characterization of defective DNA β associated with cotton leaf curl disease and their use in developing enhanced resistance

University of Agriculture, Faisalabad, Pakistan

- M.Sc. (Hons.) Agriculture, 2006 (Plant Pathology)
Dissertation: Effect of PGPR on pathogenic fungi associated with the roots of soybean
- B.Sc. (Hons.) Agriculture, 2004 (Plant Pathology)

PROFESSIONAL EXPERIENCE

University of Agriculture, Faisalabad, Sub-Campus Burewala, Pakistan

Assistant Professor, Sep 2013 to date

- Taught several under- and post-graduate courses of plant pathology and botany
- Won two competitive research grants as Principal Investigator (PI) and two as Co-PI
- Supervised ten (10) M.Sc. (Hons.) Agri. Students

Research Associate, 2005-2006

- Worked in a project titled, "Utilization of plant growth promoting and nodule forming rhizobacteria and rhizobia in the integrated control of root infecting fungi of sunflower and soybean"

Sultan Qaboos University, Muscat, Oman

Research Associate, Feb 2012 - July 2013.

- Worked on diversity of plant viruses infecting vegetable and ornamental crops of Oman

Queen Mary University of London, Cytogenetics Research Laboratory

IRSIP Research fellow, 2009-2010

- Worked on mapping of repetitive DNA probes to species in the plant genus *Nicotiana*, using fluorescent *in situ* hybridization (FISH)

TECHNICAL EXPERTISE

Microbiology

Media preparation, isolation of fungi and bacteria from infected plant samples, pure culturing, spectrophotometry, microscopy

Molecular Biology

Plant genomic DNA extraction, Fungal DNA extraction, DNA extraction from single whitefly (*Bemisia tabaci*), PCR, RT-PCR, qPCR, Rolling circle amplification using Phi DNA polymerase, Gel electrophoresis, ELISA, Southernblot hybridization, Molecular cloning (ligation, transformation, plasmid isolation, restriction digestions), Preparation of competent cells of *E. coli* and *Agrobacterium*, *Agrobacterium*-mediated inoculation, Biolistic inoculation, Transgenic plants through tissue culture, Gene silencing through RNAi

Bioinformatics

Primer designing, Sequence assembly, Sequence alignments, BLAST, Phylogenetics, Recombination, Genome annotation, Sequence submission in database etc.

PUBLICATIONS

Research publications: 28 (23 in impact factor journals)

Book chapters: 4

Abstracts: 16

(Please see Annex-I for list of publications)

RESEARCH PROJECTS

- **“Identification and molecular characterization of plant viruses from monocotyledonous crops and weeds of Southern Punjab, Pakistan”** worth Rs. 2.869 million funded by Higher Education Commission, Pakistan (As PI, Completed in Oct 2021).
- **“Community oriented plant disease diagnostic clinic (PDDC) at UAF Sub-Campus Burewala”** worth Rs. 1.849 million funded by Endowment Fund Secretariat, University of Agriculture, Faisalabad, Pakistan (As PI, Completed in Nov. 2022).

CONFERENCES/SYMPOSIA/WORKSHOPS

Organized training workshops for students and attended several national and international conferences, symposia, and workshops (Please see Annex-II)

M.SC. (HONS.) THESIS SUPERVISION

1. Esha Amin (2024) Characterization of pathogens associated with soft rot of vegetables and comparative measures to control it. (Supervisor)
2. Amna Bibi (2024) Morphological characterization and aflatoxin profiling of *Aspergillus flavus* from maize in Pakistan. (Supervisor)
3. Danyal Ahmad (2024) Observance of disease-causing pathogens' pressure on cotton in Vehari region. (Supervisor)
4. Adeeba Anwar (2023) Isolation, purification, and molecular identification of fungal plant pathogens prevalent in Vehari region. (Supervisor)
5. Muhammad Usama Ahmad Sumbal (2023) Survey to note plant disease prevalence in district Vehari. (Supervisor)
6. Shaharyar Asghar (2022) Detection and identification of plant viruses from selected monocot crops of Burewala, Pakistan. (Supervisor)
7. Muhammad Zubair (2020) Identification and molecular characterization of plant viruses from crop weeds of district Vehari. (Supervisor)
8. Mustanser Farooq (2020) Unraveling efficacy of aqueous plant extracts as biocontrol agent against early and late blight of tomato. (Supervisor)
9. Sania Khalid (2019) Diagnosis of cotton leaf curl disease associated begomovirus components in Vehari region of Punjab, Pakistan. (Supervisor)
10. Waqas Sarmad (2019) Biocontrol of black scurf of potato through bacterial isolates. (Supervisor)
11. Ahsan Raza (2024) Effectiveness of eclectic ensemble of rhizospheric *Bacillus* strains in mitigating *Fusarium* wilt in tomato. (Member Supervisory Committee)
12. Rabia Sarwar (2024) Evaluating the potential of bacterial consortia in early blight control in tomatoes. (Member Supervisory Committee)
13. Usman Farooq (2019) Assessment of begomovirus prevalence and its associated components with leaf curl disease on tomato in Vehari region. (Member Supervisory Committee)
14. Ashfaq Ahmad (2015) Assessment of environmental contamination of Endosulfan in cotton growing area of Vehari district. COMSATS-Vehari. (Member Supervisory Committee)

COURSES TAUGHT

Undergraduate Courses

- PP-402 Applied Plant Pathology
- PP-504 Diseases of Field Crops
- PP-507 Introduction to Plant Viruses
- PP-515 Genesis of Phytopathological Concepts
- PP-518 Fungal Biotechnology
- PP-603 Diagnostic Plant Pathology
- PP-609 Molecular Plant Pathology

Post graduate Courses

- Biochem-608 Molecular Biochemistry
- PP-617 General Plant Pathology
- PP-709 Integrated Plant Disease Management
- PP-714 Biotechnology and Genetic Engineering in Plant Pathology
- PP-722 Plant Virology

ANNEXURE-I

LIST OF PUBLICATIONS

1. Mustanser Farooq, **Sohail Akhtar**¹, Shakeel Imran, Ali H. Dar, Ahsan Raza, Ashir Masroor. (2024) Seed priming with plant extracts gives enhanced resistance against *Alternaria solani* in tomato. Pak. J. Phytopathol., Vol. 36 (02). 411-422.
2. Ali A, Umar UUD, **Akhtar S**, Shakeel MT, Rehman AU, Tahir MN, Atta S, Moustafa M, Ölmez F, Parveen R. (2022) Identification and primary distribution of Citrus viroid V in citrus in Punjab, Pakistan. Mol Biol Rep. doi: 10.1007/s11033-022-07677-7. Epub ahead of print. PMID: 36002656. **(Impact factor 2.31)**
3. **Akhtar, S.**, Tahir, M.N., Amin, I. and Mansoor, S (2021). Amplicon-based RNAi construct targeting beta-C1 gene gives enhanced resistance against cotton leaf curl disease. 3 Biotech 11(6), 256. <https://doi.org/10.1007/s13205-021-02816-6> **(Impact factor 2.40)**
4. Moosa, A., Farzand, A., Khan, S.A., Ahmad, T., Aslam, H.M.U., Shafique, M., Saeed, S., Masroor, A., and **Akhtar, S.**, (2021) First report of post-harvest Fusarium rot of mandarin *Citrus reticulata* cv. 'Kinnow' caused by *Fusarium equiseti* in Pakistan. Plant Disease. <https://doi.org/10.1094/PDIS-03-21-0513-PDN> **(Impact factor 3.80)**
5. Yousaf, S., Rasool, G., **Akhtar, S.** (2021) First report of *Pedilanthus leaf curl virus* and *Ageratum conyzoides* symptomless alphasatellite infecting *Cassia occidentalis* in Pakistan. *Journal of Plant Pathology*. 103, 731-732 **(Impact factor 1.15)**
6. Binyamin, R., Nadeem, S.M., **Akhtar, S.**, Khan, M.Y. and Anjum, R. (2019) Beneficial and pathogenic plant microbe interactions: A review. *Soil and Environment*. doi: 10.25252/SE/19/71659 **(HEC recognized-X)**
7. **Akhtar, S.**, Tahir, M.N., Amin, I., Binyamin, R. and Mansoor, S. (2019) Characterization of circular DNA molecules from cotton plants with leaf curl disease. *Pakistan Journal of Botany* 51(1), 319-325. **(Impact factor 0.75)**
8. Shafiq, M., Khan, M.A., Hussain, M., Sajjad, M., Farzand, A., Moosa, A., Jabbar, A., Khan, A.R., **Akhtar S.** and Binyamin, R. (2017) Relationship of meteorological variables and inoculation techniques conducive for loose smut of wheat development. *Pakistan Journal of Phytopathology* 29(01), 145-152. **(HEC recognized-Y)**
9. Ali, M.Y., Amin, I., **Akhtar, S.** and Mansoor, S. (2016) Study of secondary endosymbionts of whiteflies collected from cotton growing districts of Punjab, Pakistan. *Pakistan Journal of Zoology* 48(5), 1549-1553. **(Impact factor 0.79)**
10. Binyamin, R., Khan, M. A., Khan, A. I., Awan, F. S., Khan, N. A. and **Akhtar, S.** (2016) Genetic diversity of mungbean genotypes in relation to resistance against Mungbean yellow mosaic virus. *Pakistan Journal of Botany* 48(3), 1273-1277. **(Impact factor 0.75)**
11. Yasmeen, A., Kiani, S., Butt, A., Rao, A.Q., Akram, F., Ahmad, A., Nasir, I.A., Husnain, T., Mansoor, S., Amin, I., Aftab, S., Zubair, M., Tahir, M.N., **Akhtar, S.**, Scheffler, J., Scheffler, B. (2016) Amplicon-based RNA interference targeting V2 gene of *cotton leaf curl Kokhran virus-Burewala* strain can provide resistance in transgenic cotton plants. *Molecular Biotechnology* 58: 807-820. **(Impact factor 1.71)**
12. **Akhtar, S.**, Tahir, M.N., Baloch, G.R., Javaid, S., Khan, A.Q., Amin, I., Briddon, R.W. and Mansoor, S. (2014) Regional changes in the sequence of cotton leaf curl Multan betasatellite. *Viruses* 6(5), 2186-2203. **(Impact factor 3.81)**
13. **Akhtar, S.**, Khan, A.J., Singh, A.S. and Briddon, R.W. (2014) Identification of a disease complex involving a novel monopartite begomovirus with beta- and alphasatellites associated with okra leaf curl disease in Oman. *Archives of Virology* 159(5), 1199-1205. **(Impact factor 2.26)**
14. **Akhtar, S.**, Khan, A.J. and Briddon, R.W. (2014) A distinct strain of *Chickpea chlorotic dwarf virus* infecting pepper in Oman. *Plant Disease* 98(2), 286. **(Impact factor 3.80)**
15. Akhter, A., **Akhtar, S.**, Saeed, M., and Mansoor, S. (2014) Chili leaf curl betasatellite enhances symptoms induced by Tomato leaf curl New Delhi virus, a bipartite begomovirus. *International*

¹ Corresponding author

- Journal of Agriculture and Biology* 16(6), 1225-1228. **(HEC recognized-Y)**
16. Al-Shihi, A.A., **Akhtar, S.** and Khan, A.J. (2014) Identification of Chili leaf curl virus causing leaf curl disease of petunia in Oman. *Plant Disease* 98(4), 572. **(Impact factor 3.80)**
 17. Al-Shihi, A.A.M., Khan, A.J., **Akhtar, S.**, Lima, A.T.M., Zerbini, F.M. and Briddon, R.W. (2014) Occurrence of a new recombinant begomovirus species infecting tomato in the Al-Batinah region of Oman. *Plant Pathology* 63 (5), 1177-1184. **(Impact factor 2.49)**
 18. Khan, A.J., **Akhtar, S.**, Al-Shihi, A.A., Al-Matroushi, A.M., Ammara, U., Singh, A.K. and Briddon, R.W. (2014) Recent evolution of a novel begomovirus species causing tomato leaf curl disease in the Al-Batinah region of Oman. *Archives of Virology* 159(3), 445-455. **(Impact factor 2.26)**
 19. Khan, A.J., **Akhtar, S.**, Al-Zaidi, A.M., Singh, A.K. and Briddon, R.W. (2013) Genetic diversity and distribution of a distinct strain of Chili leaf curl virus and associated betasatellite infecting tomato and pepper in Oman. *Virus Research* 177(1), 87-97. **(Impact factor 2.74)**
 20. Khan, A.J., **Akhtar, S.**, Singh, A.K. and Briddon, R.W. (2013) A distinct strain of *Tomato leaf curl Sudan virus* causes tomato leaf curl disease in Oman. *Plant Disease* 97(11), 1396-1402. **(Impact factor 3.80)**
 21. Khan, A.J., **Akhtar, S.**, Al-Matroushi, A.M., Fauquet, C.M. and Briddon, R.W. (2013) Introduction of *East African cassava mosaic Zanzibar virus* to Oman harks back to “Zanzibar, the capital of Oman”. *Virus Genes* 46 (1), 195-198. **(Impact factor 1.62)**
 22. Azhar, M. T., **Akhtar, S.** and S. Mansoor. (2012) Letter to the Editor: Cotton leaf curl Multan betasatellite strains cloned from *Gossypium barbadense* further supports selection due to host resistance. *Virus Genes* 45 (2), 402-405. **(Impact factor 1.62)**
 23. Khan, A.J., **Akhtar, S.**, Al-Shihi, A.A., Al-Hinai, F.M. and Briddon, R.W. (2012) Identification of *Cotton leaf curl Gezira virus* in papaya in Oman. *Plant Disease* 96, 1704. **(Impact factor 3.80)**
 24. Khan, A.J., **Akhtar, S.**, Briddon, R.W., Ammara, U., Al-Matroushi, A.M., and Mansoor, S. (2012) Complete nucleotide sequence of *Watermelon chlorotic stunt virus* originating from Oman. *Viruses* 4, 1169-1181. **(Impact factor 3.81)**
 25. Mubin, M., **Akhtar, S.**, Amin, I., Briddon, R.W., and Mansoor, S. (2012) *Xanthium strumarium*: a weed host of components of begomovirus–betasatellite complexes affecting crops. *Virus Genes*, 44(1)112-119. **(Impact factor 1.62)**
 26. **Akhtar, S.**, Briddon, R.W., and Mansoor, S. (2011) Reactions of *Nicotiana* species to inoculation with monopartite and bipartite begomoviruses. *Virology Journal* 8(1), 475-483. **(Impact factor 2.46)**
 27. Amrao, L., **Akhtar, S.**, Tahir, M. N., Amin, I., Briddon, R.W., and Mansoor, S. (2010) Cotton leaf curl disease in Sindh province of Pakistan is associated with recombinant begomovirus components. *Virus Research* 153(1), 161-165. **(Impact factor 2.74)**
 28. **Akhtar, S.**, Haq, I.U., Tahir, M.N., Sahi, S.T., and Khan, M.A. (2005) In-vitro effect of PGPR on the growth of *Macrophomina phaseolina* and *Rhizoctonia solani*, root infecting fungi of soybean. *Pakistan Journal of Phytopathology* 17(2):177-180. **(HEC recognized-Y)**

Book Chapters:

1. **Soheil Akhtar** and Muhammad Shafiq Shahid. (2024). Current approaches and prospective strategies for plant virus management. In: Alireza G., Gaur R.K. and Verma, R.K. (eds). *Detection and Management of New and Emerging Mystery Plant Virus Sources*. Apple academic press, New York. ISBN 9781003493136, <https://doi.org/10.1201/9781003493136>
2. **Soheil Akhtar**, Shahira Salim Al-Risi, Maryam Ismail Al-Zeidi, Buthaina Aamir Al-Rahbi, Ahad Saud Al-Rashdi, Ali Al-Subhi and Muhammad Shafiq Shahid. (2024). Chili Leaf Curl Virus: An Emerging Threat to Our Current Vegetable Production System. In: Akhtar A. and Gaur R.K. (eds). *Pepper Virome: Molecular Biology, Diagnostics and Management*. Academic Press, pp. 395-406. ISBN 9780443155765, <https://doi.org/10.1016/B978-0-443-15576-5.00008-3>
3. Nadeem, S. M., Khan, M.Y., Waqas, M.R., Binyamin, R., **Akhtar, S.** and Zahir, Z.A. (2017) Arbuscular Mycorrhizas: An Overview. In: Qiang-Sheng Wu (ed.) *Arbuscular Mycorrhizas and Stress Tolerance of Plants*. Springer Nature, Singapore. pp. 1-24. ISBN 9789811041143.

4. Khan, A.J., **Akhtar, S.**, Mansoor, S. and Amin, I. (2014) Engineering crops for resistance to geminiviruses. In: R.K.Gaur, T. Hohn and P. Sharma, (eds.) Plant Virus-Host Interaction: Molecular Approaches and Viral Evolution. Elsevier Inc. Oxford UK, Waltham USA. pp. 291-323. ISBN 9780124115989.

Abstracts Published:

1. **Akhtar, S.**, Rehman, H., Sumbal, M.U.A. and Anwar, A. (2023) Plant Disease Situation of Field and Vegetable Crops in District Vehari of Punjab, Pakistan. 8th International Conference of Pakistan Phytopathological Society, Department of Plant Pathology, The Islamia University of Bahawalpur, Pakistan. November 26-28.
2. Anwar, A., Sumbal, M.U.A., Masroor, A. and **Akhtar, S.** (2023) Isolation, Purification and Molecular Identification of Fungal Plant Pathogens Prevalent in Vehari Region. 8th International Conference of Pakistan Phytopathological Society, Department of Plant Pathology, The Islamia University of Bahawalpur, Pakistan. November 26-28. **(Poster presentation)**
3. Sumbal, M.U.A., Anwar, A., Rehman, H., Masroor, A. and **Akhtar, S.** (2023) Survey to Note Plant Disease Prevalence in District Vehari. 8th International Conference of Pakistan Phytopathological Society, Department of Plant Pathology, The Islamia University of Bahawalpur, Pakistan. November 26-28.
4. Taqi, K., Raza, A., Anwar, U., Rehman, A., **Akhtar, S.** and Masroor, A. (2023) Evaluation of rhizospheric bacterial isolates for the control of *Fusarium* wilt of cotton. 8th International Conference of Pakistan Phytopathological Society, Department of Plant Pathology, The Islamia University of Bahawalpur, Pakistan. November 26-28.
5. Asghar, S., Masroor, A., **Akhtar, S.** (2022) Plant disease survey of Burewala, district Vehari. 1st International Conference on Revamped Scientific Outlook of 21st Century, Rawalpindi Women University, 6th Road Satellite Town, Rawalpindi, 12th October. **(Poster presentation)**
6. **Akhtar, S.**, Tahir, M.N., Amin, I., Mansoor, S., Masroor, A. and Binyamin, R. (2016) Circular molecules of diverse origins associated with cotton leaf curl disease. Conference on sustainable crop and animal production systems, Pakistan Agricultural Research Forum, The University of Haripur. 8-10th December. **(Poster presentation)**
7. **Akhtar, S.**, Tahir, M.N., Baloch, G.R., Javaid, S., Khan, A.Q., Amin, I., Amrao, L., Briddon, R.W. and Mansoor, S. (2013) Temporal and spatial changes in the betasatellite associated with the begomoviruses causing cotton leaf curl disease. 12th International Plant Virus Epidemiology Symposium (IPVE), Arusha, Tanzania. Jan 28-Feb 01. **(Oral presentation)**
8. Khan, A.J. and **Akhtar, S.** (2013) Occurrence of a new strain of *Tomato leaf curl Sudan virus* in association with the old betasatellite from Oman. 12th International Plant Virus Epidemiology Symposium (IPVE), Arusha, Tanzania, Jan 28-Feb 01.
9. Khan, A.J., **Akhtar, S.**, Al-Matrushi, A., Al-Shihi, A.A. and Briddon, R.W. (2013) Oman- a nursery for recombination between exotic Old World begomoviruses of diverse origins. 12th International Plant Virus Epidemiology Symposium (IPVE), Arusha, Tanzania, Jan 28-Feb 01.
10. Al-Matroushi, A.R., **Akhtar, S.** and Khan, A.J. (2013) Molecular characterization of begomovirus associated with tomato and pepper in southern region of Oman. 12th International Plant Virus Epidemiology Symposium (IPVE), Arusha, Tanzania, Jan 28-Feb 01.
11. **Akhtar, S.**, Amin, I., and Mansoor, S. (2013) Amplicon based enhanced resistance against cotton leaf curl begomovirus through RNAi targeting betaC1 gene. International symposium of biotechnology and conservation of species from arid regions, SQU, Oman. 10-13th February. **(Oral presentation)**
12. Al-Matroushi, A.R., **Akhtar, S.** and Khan, A.J. (2013) Role of Rep protein in the infectivity of *Tomato yellow leaf curl virus*-Oman. International symposium of biotechnology and conservation of species from arid regions, SQU, Oman, 10-13th February.
13. Al-Shihi, A.A., **Akhtar, S.** and Khan, A.J. (2013) Screening of tomato inbred lines against begomoviruses in Oman. International symposium of biotechnology and conservation of species

from arid regions, SQU, Oman, 10-13th February.

14. Al-Amri, K.N., **Akhtar, S.** and Khan, A.J. (2013) Transformation of artificial zinc finger gene in *Nicotiana benthamiana* targeting Rep protein of *Tomato yellow leaf curl virus*-Oman. International symposium of biotechnology and conservation of species from arid regions, SQU, Oman, 10-13th February.
15. Al-Rushadi, M., **Akhtar, S.** and Khan, A.J. (2013) Development of transgenic tomato expressing miRNA genes targeting Rep protein of *Tomato yellow leaf curl virus*-Oman. International symposium of biotechnology and conservation of species from arid regions, SQU, Oman, 10-13th February.
16. **Akhtar,S.**, Briddon,R.W., and Mansoor,S. (2011) Reactions of *Nicotiana* species to inoculation with monopartite and bipartite begomoviruses. 8th National Conference of Pakistan Phytopathological Society, Department of Plant Pathology, University of Agriculture, Faisalabad, Pakistan. 28th-29th November. **(Oral presentation)**

ANNEXURE-II

Conferences, Symposia and Workshops Organized:

1. "International Education Expo 2023, Season-II" December 12-16, UAF Sub-Campus Burewala. (Member Organizing Committee)
2. "Kisan Bethak regarding Wheat Campaign" November 3, 2023, Agricultural Farm, UAF Sub-Campus Burewala.
3. One day seminar on "Significance of Plant Disease Diagnosis" November 29, 2022, UAF Sub-Campus Burewala.
4. Live webinar on "Diagnostic Tools Aiding Plant Disease Diagnosis" October 12, 2022, UAF Sub-Campus Burewala.
5. One day training on "Plant Disease Diagnosis" June 21, 2019, UAF Sub-Campus Burewala-Vehari.
6. One day training on "Thesis and Research Writing" February 02, 2018, UAF Sub-Campus Burewala-Vehari. (Member Organizing Committee)
7. One day workshop on "Hands on DNA Manipulation Tools", March 11, 2017, UAF Sub-Campus Burewala-Vehari.
8. "Kisan Convention" held at UAF Sub-Campus Burewala-Vehari, 15th January 2017. (Member Organizing Committee)
9. One day seminar on "Wheat Crop Management for Enhanced Productivity", UAF Sub-Campus Burewala-Vehari, 29th November 2014. (Member Organizing Committee)
10. One day seminar on "Enhancing Wheat Production Using Modern Technologies", UAF Sub-Campus Burewala-Vehari. 20th November 2013. (Member Organizing Committee)

Conferences, Symposia and Workshops Attended:

1. COMSTECH-ICGEB-NIBGE International Workshop on "Use of Genome Editing and Other New Breeding Technologies for Global Food Security" at COMSTECH Secretariat, 33-Constitution Avenue, G-5/2, Islamabad, Pakistan. 8-10 April 2019.
2. One day symposium and hands-on training on molecular characterization of whiteflies (Insecta) in Pakistan. NIBGE, Faisalabad, Pakistan. 30th November 2018.
3. 2nd Sino-Pak international conference on innovations in cotton breeding and biotechnology. MNS University of Agriculture, Multan, Pakistan. 26-27 November 2018.
4. One day international workshop on applications of computational biology in biotechnology. NIBGE, Faisalabad, Pakistan. 31st July 2017.
5. Conference on Sustainable Crop and Animal Production Systems by Pakistan Agricultural Scientists Forum, University of Haripur. 8-10 December 2016.
6. National Grants Writing Workshop by U.S.-Pakistan Center for Advanced Studies in Agriculture and Food Security. 6-7 April 2016.
7. International seminar on seed longevity, drying and storage. University of Agriculture, Faisalabad, Sub-Campus Burewala-Vehari, Pakistan. 24th November 2016.
8. International conference on forestry and environment: Challenges and Prospects. Organized by Department of Forestry and Range Management, UAF Pakistan and Faculty of Forestry, Kastamonu University, Turkey. 21-22 November 2016.
9. Two days workshop on Next Generation Sequencing (from Physiology to Bioinformatics) at Institute of Agricultural Sciences, University of the Punjab, Lahore. 4-5 December 2015.
10. Training of Presiding Officers and Senior Assistant Presiding Officers. Local

- Government Elections Punjab, Election Commission of Pakistan, 2015.
11. Indigenous on campus training. University of Agriculture, Faisalabad, Pakistan. 15-19 December 2014.
 12. Project formulation workshop by Pakistan Science Foundation. University of Agriculture Faisalabad, Pakistan. 3-4 December 2013.
 13. International Symposium of Biotechnology and Conservation of Species from Arid Regions. Sultan Qaboos University, Muscat, Oman. 10-13 February 2013.
 14. One day symposium on "DNA Barcoding: A promising tool for species identification and biodiversity digitization", NIBGE, Faisalabad, Pakistan. 30th January 2012.
 15. Computational Biology and Bioinformatics Workshop. LUMS, Lahore, Pakistan. 9-13 January 2012.

REFERENCES

Dr. Shahid Mansoor (SI)

PhD Supervisor,
Senior Advisor, International Center for Chemical and Biological Sciences
University of Karachi
Karachi, Pakistan
Phone: +92-21-99261715, +92-300-7944841
E-mail: shahidmansoor7@gmail.com

Dr. Muhammad Shafiq Shahid

Associate Professor
Department of Plant Sciences,
College of Agricultural & Marine Sciences, Sultan Qaboos University.
Al-Khoud PC 123, Oman
E-mail: mshahid@squ.edu.om
Tel: +968 2414 1209

Dr. Sajid M. Nadeem

Principal
University of Agriculture Faisalabad,
Sub-Campus Burewala-Vehari, Pakistan
E-mail: sajidmn92@hotmail.com
Phone: +92-333-6533119