

CV OF DR. AMBREEN AHMED

Dr. Ambreen Ahmed
Assistant Professor,
Department of Botany,
University of the Punjab,
Lahore, Pakistan.

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ACADEMIC QUALIFICATION:

- Ph.D. (Microbiology and Molecular Genetics) University of the Punjab
- M.Sc. (Botany) 1st Div Punjab University **1st Position (Gold Medalist)**
- B.Sc. (Bot., Zoo., Chem.) 1st Div Punjab University
- F.Sc. (Pre-Medical) 1st Div Lahore Board
- Matriculation 1st Div Lahore Board

DISTINCTIONS:

- Selected as HEC approved Ph.D. supervisor (2015)
- Foreign Scholarship under IRSIP awarded by Higher Education Commission (HEC) for **Purdue University, USA** (2009) as visiting Ph.D. Scholar.
- 1st Position in Punjab University in M.Sc. (**Gold Medalist**) (1999).
- Selected as Lecturer by Punjab Public Service Commission (2002).
- President's Talent (Merit) Scholarship (B.Sc.) awarded by UGC (1996).

PROFESSIONAL EXPERIENCE:

- Assistant Professor (BPS-19), Department of Botany, PU (2012 - todate)
- Lecturer (BPS-18), Department of Botany, University of the Punjab (2005 – 2012).
- Research Officer (BPS-17), Department of Botany, University of the Punjab (2002- 2005).

TEACHING EXPERIENCE:

Postgraduate Teaching (Ph.D./MS/MPhil/M.Sc.) in Botany Department

Undergraduate Teaching in Botany Department

Postgraduate Teaching As Visiting Faculty: (Ph.D/MPhil/M.Sc.)

- General and Medical Genetics [M.Phil. /Ph.D. 2013-14; 2014-15, 2016](School of Biological Sciences, PU)
- Principles of Genetics [M.Sc.](Department of Microbiology and Molecular Genetics, PU)

RESEARCH EXPERIENCE:

Ph.D. Research: (Microbiology and Molecular Genetics)

M.Sc. Research: (Microbiology)

Effect of temperature on growth, morphology, staining behavior and soluble protein content of *div*-mutants of *Bacillus subtilis*.

- Potato Seed Centre, Punjab University. (Biotechnology)
Production of disease free potatoes using plant tissue culture techniques.
- Botany Department, Punjab University.

Research Supervision (Ph.D): In Progress 04

Research Supervision (MPhil): Completed 05; In Progress 02

Research Supervision (M.S.): Completed 05; In Progress 03

Research Supervision (M.Sc.): Completed 11; In Progress 02

Research Supervision (BS): Completed 01; In Progress 02

INTERSHIPS/RESEARCH SUPERVISION TO STUDENTS FROM OTHER INSTITUTIONS:

- Amna Arshad (2012-2013) – Punjab College, Lahore
- Ifrah Javed (2016-2017)- The Lahore University, Lahore
- Muhammad Aftab (2016-2017) – Forman Christian College University
- Misha Hussain (2016-2017) – Government College University, Lahore
- Aqsa Tariq (2017) – University of the Punjab
- Ijlal Akhtar (2017) – Azad Kashmir University, Muzaffarabad

RESEARCH PUBLICATIONS:

1. **Ahmed A.** and Sabri A.N., 2004. Effect of varying temperature on growth, morphology and soluble protein content of *div I* and *div II* mutant strains of *Bacillus subtilis*. *Science International*. 16 (1): 43-52.
2. **Ahmed A.**, Sabri A.N. and Hasnain, S., 2008. Effect of varying temperature on growth, morphology and soluble protein content of *div IV* and *div V* mutant strains of *Bacillus subtilis*. *African Journal of Biotechnology*. 7 (10): 1505-1511.
3. **Ahmed A.** and Hasnain S. 2010. Auxin producing *Bacillus* sp.: Auxin quantification and effect on the growth *Solanum tuberosum*” *Pure and Applied Chemistry*. 82 (1): 313-319.
4. **Ahmed A.** and Hasnain S. 2014. Auxins as one of the factors of plant growth improvement by plant growth promoting rhizobacteria. *Polish Journal of Microbiology*. 63(3): 261-266
5. Naseem S., Yasin M., **Ahmed A.** and Faisal M. 2015. Chromium Accumulation and Toxicity in Corn (*Zea mays* L.) Seedlings. *Polish Journal of Environmental Studies*. 24 (2): 899-904
6. Fatima H. and **Ahmed A.** 2016. How chromium-resistant bacteria can improve corn growth in chromium contaminated growing medium. *Polish Journal of Environmental Studies*, 25(6): 2357-2365
7. Jabeen F., **Ahmed A.** and Hasnain S. 2008. Abstract entitled “ Impact of varying concentration of plant growth regulators on callogenesis and organogenesis in *Celosia* sp.” published in the proceedings of 1st Symposium of Microbiology and Molecular Genetics entitled “Genomics, Proteomics, Metabolomics: Recent Trends in Biotechnology”, Department of Microbiology and Molecular Genetics, University of the Punjab. Pg 307- 308.

8. **Ahmed A.** and Hasnain S. 2008 Auxin producing *Bacillus* sp.: Auxin quantification and effect on the growth of *Solanum tuberosum*. *Journal of Biotechnology*.136S: pp S113
9. Wagi S. and **Ahmed A.** 2016. A report on the quality assessment of preserved fruit juices: microbial and biochemical analysis. *Science International*. 28 (2): 2053-2057.
10. Naseem S., Yasin M., Faisal M and **Ahmed A.** 2016. Comparative study of plant growth promoting bacteria in minimizing toxic effects of chromium on growth and metabolic activities in wheat (*Triticum aestivum*). *Journal of Chemical Society of Pakistan*, 38 (3): 509-516.
11. Aslam T. and **Ahmed A.** 2016. Growth improvement studies in *Brassica rapa*. *Journal of Bacteriology and Mycology: Open access*. 3(3): 00062
12. Arshad Q. and **Ahmed A.** 2017. Chromium-resistant PGPB: growth stimulatory impact on *Vigna radiata* L. under chromium stress. *Romanian Biotechnology Letters*. 22(5): 12988-12996
13. Wagi S. and **Ahmed A.** 2017. Phyllospheric plant growth promoting bacteria. *Journal of Bacteriology and Mycology: Open access*. 5(1): 00119
14. Karamat M. and **Ahmed A.** 2018. Impact of *Arthrobacter mysorens*, *Kushneria avicenniae*, *Halomonas* spp., and *Bacillus* sp. on *Helianthus annuus* L. for growth enhancement. *Journal of Animal and Plant Sciences*. 28(6) (Accepted)
15. Habib S, Fatima H and **Ahmed A.** 2019. Comparative analysis of pregermination and post-germination inoculation treatments of Zeamays L. to mitigate chromium toxicity in Cr-contaminated soils. *Polish Journal of Environmental Studies*, 28(2) [DOI: 10.15244/pjoes/81570] (Accepted)
16. Aslam T. and **Ahmed A.** 2018. Lead-tolerant bacteria can minimize lead toxicity in plants. *RADS Journal of Biological Research and Applied Sciences*. 9 (1): 06-12 (Accepted)
17. Fatima H. and **Ahmed A.** 2018. Heavy metal pollution-A mini review. *Journal of Bacteriology and Mycology: Open access*. 6(3):179-181

RESEARCH PROJECTS (Completed 10):

1. Isolation of auxin producing bacteria and its impact on plant tissue culture, Funded by University of the Punjab worth **Rs. 0.17 million** (2005) **P.I.**
2. 16S rRNA Sequencing of auxin producing bacteria and their auxin quantification, Funded by University of the Punjab worth **Rs. 0.1 million** (2008) **P.I.**
3. Use of phytohormones producing bacteria as biofertilizers for growth improvement of *Solanum tuberosum*, Funded by University of the Punjab worth **Rs. 0.1 million** (2009) **P.I.**
4. *Enterobacter* sp.: Impact on the growth of *Brassica oleraceae*, Funded by University of the Punjab worth **Rs. 0.125 million** (2010) **P.I.**
5. Auxin production potential of PGPB: Impact of variable physiological factors, Funded by University of the Punjab worth **Rs. 0.125 million** (2011). **P.I.**
6. *Abelmoschus esculentus*: Phytostimulation by *Enterobacter* sp. Funded by University of the Punjab worth **Rs. 0.125 million** (2012). **P.I.**
7. Bacterial IAA: Extraction, purification and application for efficient plant growth. Funded by University of the Punjab worth **Rs. 0.125 million** (2013). **P.I.**
8. Screening of heavy metal resistant-bacteria from contaminated sites and evaluation of their bioremediation potential, Funded by University of the Punjab worth **Rs. 0.15 million** (2014) **P.I.**

9. Characterization and genetic analysis of heavy metal-resistant bacterial isolates obtained from indigenous environment, Funded by University of the Punjab worth **Rs. 0.15 million** (2015). **P.I.**
10. To study phytostimulatory impact of phyllospheric auxin-producing bacteria, Funded by University of the Punjab worth **Rs. 0.15 million** (2016). **P.I.**

RESEARCH PROJECT (In Hand: 01):

11. Impact of varying seed bacterization treatments on the internal biology of treated and non-treated plants under chromium stress, Funded by University of the Punjab worth **Rs. 0.15 million** (2017). **P.I.**

ADMINISTRATIVE EXPERIENCE:

- Member, Board of Faculty of Life Sciences, Punjab University (2008-2011).
- Member, Board of Studies, Botany Department, Punjab University (2008-2011).
- Incharge, Central Resource Lab, Botany Department, PU (April, 03 - June, 09; October, 2010 till November, 2015)
- Member, Departmental Central Resource Lab Committee, Botany Department (November, 2015 - todate)
- Member, Admission Committee, B.S. 2003, 2010, 2011, 2012, 2013, 2016, Botany Department, PU
- Member, Admission Committee (M.Sc.) 2004, 2005, 2006, 2007, 2008, 2010, 2015, 2017 Botany Department, PU.
- Member, Departmental Scholarship Committee, November, 2013- todate.
- Member, Departmental Seminar Committee (B.S.) 2007, 2008, 2013, 2014
- Member, Departmental Seminar Committee (M.Sc.) 2006, 2008, 2012, 2013, 2014, 2015, 2016, 2017
- Member, Sports Committee, 2004, 2005, 2010, 2011, 2012, 2013, 2014, 2015, 2017 Botany Department, PU.
- Incharge, Departmental Sports (2015, 2016, 2018)
- Compilation of Departmental Annual Report (2006-07)
- Compilation of Departmental Curriculum (BS), 2007.
- Stock taking, (Library), 2010, 2013, Botany Department, PU.
- Stock taking, (Store), 2004, 2007, 2008, 2012, Botany Department, PU.
- Stock taking, (Herbarium) 2005, Botany Department, Punjab University.
- Member, Book Fair Entertainment Committee (2013, 2016)
- Member, Book Fair Reception Committee (2012)
- Member, Convocation Reception Committee (2013)
- Member Prospectus, Media and Website Committee (2017)
- Focal Person, Prime Minister Youth Intership Programme, Department of Botany, PU (August 2017 - todate)
- Focal Person on Drug Abuse/Anti-narcotics, Department of Botany, PU (May, 2018 –todate)
- Member , Organizing committee (Session Incharge), International Conference CMAPS-17 (28-29th Nov, 2017) organized by the Department of Botany, PU

INTERNATIONAL CONFERENCE PARTICIPATION:

- 162nd Meeting of Society for General Microbiology, **Edinburgh, UK**. (31st Mar–3rd Apr, 2008) **Poster Presentation**
- 13th International Biotechnology Symposium and Exhibition, **Dalian, China** (12-17th Oct, 2008) **Oral Presentation**.
- International Conference on Innovations in Chemical and Agricultural Engineering, **Kuala Lumpur, Malaysia**. (Feb 8-9th, 2015) **Oral Presentation**
- International Conference on Agricultural, Ecological and Medical Sciences, **Penang, Malaysia** (Feb. 10-11th, 2015). **Oral Presentation**

NATIONAL CONFERENCES AND SYMPOSIA PARTICIPATION:

1. 7th National Conference of Plant Scientists, Lahore. (14-16th Nov, 2000) **Poster Presentation**
2. 18th FAOBMB International Symposium (20-23rd Nov, 2005) “Genomics and Proteomics in Health and Agriculture” held in Lahore. **Poster Presentation:**
3. 4th International Symposium of Genetic Engineering and Biotechnology (4-8th December, 2005) on “Genomics, Bioinformatics, Biotechnology & Economic Development” held in Karachi. **Poster Presentation**
4. International Conference on Environmental Horizons (19-21st Dec, 2005) held in Karachi. **Oral presentation**
5. International Symposium on Applications of Plant Sciences in Emerging Scenario (20-22 March, 2006) at Department of Botany, Govt. College University, Faisalabad. **Poster Presentation**
6. 26th Pakistan Congress of Zoology (International) held in Lahore (4th-6th April, 2006). **Oral Presentation**
7. International Conference on sustainable crop production on salt affected land (4-6th December, 2006) Organized by University of Agriculture, Faisalabad.
8. 1st Symposium of Microbiology and Molecular Genetics, “Genomics, Proteomics, Metabolomics: Recent Trends in Biotechnology” at Sheikh Zaid Islamic Centre, University of the Punjab (22-23rd Oct, 2007) organized by the Department of Microbiology and Molecular Genetics, University of the Punjab. **Oral Presentation**
9. National Bioforum 2008 at Centre of Excellence in Molecular Biology (CEMB), Punjab University (24th-28th Mar, 08). [Model Presentation]
10. Symposium “Current Agro Biotechnology and Transgenic plants” at Pearl Continental Hotel, Lahore (21st June, 2010) organized by Department of Microbiology and Molecular Genetics, University of the Punjab. **Poster Presentation**
11. 2nd International Conference and 11th National Conference of Plant Scientists at GCU, Lahore 22-24th Feb, 2011. **Poster Presentation**
12. National Conference on trends in Biochemistry and Molecular biology (21st February, 2012) at Quaid-e Azam University, Islamabad. **Poster Presentation**
13. 32nd Pakistan Congress of Zoology (International) (6-8th Mar, 12) at GCU, Lahore. **Oral Presentation**
14. Conference entitled “Bio-physicochemical basis for Technopreneurship” (2-3rd April, 2013) **Poster Presentation**
15. Young researchers conference on Bioinformatics, 8th April, 13 at National Centre for Physics, Quaid-e-Azam University, Islamabad. **Oral presentation & Poster presentation**

16. 2nd Annual Meeting of Pakistan Society for Computational Biology/ Science (Oct 21-25th, 2013) at International Islamic University, Islamabad. **Oral Presentation (2nd Prize awarded)**
17. 11th Biennial conference on molecular biosciences- challenges and opportunities at SBS, PU on 25-28th Nov, 2013. **Poster presentation**
18. 2nd Women Intercollegiate and university Science Symposium and Model/Poster Competition on “The revolution of Biotechnology: on 18th April, 2014 at Department of Biotechnology, LCWU, Lahore. **Poster Presentation:**
19. International Conference of Plant Sciences at GCU, Lahore (22-24th Sep, 2014)
Oral presentation & Poster Presentation 2nd Prize awarded
20. 25th National and 13th International Chemistry Conference at institute of Chemistry, PU (20-22th, Oct 2014). **Oral presentation & Poster Presentation**
21. International Conference on Biotechnology for Sustainability 26-28th Nov, 2014. **Poster Presentation**
22. 4th Invention to innovation summit at Centre for Undergraduate Studies, PU (4 & 5th Mar, 2015)
23. 10th Biennial International Conference of Pakistan Society of Microbiology (PSM 10 - 25 to 28th Mar, 2015) “Exploring Microbes for future Endeavours” held at MMG, PU (28th -31st Mar, 2015) **Poster Presentation**
24. 5th International Multidisciplinary conference (Science International Conference) (29-31th Oct, 2015) held at Imperial College, Bahria Town, Lahore. **Oral Presentations**
25. 5th Invention to Innovation Summit held at Centre for Undergraduate Studies, PU (2-3rd Mar, 2016)
26. 13th Medical Microbiology and Infectious Diseases Conference held at PC, Lahore (26th March 2016)
27. 13th Biennial Conference of Pakistan Society for Biochemistry and Molecular biology (PSBMB) on Recent advances & challenges in Molecular Biology, Biochemistry & Biotechnology at COMSATS Abbottabad. **Oral Presentation & Poster Presentation**
28. 14th Eurasia conference on chemical Sciences held at Karachi University, Karachi (15-18th Dec, 2016) **Poster Presentation**
29. 6th International and 15th National Conference on Dynamic trends in plant sciences fostering environment and food security organized by Pakistan Botanical Society (9-11th May, 2017) **Oral Presentation**
30. International conference on Trends and prospects in Molecular Biosciences (23th -24th October, 2017) organized by IBB, PU. **Oral Presentation & Poster presentation**
31. International Conference on new trends in natural sciences: From basic to applied (25-27th Oct. 2017), organized by Department of Biotechnology, LCWU. **Oral Presentation**
32. 1st International Conference on conventional and modern approaches in plant sciences (28-29th Nov., 2017) organized by Department of Botany, PU as member of organizing committee. **Oral Presentation & Poster presentation**
33. 4th Conference on Frontiers of Nanoscience and Nanotechnology (12-13th Dec, 2017) organized by PINSTECH, Islamabad. **Oral Presentation & Poster presentation**
34. International Conference on solid state physics (13-17th Dec. 2017) organized by solid state physics Department, PU. **Oral Presentation**
35. 38th Pakistan Congress of Zoology (International) Department of Zoology, University of the Punjab (27th Feb- 1st Mar, 2018) **Oral Presentation & Poster Presentation**

36. MMG 2018 “A Conference on Microbiology & Molecular Genetics” (7-9th Feb, 2018) organized by Department of Microbiology and Molecular Genetics, PU
Oral Presentation & Poster Presentation

INTERNATIONAL & NATIONAL SEMINARS AND SYMPOSIA ATTENDED:

1. Seminar entitled “Listeriosis” on 8th March, 2005 at Botany Department, University of the Punjab.
2. Seminar entitled “Biofertilizers : Potentials and Prospects” (12-13th April, 2005) at Ayub Agriculture Research Institute, Faisalabad
3. Seminar entitled “Zoonosis of Bird Flu” at Botany Department, University of the Punjab.
4. Seminar entitled “Suicidal Tendencies in Students” at Botany Department, University of the Punjab.
5. International Symposium entitled “Nanochemistry: Chemistry, Biochemistry, Molecular Biology & Bioinformatics of Enzymes” (September 20-21, 2006) at School of Biological Sciences, University of the Punjab.
6. Seminar entitled “Developing Inocula of EM fungi for the plantation industry” by Dr. Clem Kuek, HEC Foreign Professor from Australia (11th January, 2007) at Botany Department, Punjab University.
7. Seminar on “Educational Leadership in Pakistan: Perceptions, Practices and Possibilities” (22nd March, 2007) organized by British Council at Lahore College for Women University, Lahore.
8. Seminar entitled “Transmission electron microscopy EFTEM analysis” by Mr. Klaus Teufel on 1st November, 2007 at Botany Department, University of the Punjab.
9. Symposium on “Microbial Resistant Paints” (17th April, 08) organized by MMG, PU.
10. Seminar entitled “ Genetic control of Heartwood formation in Black Walnut (*Juglans nigra*)” by Keith Woeste on 14th Oct., 09 at Department of Horticulture, Purdue University, IN, USA.
11. Seminar entitled “ Blue light sensing in plants- All you need is a little LOV” by John Christie, University of Glasgow, Scotland, UK on 15th Oct., 09 at the Department of Horticulture, Purdue University, IN, USA.
12. Seminar entitled “RNAi reveals general auxin transport related functions of ABCB Transporters in *Arabidopsis thaliana*” by Haibing Yang, Purdue University, USA on 11th Nov., 09 at Department of Horticulture, Purdue University, IN, USA.
13. 22nd Asian Pacific Weed Science Conference at GC University Lahore (8-12th March, 2010) organized by Asian Pacific Weed Science Society & Pakistan Weed Science Society.
14. International conference on “Research Methodologies: New trends and integrative approach from the bench to bedside” (6-8th Sep, 12) at the University College of Pharmacy, University of the Punjab.
15. Video-conference on “Pak-US Science & Technology Cooperation Program” (5th Sep, 12) at Centre for Undergraduate Studies, PU.
16. Invention to Innovation Summit (18th June, 2012) at Al-Razi Hall, Centre for Undergraduate Studies, PU.
17. 1st Women Intercollegiate and university Science Model and Poster Competition on “Impact of Biotechnology in today’s world” on 12th March, 2013 at Department of Biotechnology, LCWU, Lahore.

18. A technical lecture on Biogas Plant (23rd January, 2014) at Al-Razi Hall, Centre for Undergraduate Studies, PU, organized by ORIC & School of Physical Sciences.
19. Invention to innovation Summit (19-20th March, 2014) at Al-Razi Hall, Centre for Undergraduate Studies, PU.
20. Seminar on “Scientific writing: Guidelines, issues and solutions” at Department of Microbiology and Molecular Genetics on 27th March, 2014.
21. 1st International Seminar on “Soil Health Reclamation Approaches” on Wednesday, June 11, 2014 organized by CEES at UGC, PU. **Poster Presentation**
22. Lecture on “Human gene therapy: The Promise, The problems and the continuing search for solutions” on 18th June, 2014 at Al-Razi Hall , Centre for Undergraduate Studies, University of the Punjab, Lahore
23. One day symposium on Emerging issues of multidrug resistance: A threat to the Globe” on 2nd Oct, 2014 at UGC, PU.
24. Lecture series “Jamia Punjab ki tareekh usataza karam ki zabani”, lecture delivered by Prof. Dr. Razi Abbas Shamsi (13th Jan, 2016) under the title “Madir e ilmi meri yadashtain” at UGC, PU
25. One day Symposium on “Personalized Medicine: Detection, Diagnosis and Treatment” on 25th May, 2017 organized by IBB, PU
26. Seminar on “Department of Botany, University of the Punjab: A historical Perspective” by Prof. Dr. Khalid Hameed Sheikh (25th Oct, 2017) at Al- Razi Hall, UGB organized by Department of Botany, PU
27. Seminar on awareness regarding Technology development fund (26th Oct, 2017) organized by ORIC, PU at Law college, PU
28. Seminar on “Environmental Pollution” by Prof. Dr. Razi Abbas Shamsi (26th Jan, 2018) at UGC, PU, organized by Department of Botany, PU
29. Seminar on “ Towards Two Decades (1995-2015) of Biotechnology: Success, Failure and Prospects” by Prof. Dr. Javed Iqbal (14th Feb, 2018) at UGC, PU organized by Department of Botany, PU
30. Seminar on Road Safety (Traffic Awareness Programme) by Muhammad Shehzad Yousaf, Senior Petrol Officer (12th April, 2018) at UGC, PU, organized by Department of Botany, PU
31. Invention to Innovation Summit 2018 organized by ORIC , PU (7-8th Mar, 2018) at Punjab University

WORKSHOPS ATTENDED:

- i. ISI Web of Science Workshop conducted by Punjab University Library at Punjab University Library Auditorium on 17th Jan, 2006.
- ii. Workshop on “Intelligent Data Analysis Methods in Functional Genomics” (17 and 18 March, 2007) organized by centre for Advanced Studies in Mathematics, LUMS.
- iii. Workshop on “Proteomics: From sample preparation to data analysis” at Institute of Biochemistry and Biotechnology, University of the Punjab (22-23rd Oct, 2007) organized by the Department of Microbiology and Molecular Genetics, University of the Punjab.

- iv. Workshop on “Self Assessment Manual” on 27th Nov, 2007 at Institute of Chemical Engineering and Technology, Punjab University.
- v. Workshop on “Introduction to Laboratory Instrumentation” (10-18th July, 2008) organized by University of Veterinary and Animal Sciences at University of Veterinary and Animal Sciences, Lahore.
- vi. Workshop on “Biosafety” by Sure Bio Diagnostics on 7th March, 2011 at MMG, PU
- vii. Workshop on “Research Ethics, Endnote and Turnitin (2-3rd Oct, 2012) at the Department of Library and Information Science, University of the Punjab.
- viii. One day workshop on “Quantitative data analysis using SPSS” (29th Sep, 2012) at Centre for Undergraduate Studies, University of the Punjab.
- ix. One day workshop on “PCR Technology” at Centre for Undergraduate Studies on 2nd Feb, 13.
- x. First national workshop on Computational tools (9-12th April, 2013) at National Centre for Physics, Quaid-e-Azam University, Islamabad.
- xi. Workshop on “Mixed method research using SPSS and NVivo software” on 1st June, 2013 organized by Office of Research Innovation and Commercialization (ORIC), University of the Punjab, Lahore at Centre for Undergraduate Studies, PU.
- xii. 2nd Youth innovation workshop 29-30th August, 2013 organized by NAYS 2nd position in project presentation: “Education with personality grooming”
- xiii. Workshop on Biosafety and Risk assessment (19th April, 2014) organized by Department of Microbiology and Molecular Genetics at Centre for Undergraduate studies, PU.
- xiv. International Training Workshop on “Microarray for Gene Expression” (22-25th April, 2014) organized by Centre of Excellence in Molecular Biology, PU.
- xv. Craft of scientific writing- A two day intensive workshop on scientific writing & Publishing organized by MMG, PU (6 & 7th Dec, 2016).
- xvi. Workshop on “ Innovative ideas in Kitchen Gardening and Mushroom cultivation” (4th Oct, 2017) organized by Department of Botany, PU
- xvii. Workshop on “Atomic absorption spectrophotometry and heavy metal analysis” (27th Nov, 2017) organized by Department of Botany, PU
- xviii. Workshop on “Use of Molecular Techniques for naming Fungi” (27th Nov, 2017) organized by Department of Botany, PU

PARTICIPATION AS RESOURCE PERSON/MENTOR/JUDGE

1. Lecture delivered as Resource Person (25th November, 2004) in National Seminar on “New trends in Plant Sciences” at Department of Botany, University of Sindh, Jamshoro.
2. Participated as Member Organizing Committee and Resource Person in the HEC workshop on “Microbiological and Genetical Techniques for Degree Colleges Teachers”(7-12th June, 2004) at Department of Microbiology and Molecular Genetics, Punjab University.
3. Participated as Mentor in High School Summer Research Programme funded by PSF and organized by PSCB (2013)
4. Participated as Judge in Exhibition of Research Project Poster Presentation (13th & 23rd Nov, 2006) in Divisional Science Olympiads, organized by Ministry of Education and Science Education in Collaboration with Intel-corporation (Pvt) Ltd.
5. Participated as Judge in Exhibition of Research Project Poster Presentation (2nd & 18th Dec, 2008) in Divisional Science Olympiads, organized by Ministry of Education and Science Education in Collaboration with Intel-corporation (Pvt) Ltd.

6. Chaired Session at MMG Conference 25-28th Mar, 2015
7. Participated as Judge in Microbial Art Competition held at MMG, PU (6 &7th Feb, 2017)
8. Participated as Judge in Floral Arrangement Competition (2018), Department of Botany, PU
9. Participated as Judge in Poster Competition in MMG conference 7-9th Feb, 2018

TRAINING COURSES ATTENDED:

- Seventh HRDC Faculty orientation program conducted by Human Resource Development Centre, Punjab University from 3rd to 14th October, 2005 at Institute of Administrative Sciences, University of the Punjab.

MEMBERSHIP OF LEARNED SOCIETIES:

- i. Member, American Society for Microbiology
- ii. Member, Society for General Microbiology, UK (2008-09).
- iii. Life Member, Pakistan Botanical Society
- iv. Life Member, Pakistan Society for Biotechnology
- v. Life Member, Pakistan Zoological Society