

Dr. Hazrat Ali

Father Name: Muhim Gul

Date of Birth: April 04, 1980; Place of Birth: Tazagram, Dir Lower, Pakistan

Home Address: Village and Post Office Tazagram, Tehsil Adenzai, District Dir Lower, Khyber Pakhtunkhwa, Pakistan

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Professional Biography

I did B.Sc. in Chemistry, Botany and Zoology from University of Peshawar in 2000 and M.Sc. in Chemistry with specialization in Physical Chemistry from Institute of Chemical Sciences, University of Peshawar in 2002. Received Bachelor of Education (B.Ed.) with elective courses Teaching of Biology and Teaching of Chemistry from Allama Iqbal Open University Islamabad in 2003. Joined the Department of Biotechnology, University of Malakand (UOM) as Lecturer in Physical Chemistry in March 2004. Earned M.Phil. in Chemistry with specialization in Environmental Chemistry from Department of Chemistry, UOM in 2012. Moved to the Department of Zoology, UOM as Lecturer in September 2013. Completed PhD in Chemistry with specialization in Environmental Chemistry from Department of Chemistry, UOM in 2018. Currently I am leading Environmental Chemistry, Ecotoxicology and Ecology Laboratory at Department of Zoology, UOM. Have published 36 papers in reputed journals and serving as a reviewer for several reputed journals. I am a regular member of Ecological Society of America (ESA).

Qualification History

Level	Subject	Year	Marks Obtained		Division	Grade	Board / University
			% age	CGPA			
Ph.D.	Chemistry (Environmental)	2018	80.17	3.87/4.00	1 st	A	University of Malakand
M.Phil.	Chemistry (Environmental)	2012	77.25	3.70/4.00	1 st	B+	University of Malakand
B.Ed.	Science	2003	61.00	---	1 st	B	AIOU Islamabad
M.Sc.	Chemistry (Physical)	2002	66.00	---	1 st	B	University of Peshawar
B.Sc.	Chem., Bot., Zoo.	2000	64.73	---	1 st	B	University of Peshawar
F.Sc.	Pre-Medical	1998	61.55	---	1 st	B	BISE Swat
SSC	Science	1996	66.82	---	1 st	B	BISE Swat

Educational Institutions Attended

Level	Period	Institution	Education
University	2010-2018	Department of Chemistry, University of Malakand	MPhil & PhD
University	2000-2002	Department of Chemistry, University of Peshawar	M.Sc.
College	1996-2000	Government Degree College Thana, Malakand	F.Sc. & B.Sc.
High School	1991-1996	Government High School Shawa, Dir Lower	Matric
Elementary School	1985-1990	Government Primary School Tazagram, Dir Lower	5 th

Ph.D. Specialization: Environmental Chemistry

Thesis Title: “Bioaccumulation of selected toxic heavy metals along rivers of Malakand Division and River Kabul, Pakistan”

Courses Studied

1. Advanced Coordination Chemistry
2. Advanced Applied Chemistry
3. Photochemistry
4. Modern Chromatographic Techniques
5. Nuclear Chemistry
6. Enzyme Kinetics

M.Phil. Specialization: Environmental Chemistry

Thesis Title: “Phytoremediation of selected heavy metals by pearl millet (*Pennisetum glaucum*)”

Courses Studied

1. Organometallic Chemistry
2. Special Topics in Applied Chemistry
3. Advances in Catalysis
4. Heterogeneous Catalysis
5. Interpretative Spectroscopy
6. Special Topics in Organic Chemistry
7. Biochemistry
8. Environmental Biotechnology

B.Ed. Specialization: Teaching of Biology and Teaching of Chemistry

Courses Studied

1. Perspectives of Education
2. School Organization and Management
3. Evaluation, Guidance and Research
4. Educational Psychology and Curriculum
5. English
6. Islam, Pakistan and Modern World
7. Teaching of Biology
8. Teaching of Chemistry

M.Sc. Specialization: Physical Chemistry

Courses Studied

1. Physical Chemistry
2. Organic Chemistry

3. Inorganic Chemistry
4. Fuel Chemistry
5. Environmental Chemistry
6. Quantum Chemistry and Spectroscopy
7. Statistical Mechanics, Thermodynamics and Solution Thermodynamics
8. Surface Chemistry and Advanced Chemical Kinetics

Employment History

Organization/Department	Designation	From	To
Department of Zoology, University of Malakand, Pakistan	Lecturer	18-09-2013	Present
Department of Biotechnology, University of Malakand, Pakistan	Lecturer	08-03-2004	17-09-2013

Courses Taught at Undergraduate Level (M.Sc., BS, and B. Pharmacy)

- Conservation Biology
- Limnology
- Ecotoxicology
- Ecology
- Research Methodology
- Environmental Chemistry
- Environmental Biology
- Environmental Science
- General Chemistry
- Inorganic Chemistry
- Organic Chemistry
- Physical Chemistry
- Pharmaceutical Chemistry (Inorganic)
- Biochemistry

Areas of Interest

- ❖ Environmental & Ecological Chemistry

- ❖ Green and Herbal Chemistry
- ❖ Ecology & Environmental Biology
- ❖ Environmental Biotechnology (Bioremediation & Bioleaching, Phytoremediation & Phytomining, Biofuels & Biopesticides)
- ❖ Environmental Toxicology & Ecotoxicology
- ❖ Biodiversity & Conservation Biology
- ❖ Ethnobotany and Ethnopharmacology

Authorship Profile

Total Publications = 36

Total Impact Factor = **40.373**

Total Citations = 2299 (Google Scholar), 1454 (Scopus), 1232 (Web of Science)

h-index = 11

i10-index = 14

ORCID ID: <https://orcid.org/0000-0002-6822-6925>

Scopus Author ID: 57188534789

Web of Science Researcher ID: W-4236-2019

(Scopus ID, Google Scholar and ResearchGate profiles linked to ORCID and Web of Science Researcher ID)

List of Publications

1. **Hazrat Ali** and Shah Khalid Muhammad (2008). "Biodecolorization of acid violet 19 by *Alternaria solani*". *African Journal of Biotechnology*. 7 (6): 831-833. (Impact Factor: 0.456)
2. **Hazrat Ali** and Shah Khalid Muhammad (2008). "Biosorption of crystal violet from water on leaf biomass of *Calotropis procera*". *Journal of Environmental Science and Technology*. 1 (3): 143-150.

3. **Hazrat Ali**, Wisal Ahmad and Taqweem ul Haq (2009). “Decolorization and degradation of malachite green by *Aspergillus flavus* and *Alternaria solani*”. *African Journal of Biotechnology*. 8 (8): 1574-1576. (Impact Factor: 0.565)
4. **Hazrat Ali** (2010). “Biodegradation of synthetic dyes-A review”. *Water, Air and Soil Pollution*. 213 (1-4): 251-273. (Impact Factor: 1.765)
5. **Hazrat Ali**, Muhammad Naseer and Muhammad Anwar Sajad (2012). “Phytoremediation of heavy metals by *Trifolium alexandrinum*”. *International Journal of Environmental Sciences*. 2 (3): 1459-1469.
6. **Hazrat Ali**, Mehtab Khan, Muhammad Idrees and Sohail Ahmad Jan (2012-2013). “Biological decolorization of crystal violet by *Alternaria solani*”. *International Journal of Green and Herbal Chemistry*. 2 (1): 31-38.
7. **Hazrat Ali**, Ezzat Khan and Muhammad Anwar Sajad (2013). “Phytoremediation of heavy metals—Concepts and applications”. *Chemosphere*. 91 (7): 869-881. (Impact Factor: 3.499)
8. Muhammad Saleem Khan, Sajjad Ahmad Khan, Muhammad Anwar Sajad, Farooq Ali, **Hazrat Ali**, Wisal Muhammad Khan, Sajjad Ali and Fida Hussain (2014). “Phytoremediation of cadmium from effected soil using maize plant (*Zea mays* L.)”. *Journal of Biodiversity and Environmental Sciences*. 5 (2): 1-8.
9. Abid Ullah, Hafsa Mushtaq, **Hazrat Ali**, Muhammad Farooq Hussain Munis, Muhammad Tariq Javed, and Hassan Javed Chaudhary (2015). “Diazotrophs-assisted phytoremediation of heavy metals: a novel approach”. *Environmental Science and Pollution Research*. 22 (4): 2505-2514. (Impact Factor: 2.760)
10. Muhammad Saleem Khan, Muhammad Anwar Sajad, Wisal Muhammad Khan, Sajjad Ali, **Hazrat Ali**, and Abdul Naeem (2015). “Phytoremediation of nickel from the effluents of selected ghee industries of Khyber Pakhtunkhwa, Pakistan”. *Journal of Biodiversity and Environmental Sciences*. 6 (3): 174-182.
11. **Hazrat Ali**, Shahab Uddin and Sajid Jalal (2015). “Chemistry and biological activities of *Berberis lycium* Royle”. *Journal of Biologically Active Products from Nature*. 5 (5): 295-312.
12. Fazal Haq, Mahrukh Butt, **Hazrat Ali** and Hassan Javed Chaudhary (2016). “Biosorption of cadmium and chromium from water by endophytic *Kocuria rhizophila*:

- equilibrium and kinetic studies”. *Desalination and Water Treatment*. 57 (42): 19946-19958. (Impact Factor: 1.631)
13. Fazal Haq, **Hazrat Ali**, Muhammad Shuaib, Malik Badshah, Syed Waqas Hassan, Muhammad Farooq Hussain Munis and Hassan Javed Chaudhary (2016). “Recent progresses in bioethanol production from lignocellulosic materials: A review”. *International Journal of Green Energy*. 13 (14): 1413-1441. (Impact Factor: 1.454)
 14. Muhammad Anwar Sajad, Muhammad Saleem Khan, Abdul Naeem and **Hazrat Ali** (2016). “Screening of plants for the phytoremediation of zinc from Dir Lower, Khyber Pakhtunkhwa, Pakistan”. *Journal of Biodiversity and Environmental Sciences*. 8 (5): 206-218.
 15. Barkat Ali, Amna, Muhammad Tariq Javed, **Hazrat Ali**, Muhammad Farooq Hussain Munis, and Hassan Javed Chaudhary (2017). “Influence of endophytic *Bacillus pumilus* and EDTA on the phytoextraction of Cu from soil by using *Cicer arietinum*”. *International Journal of Phytoremediation*. 19 (1): 14-22. (Impact Factor: 1.886)
 16. **Hazrat Ali** and Ezzat Khan (2017). “Environmental chemistry in the twenty-first century”. *Environmental Chemistry Letters*. 15 (2): 329-346. (Impact Factor: 3.125)
 17. **Hazrat Ali**, Wajid Ali, Karim Ullah, Fazle Akbar, Sher Ahrar, Irfan Ullah, Irum Ahmad, Ashfaq Ahmad, Ikram Ilahi and Muhammad Anwar Sajad (2017). “Bioaccumulation of Cu and Zn in *Schizothorax plagiostomus* and *Mastacembelus armatus* from River Swat, River Panjkora and River Barandu in Malakand Division, Pakistan”. *Pakistan Journal of Zoology*. 49 (5): 1555-1561. (Impact Factor: 0.547)
 18. **Hazrat Ali** and Ezzat Khan (2018). “What are heavy metals? Long-standing controversy over the scientific use of the term ‘heavy metals’ – proposal of a comprehensive definition”. *Toxicological & Environmental Chemistry*. 100 (1): 6-19. (Impact Factor: 0.971)
 19. **Hazrat Ali** and Ezzat Khan (2018). “Assessment of potentially toxic heavy metals and health risk in water, sediments, and different fish species of River Kabul, Pakistan”. *Human and Ecological Risk Assessment*. 24 (8): 2101-2118. (Impact Factor: 2.012)
 20. **Hazrat Ali** and Ezzat Khan (2018). “Bioaccumulation of non-essential hazardous heavy metals and metalloids in freshwater fish. Risk to human health”. *Environmental Chemistry Letters*. 16 (3): 903-917. (Impact Factor: 4.617)

21. Ikram Ilahi, Waqas, Saif Ullah, **Hazrat Ali**, Reema Begum, Hafsa Nawaz, Hafsa Bibi, Anila Bibi, Fouzia Sardar, Amia Bibi, Fozia Bibi and Sheema Bibi (2018). "Effect of long-term exposure to sublethal concentration of imidacloprid on some biochemical and hematological parameters of Grass carp and Goldfish". *Pakistan Journal of Pharmaceutical Sciences*. 31 (6) (Suppl.): 2655-2660. (Impact Factor: 0.596)
22. **Hazrat Ali** and Ezzat Khan (2019). "Trophic transfer, bioaccumulation and biomagnification of non-essential hazardous heavy metals and metalloids in food chains/webs—Concepts and implications for wildlife and human health". *Human and Ecological Risk Assessment*. 25 (6): 1353-1376. (Impact Factor: 2.012*)
23. **Hazrat Ali**, Wajid Ali, Karim Ullah, Fazle Akbar and Hanif Khan (2019). "Assessment of Cu and Zn in water, sediments and in the carnivorous fish, *Channa gachua* from River Swat and River Barandu, Malakand Division, Pakistan". *Iranian Journal of Science and Technology, Transactions A: Science*. 43 (3): 773-783. (Impact Factor: 0.692*)
24. **Hazrat Ali** and Ezzat Khan (2019). "Bioaccumulation of Cr, Ni, Cd and Pb in the economically important freshwater fish *Schizothorax plagiostomus* from three rivers of Malakand Division, Pakistan: Risk assessment for human health". *Bulletin of Environmental Contamination and Toxicology*. 102 (1): 77-83. (Impact Factor: 1.650*)
25. **Hazrat Ali**, Ezzat Khan and Ikram Ilahi (2019). "Environmental chemistry and ecotoxicology of hazardous heavy metals: Environmental persistence, toxicity, and bioaccumulation". *Journal of Chemistry*. Article ID 6730305. (Impact Factor: 1.727*)
26. Ikram Ilahi, Jahangir Khan, **Hazrat Ali**, Mehreen Ghias, Abdur Rahim, Taqweem ul Haq, Muhammad Anwar Sajad, Shah Zaman, Gul Rahim, Tour Jan, Saeed Ahmad, Shariat Ullah, Sania Mehreen and Huma Zafar (2019). "Hepaotoprotective and nephroprotective activities of *Pistacia integerrima* fruit extract in paracetamol intoxicated male rabbits with effect on blood cells count". *Pakistan Journal of Pharmaceutical Sciences*. 32 (2) (Suppl.): 817-823. (Impact Factor: 0.596*)
27. I Ilahi, AM Yousafzai, TU Haq, **H Ali**, A Rahim, MA Sajad, AN Khan, A Ahmad, S Ullah, S Zaman, A Bibi, S Hussain, MU Rahman, MS Saqib, B Ahmad and M Attaullah (2019). "Oviposition deterrence and adult emergence inhibition activities of *Cymbopogon nardus* against *Culex quinquefasciatus* with study on non-target

- organisms”. *Applied Ecology and Environmental Research*. 17(2): 4915-4931. (Impact Factor: 0.689*)
28. I Ilahi, AM Yousafzai, M Attaullah, TU Haq, **H Ali**, A Rahim, MA Sajad, S Najeeb, S Zaman, S Ullah, A Ahmad, R Begum, Waqas, H Bibi, S Hussain and B Ahmad (2019). “The role of odonate nymphs in ecofriendly control of mosquitoes and sensitivity of odonate nymphs to inorganic nutrient pollutants”. *Applied Ecology and Environmental Research*. 17(3): 6171-6188. (Impact Factor: 0.689*)
 29. Muhammad Anwar Sajad, Muhammad Saleem Khan, **Hazrat Ali** and Zaib un Nisa (2019). “Lead phytoremediation potential of sixty-one plant species: An open field survey”. *Pure and Applied Biology*. 8(1): 405-419. (HEC Recognized)
 30. Zaib un Nisa, Samin Jan, Muhammad Anwar Sajad, Safdar Hussain Shah, Ghulam Farooq and **Hazrat Ali** (2019). “Micropropagation through apical shoot explants and morphogenic potential of different explants of *Saussurea lappa*: An endangered medicinal plant”. *Pure and Applied Biology*. 8(1): 585-592. (HEC Recognized)
 31. **Hazrat Ali**, Ezzat Khan and Muhammad Jamal Nasir (2019). “Bioaccumulation of some potentially toxic heavy metals in freshwater fish of River Shah Alam, Khyber Pakhtunkhwa, Pakistan”. *Pakistan Journal of Zoology*. (in press). (Impact Factor: 0.790*)
 32. I Ilahi, AM Yousafzai, J Khan, G Rahim, S Zaman, M Attaullah, A Rahim, S Ullah, MA Sajad, TU Haq, T Jan and **H Ali** (2019). “Role of *Chenopodium botrys* (Linn.) non-polar extract in the control of lymphatic filariasis vector with effect on biochemical and hematological parameters of non-target rabbits”. *Pakistan Journal of Pharmaceutical Sciences*. 32 (3) (Suppl.): (Impact Factor: 0.596*)
 33. I Ilahi, AM Yousafzai, **H Ali**, A Rahim, M Attaullah, TU Haq, F Ullah, S Hussain and A Ahmad (2019). “Sensitivity of odonate nymphs to different classes of agricultural insecticides frequently applied in Swat valley Pakistan”. *Applied Ecology and Environmental Research*. (in press). (Impact Factor: 0.689*)
 34. Abid Ullah, Mohammad Nisar, **Hazrat Ali**, Ali Hazrat, Kashif Hayat, Ayaz Ali Keerio, Muhammad Ihsan, Muhammad Laiq, Sana Ullah, Shah Fahad, Aziz Khan, Aamir Hamid Khan, Adnan Akbar and Xiyan Yang (2019). “Drought tolerance improvement in

plants: an endophytic bacterial approach”. *Applied Microbiology and Biotechnology*. 103 (18): 7385–7397. (Impact Factor: 3.670*)

35. Ikram Ilahi, Muhammad Attaullah, Abdur Rahim, Muhammad Anwar Sajad, Shariat Ullah, Shah Zaman, Gul Rahim and **Hazrat Ali** (2019). “Insecticidal activities of *Cymbopogon nordus* (Linn.) whole-plant ethyl acetate extract against lymphatic filariasis vector with study on non-target organisms”. *International Journal of Biosciences*. 14 (6): 312-323.
36. I Ilahi, AM Yousafzai, TU Haq, M Attaullah, A Rahim, **H Ali**, H Muhammad, Halimullah, M Farooq, Y Ali, K Roghani, J Bibi, S Khan and A Mehmood (2019). “Effect of inorganic nutrient pollutants on oviposition preference, egg hatching rate and larval development of *Culex quinquefasciatus*”. *Applied Ecology and Environmental Research*. 17 (5): 10525-10541. (Impact Factor: 0.689*)
DOI: http://dx.doi.org/10.15666/aeer/1705_1052510541
- 37.

*2018 Impact Factor

List of Theses Supervised (Undergraduate)

1. Shah Khalid Muhammad “Biosorption and biodegradation of crystal violet by *Aspergillus* and *Alternaria* spp.” BS in Biotechnology (2008)
2. Sajjad Ali Shah “Biosorption of Cu (II) ions from water on pre-treated biomass of *Calotropis procera*” BS in Biotechnology (2008)
3. Wesal Ahmad “Decolorization and degradation of malachite green by *Aspergillus* and *Alternaria* spp.” BS in Biotechnology (2008)
4. Taqweem-ul-Haq “Decolorization and degradation of methylene blue by *Aspergillus* and *Alternaria* spp.” BS in Biotechnology (2008)
5. Mehtab Khan “Effect of dye concentration and pH on decolorization and degradation of crystal violet dye by *Alternaria solani*” BS in Biotechnology (2009)
6. Muhammad Idrees “Effect of NaCl concentration on decolorization and degradation of crystal violet dye by *Alternaria solani*” BS in Biotechnology (2009)

7. Sohail Ahmad Jan “Microbial and phytotoxicity study of crystal violet dye” BS in Biotechnology (2009)
8. Muhammad Anwar Sajad “Phytoremediation of heavy metals by alfalfa (*Medicago sativa*)” BS in Botany (2010)
9. Zainab “Drinking water contamination: Sources, effects on human health, and remediation” BS in Botany (2010)
10. Muhammad Asif Nawaz “Evaluation of zinc in different local pulses of district Dir lower” BS in Biotechnology (2010)
11. Jawad Akhtar “Evaluation of copper in different local pulses of district Dir lower” BS in Biotechnology (2010)
12. Muhammad Naseer “Phytoremediation of heavy metals by *Trifolium alexandrinum* and *Trifolium resupinatum*” BS in Botany (2010)
13. Sahib Zada “Evaluation of iron in different local pulses of district Dir lower” BS in Biotechnology (2010)
14. Muhammad Shuaib “Biodegradation of malachite green oxalate by yeast (*Saccharomyces cerevisiae*)” BS in Biotechnology (2010)
15. Fazal Haq “Production of bioethanol from lignocellulosic materials—A review” BS in Botany (2011)
16. Shahab Uddin “Ethnomedicinal uses, phytochemical constituents and pharmacological activities of *Berberis lycium* Royle—A review” M.Sc. in Botany (2013)
17. Sajid Jalal “Ethnomedicinal uses, phytochemistry and pharmacology of *Calotropis procera*—A review” BS in Botany (2013)
18. Mirza Gul “Epidemiology of pesticide poisoning in Tehsil Adenzai, District Dir Lower, Pakistan” M.Sc. in Zoology (2013)
19. Muhammad Sajid “Ethnomedicinal survey of some plants of valley Talash, District Dir Lower, Khyber Pakhtunkhwa, Pakistan” BS in Botany (2013)
20. Aman Ullah “Avian fauna of District Dir Lower, Pakistan with reference to population status” M.Sc. in Zoology (2013)
21. Bibi Hafsa, Kausar and Nabila “Berberine as cholesterol lowering drug—a review” M.Sc. in Zoology (2014)

22. Marina Guluzar and Shandana Bilal “Diclofenac as a cause of vulture population decline in the Indian subcontinent—a review” M.Sc. in Zoology (2014)
23. Muhammad Naeem and Noman Ahmad “Sources, bioaccumulation in food chains and human health effects of cadmium—a review” BS in Zoology (2015)
24. Muhammad Idrees and Saqib ur Rahman “Bioaccumulation of Cu and Zn in honeybees (*Apis indica*) in Malakand Division, Pakistan” BS in Zoology (2016)
25. Nawab Ali, Atta Ullah and Safia Naz “Bioaccumulation of Cu and Zn in tobacco (*Nicotiana tabacum* L.) from Malakand Division, Pakistan” BS in Zoology (2016)
26. Sher Ahrar, Irfan Ullah and Irum Ahmad “Bioaccumulation of Cu and Zn in different fish species from River Panjkora, Dir Lower, Pakistan” BS in Zoology (2016)
27. Ashfaq Ahmad, Tawseef Ahmad and Shaer Bahadar “Bioaccumulation of Cu and Zn in different fish species from River Kabul, Pakistan” BS in Zoology (2016)
28. Wajid Ali, Karim Ullah and Fazle Akbar “Bioaccumulation of Cu and Zn in different fish species from River Swat and River Barandu, Malakand Division, Pakistan” BS in Zoology (2016)
29. Salim Ullah, Junaid Khan, Saleema Bibi and Sadam Hussain “Reproductive biology, feeding ecology and heavy metals ecotoxicology of *Mastacembelus armatus*” BS in Zoology (2017)
30. Hasnain Khan, Asma Naeem and Sunbal “Phytodesalination by the free floating macrophyte *Pistia stratiotes* L. under laboratory conditions” BS in Botany (2018)
31. Ashfaq Ahmad, Farooq Akbar Khan and Muhammad Bilal “Effects of water-borne Cd on Zn levels in different tissues of the freshwater fish *Channa gachua* under laboratory conditions” BS in Zoology (2018)
32. Sami Ullah Khan, Wasim Akram and Muhammad Mudassir Khan “Effects of water-borne Cd on Ca levels in bones of the freshwater fish *Channa gachua* under laboratory conditions” BS in Zoology (2018)

Memberships and Fellowships

1. Member of Ecological Society of America (ESA) since 08-Aug-2019

Awards

1. Research Productivity Award (RPA) 2016-17 (Category C) from Pakistan Council for Science and Technology (PCST)

Administrative Experience / Additional Responsibilities

1. Semester Coordinator at Department of Biotechnology/Botany/Zoology, University of Malakand, from November 15, 2011 to October 31, 2012.
2. Coordinator of Examinations at Department of Biotechnology/Botany/Zoology, University of Malakand, from September 30, 2011 to November 15, 2011.
3. Coordinator of Examinations at Department of Biotechnology/Botany, University of Malakand, from January 21, 2010 to September 30, 2011.

Conferences/Symposia/Workshops Attended

1. Participated in 27th National & 15th International Chemistry Conference “Innovation and Sustainability”, August 22-25, 2016, at Department of Chemistry, University of Malakand, Pakistan
2. Poster presented in 12th International & 24th National Chemistry Conference “Innovations in Chemistry”, October 28-30, 2013, at Institute of Chemical Sciences, Bahauddin Zakariya University, Multan, Pakistan
3. Participated in 1st International Symposium on Biotechnology “Current Trends”, July 2-4, 2008, at Department of Biotechnology, University of Malakand, Khyber Pakhtunkhwa, Pakistan
4. Participated in 1st National Symposium on Pharmacy “Old Plants-New Remedies”, June 9-10, 2008, at Department of Pharmacy, University of Malakand, Khyber Pakhtunkhwa, Pakistan
5. Participated in 1st National Symposium on Biotechnology “Recent Advances”, May 21-24, 2007, at Department of Biotechnology, University of Malakand, Khyber Pakhtunkhwa, Pakistan

Last updated on 29-Sep-2019