CURRICULUM VITAE

Name	**FIRDAUS-E-BAREEN**
CNIC No.	**35201-1505920-4**
Nationality	**Pakistani**
Current Position	**Principal**
Mailing Address	**College of Earth and Environmental Sciences (CEES)** **University of the Punjab,** **Quaid-e-Azam Campus,** **Lahore 54590, Pakistan.**
Email address:	**fbareen@gmail.com**

Qualification
Ph.D. (1998)

Specialization
Mycology, Environmental Biotechnology

Employment Record

Current Position:
Principal, College of Earth and Environmental Sciences, University of the Punjab, Lahore since 04.04.2012

Previous Positions:

1. **Professor** (BPS-21), Dept. of Botany, University of the Punjab, Lahore since 25.7.2004.
2. **Associate Professor** (BPS-20), Dept. of Botany, University of the Punjab, Lahore from 30.11.2000 to 24.7.2004 (about 4 years).
3. **Assistant Professor:** (BPS-18), Dept. of Botany, University of the Punjab, Lahore since 13.7.1996 to 29.11.2000 (about 4 years).
4. **Lecturer** (BPS-17) Dept. of Botany, University of the Punjab, Lahore from 22.11.1988 to 12.7.1996 (about 8 years).
5. **Research Fellow** in PAEC-PU Collaboration project, Department of Botany, University of the Punjab, Lahore from 14.06.1988 to 21.11.1988 (about 6 months)
6. **Ph.D Research Scholar** in Department of Botany, University of the Punjab, Lahore from 01.06.1987 to 13.06.1988 (about 1 year)
7. **Research Fellow** (BPS-16), Center for Advanced Molecular Biology, University of the Punjab, Lahore from 27.12.1986 to 31.05.1987 (about 6 months)

Projects Secured:

No.	Title of the project	Duration	Amount in Rs.	Sponsored by
1.	Mushroom flora and its role in	1998-1999	196,000/-	University of

	the survival and growth of important forest trees	(completed)		the Punjab, Lahore
2.	Phytoremediation of tannery effluents and associated contaminated soils in the Kasur District	1.7.2002-31.12.2004 (completed)	514,300/-	NDP (National Drainage Programme), WAPDA, Lahore, Pakistan
3.	Biodiversity of plants and fungal microbes under chromium stresses and their role as hyperaccumulator organisms	2005-2006 (completed)	196,200/-	University of the Punjab, Lahore
4.	Studies of ecological changes induced due to Chashma Right Bank Canal (CRBC) Irrigation Project	1.7.2006-31.12.2006 (completed)	55,000/-	NDP (National Drainage Programme) WAPDA, Lahore, Pakistan
5.	Microbial dynamics in composted preparations of tannery solid waste and their role in heavy metal uptake in selected plants	2008 (completed)	150,000/-	University of the Punjab, Lahore
6.	Role of plants and associated resistant fungi in metal uptake from tannery sludge and solid waste.	7.7.2008- (in progress)	3,796,380/-	Higher Education Commission (HEC), Pakistan
7.	Biochemical Characteristics of *in vitro* salt-tolerant cell lines and regenerated plants of wheat (*Triticum aestivum* L.)	2009 (completed)	200,000/-	University of the Punjab, Lahore
8.	A multivariate analyses of heavy metal contamination in vegetables and fruits in the vicinity of some industrial areas of the Punjab	2010 (completed)	200,000/-	University of the Punjab, Lahore
9.	Role of some growth promotors in enhancement of metal uptake and stress alleviation in selected plants grown in tannery waste contaminated soil.	2011 (completed)	250,000/-	University of the Punjab, Lahore
10.	Detoxification of industrial sludge using aquatic plants and indigenous microbes.	03.08.2011-02.08.2014 (in progress)	2,760,230/-	Higher Education Commission (HEC), Pakistan

11.	Role of EDTA in enhancement of uptake of different heavy metals and their root to shoot translocation in plants grown hydroponically.	2012 (in progress)	250, 000/-	University of the Punjab, Lahore

Research Interests

1. Taxonomy and Ecology of Aquatic Hyphomycetes
2. Phytoremediation of metal contaminated sites
3. Chelate assisted metal Phytoextraction
4. Biodiversity studies in metal polluted habitats
5. Role of antioxidant enzymes in stress alleviation in plants
6. Fertilizer perspective of contaminated solid waste and sludge
7. Constructed wetlands

On the panel of referees in

1. African Journal of Biotechnology
2. African Journal of Environmental Science and Technology
3. African Journal of Biochemistry Research
4. Journal of Hazardous Materials
5. Microbial Ecology
6. Chemosphere

Theses Supervised

Ph.D.

1. Tahira, S.A. 2008. Phytoremediation of tannery effluents and associated contaminated soils of the Kasur District.
2. Zulfiqar, A. 2011. The physiological and molecular mechanism of chromium tolerance and hyperaccumulation in plants (submitted)
3. Nazir, A. 2012. Role of fungi in phytoextraction of heavy metals from toxic tannery wastes (in progress)
4. Ayaz, S. 2012 Detoxification of industrial sludge using aquatic plants and indigenous microbes (in progress)
5. Shafiq, M. 2012. Rapid composting technology and its fertilizer perspective in the Rice-Wheat system (in progress)

M.Phil./ M.Sc. Hons/ MS

1. Jamil, S. 2011. Role of some growth regulators in stress alleviation and enhancement of metal uptake in some selected hyperaccumulators

2. Saeed, S. 2011. Role of EDTA in enhancement of phytoextraction of metals from a Tannery Solid Waste amended soil
3. Mobeen, A. 2010. Multivariate analysis of wood colonizing aquatic hyphomycetes of the canal water habitat, Lahore, Pakistan.
4. Khalid, J. 2010. Multivariate analysis of aquatic hyphomycetes colonizing some some slow degrading materials in the canal water habitat, Lahore, Pakistan.
5. Perveen, A. 2010. Role of autochthonous fungi in enhancement of heavy metal uptake in some selected plants from tannery solid waste.
6. Sabir, A. 2010. Heavy metal decontamination of some effluents using indigenous saprobic fungi from the leather industry, Kasur.
7. Shamshad, H. 2010. Role of some hydrophytes and indigenous microbes in heavy metal decontamination of effluents from the leather and paper and & pulp industries, Sheikhupura Road, Lahore.
8. Qamar, R. 2009. Role of plants and resistant fungi in phytoremediation of tannery solid waste taken from Kasur tannery waste Management Agency Pakistan.
9. Nazir, N. 2009. Microbial dynamics in composted preparations of tannery solid waste and their role in heavy metal uptake in some plant species.
10. Sheza Ayaz. 2008. Role of some selected hydrophytes in rhizofiltration of metals from tannery sludge.
11. Aisha Nazir. 2008. Role of rhizosphere fungi in metal accumulation of selected plants from sludge and Solid waste amended soil from KTWMA, Pakistan
12. Mahmood, Z. 2006. Role of rhizosphere and Arbuscular Mycorrhizal fungi in phytoremediation of tannery effluent contaminated soil of the Kasur District.
13. Imtiaz, S. 2003**.** Biodiversity of plants and fungal microbes under chromium stress and their role as hyperaccumulator organisms.

M.Sc.

1. Rauf, A. 1990. Role of Gibberellic acid (GA) in enhancement of growth and subsequent VA mycorrhizal infections in some legumes

2. Ahmad, T. 1990. A study of VA Mycorrhizal endophytes associated with *Zephyranthes citrina*

3. Dar, S.A. 1990. Freshwater hyphomycete stream spora of the District Muzzafarabad (Azad Kashmir)
4. Javed, F. 1991. Occurrence of canal water borne hyphomycetes on leaf baits of some deciduous tree species
5. Masood, N. 1992. Mycorrhizal associations of some plant communities in hilly areas of Pakistan
6. Mushtaq, S. 1992. Allelopathic effect of bark and leaves of melia azedarch on germination and subsequent VA mycorrhizal development in Maize (*Zea mays* L.)
7. Khaliq, S. 1992. a taxonomic study of Endogonaceous spores in the rhizosphere of some grasses in Cholistan

8. Saeed, A. 1993. Biological control of Black scurf in tissue culture raised potato seedlings using *Trichoderma viride* under field conditions
9. Mahmood, M.B. 1994. Colonization of woody baited blocks by freshwater hyphomycetes
10. Bano, S. 1995. Culture studies of freshwater Hyphomycetes in the Lahore Branch of the BRB canal.
11. Fauzia Fayyaz 1997. Isolation and characterization of ectomycorrhizae of shrubs of Quaid-e-Azam Campus, Lahore
12. Samina Khurshid 1997. Isolation and characterization of ectomycorrhizae of trees of Quaid-e-Azam Campus, Lahore
13. Nadeem, F. 1998. Characterization and synthesis of different ectomycorrhizae on *Eucalyptus camaldulensis* Dehne
14. Luqman, M. 1999. An ecological study of freshwater hyphomycetes in the River Ravi (near Old Bridge) Lahore
15. Jabeen, F. 2000. Colonization pattern of canal water hyphomycetes on different sized leaf baits of *Populus euramericana* (Dade) Guinier CV-1-214 and *Salix babylonica* L.
16. Mannan, A, 2001. Allelopathic effects of *Parthenium hysterophorus* L. on germination of some weeds and on subsequent development of VA mycorrhiza in *Zea mays* L.
17. Niazi, A.R.K. 2001. Characterization of some ectomycorrhizae from Murree Hills
18. Amin, H. 2002. Influence of root initiating hormones on some herbaceous ornamentals and subsequent AM development
19. Ashfaq, J. 2002. Use of some root initiating hormones for vegetative propagation of some ornamental shrubs and their status of Arbuscular Mycorrhiza
20. Perveen, S. 2004. Colonization pattern of aquatic hyphomycetes in relation to degradation of different bait leaves in canal water
21. Ijaz, A. 2004. Screening of Some Selected Hydrophytes for Bioremediation of Tannery Effluents
22. Ashraf, A. 2004. A phytosociological study of of plant communities of tannery effluent contaminated sites of the Kasur District.
23. Mukhtar, H. 2005. A survey of plant populations and associated mycoflora of tannery effluent contaminated soils around Kasur
24. Rafiq, F. 2005. A survey of hydrophytes growing in water bodies polluted with industrial effluents
25. Umm-ul-Banien. 2006. Survival of freshwater Hyphomycetes in different substrata in the Lahore Branch of the BRB Canal under normal conditions and during canal closure
26. Arshad, M. 2007. Colonization patterns of aquatic hyphomycetes on unusual substrata in a canal and its connecting irrigation channels
27. Bashir, H. 2008. Isolation, characterization and syntheses of some ectomycorrhizae from Sharan, Kaghan valley.

28. Ahmad, S. 2009. Mycoremediation of textile and tannery waste from the districts Kasur and Faisalabad.
29. Jabeen, F. Impact of growth regulating substances on enhancement of metal uptake in plants from tannery solid waste
30. Ali, S. 2010. A comparison of heavy metal contamination of some fruits in industrial zones of Kasur and Sheikhupura.
31. Nasrullah, M. 2010. A comparison of heavy metal contamination of some vegetables in industrial zones of Kasur and Sheikhupura.
32. Javed, F. A comparison of autochthonous and allochthonous fungi from tannery waste.
33. Shafqat, S. Effect of hormonal application on metal uptake by some selected mycorrhizal and non mycorrhizal plants.

Teaching Experience

1. Phycology and Bryology (undergraduate and graduate level)
2. Microbiology and Phycology (graduate level)
3. Mycology (undergraduate and graduate level)
4. Plant Ecology (graduate and undergraduate level)
5. Cell Biology (graduate level)
6. Water Pollution its Management and Control (M.Phil. and Ph.D. classes)
7. Mushrooms and Fungal Technology (graduate level)
8. Fungal Ecology (M.Phil. and Ph.D. classes)
9. Autecology (graduate level)
10. Synecology and Ecosystem (graduate level)
11. Mycosociology (M.Phil. and Ph.D. classes)

Field tours conducted in Pakistan

Murree Hills, Azad Kashmir, Shogran, Salt Range, Northern Areas upto Khunjrab Pass, Expedition to Nanga Parbat, Cholistan and adjoining areas.

Countries visited

Bangladesh, Canada, Germany, Malaysia, Saudi Arabia, Singapore, USA.

Conferences represented

1. Khilji, S. presented a paper titled **"Multivariate analysis of heavy metal contamination** (Khilji, S. and **Firdaus-e-Bareen**) in vegetables and fruits in the vicinity of some industrial areas of the Punjab" in **International Symposium on Biotechnology and other Omics in Vegetable Science**, Antalya, Turkey, April 29-May 2, 2012.
2. Shafiq M. presented a poster the paper **"Sustainability Perspective of Rice Straw Compost in Rice-Wheat System"** (Shafiq M. and **Firdaus-e-Bareen**) in **27th International Symposium on Frontiers in Life Sciences** University of Cornell, Ithaca, NY, USA April 2-3, 2012.
3. Shafiq M. presented orally the paper **"Effects of Rice Straw Compost on Phytoremediation- Repercussions Over Time"** (Shafiq M. and **Firdaus-e-Bareen**) in

27th International Conference on Solid Waste Technology and Management Philadelphia, PA USA March 11-14, 2012.

4. Tahira S.A. presented orally the paper **"Phytoremediation of tannery effluents"** (Tahira, S.A. and **Firdaus-e-Bareen**) in **3rd National seminar on "Drainage in Pakistan**" NWFP Agricultural University, Peshawer, Pakistan, 2004.

Conferences attended

5. Attended **the 2nd International Conference of Plant Scientists (ICPS 2011)** held in January 22-24 at GCU, Lahore and presented one oral presentation titled **"Comparative efficacy of rice-straw-compost vs. commercial fertilizer on rice crops".**

6. Attended **2nd International Seminar on Medicinal Plants: Isolation and Applications (ISMP 2010)** held in January 14-16, 2010 at Lahore College for Women University, Lahore and presented three oral presentations titled **"Hydrophytes and their Heavy Metal Status in Tannery Effluents and Associated Contaminated Drains"** and **"Plant Biodiversity and its associated fungal flora in soil polluted with tannery wastes"** and **"Chemically assisted phytoextraction of toxic metals from tannery effluent contaminated soil using some cultivated plants associated rhizosphere fungi."**

7. **Seminar on Food Safety and Security through Application of Chemistry and Chemical Technologies** held on May 2, 2009, organized by The Royal Society of Chemistry UK and the Environ Monitor at Ambassador Hotel, Lahore and presented a paper **"Role of EDTA in phytoextraction of toxic metals from tannery effluent contaminated soil".**

8. **1st International Conference on Role of Chemistry for Environmental Preservation (RECP 2008)** held in June 2008, organised by The Royal Society of Chemistry UK and the Environ Monitor at Ambassador Hotel, Lahore and contributed one poster presentation titled **"Tannery waste: a potential environmental risk"** and one oral presentation titled **"Bioremediation potential of two hydrophytes for cleaning the toxic tannery sludge."**

9. **1st International Seminar on Medicinal Plants: Isolation and Applications (ISMP 2008)** held in May 20-23, 2008 at Lahore College for Women University, Lahore and presented two oral presentations titled **"Bioaccumulation of metals from tannery sludge by *Typha angustifolia* L."** and **"Phytoextraction of heavy metals from tannery solid waste amended soil using *Spinacia oleracea* L. and associated rhizosphere fungi."**

10. **International Conference of plant Scientists** held from 21-24th April, 2008, organized by Dept. of Botany, University of Agriculture, Faisalabad, and presented a paper titled "**Role of rhizosphere fungi in enhancement of metal uptake from tannery sludge amended soil by *Brassica juncea* L."** and two posters titled "**Rhizofiltration of heavy metals from the tannery sludge by the anchored hydrophyte, *Hydrocotyle umbellata* L."** and "**Ecological studies of aquatic hyphomycetes in a canal and its connecting irrigation channels."**

11. **Third International Conference of Plant Pathology on "Future Food Security"** held on 19-21st November, 2007, organised by the Department of Mycology and Plant

Pathology and presented a paper titled **"Role of *Helianthus annus* L. and associated rhizosphere fungi in uptake of Heavy metals from Tannery solid waste amended soil."**

12. **International symposium on Applications of Plant Sciences in Emerging Scenario, Faisalabad** (20-22 March, 2006) organized by the Government College University, Faisalabad and presented a paper **Evaluation of Hydrophytes for tolerance towards Contamination of polluted waters: Implications for phytoremediation.**
13. **Culture Area Karakorum: International Symposium on Karakorum, Hindukush, Himalaya: Dynamics of change, Islamabad** (29 Sep- 2 Oct, 1995). Presented two papers titled "Riparian vegetation and freshwater fungal flora of some lakes in the northern areas" and "The longitudinal distribution patterns of freshwater hyphomycetes along some mountain streams in the northern areas".
14. **All Pakistan Science Conference, Khanuspur** (16-21 May, 1992). Worked as a member of the organizing committee and presented a paper titled "An ecological study of canal water borne hyphomycetes".
15. **Culture Area Karakorum: Pak-German Joint Workshop, Lahore** (1-3 Dec,1991) Presented a paper titled " Different ecological techniques employed in the study of conidial dynamics of freshwater fungi in the Karakorum Range".
16. **Culture Area Karakorum: Pak-German Seminar on "Problems of High Mountain Research in Karakorum", Gilgit** (10-16 Aug,1991)
17. **National Science Conference, Lahore** (1-3 Dec,1991)
18. **Second National Conference of Plant Scientists, Lahore** (25-28 Nov, 1984)

Conferences and seminars organized

19. Organized a seminar titled **"**Developing Inocula of EM fungi for the plantation industry**" by Dr. Clem Kuek,** HEC Foreign Professor from Australia (11th January, 2007) at **Department of Botany, Punjab University, Lahore.**

20. **Seventh Plant Science Conference, Lahore** (14-16 Nov, 2000) as convener of the Invitation Committee.
21. **All Pakistan Science Conference, Lahore** (5-10 Dec, 1993) as a member of the organizing committee.