

## CURRICULUM VITAE

NAME:	DR. FIRDAUS-E-BAREEN
FATHER'S NAME	Muhammad Siddique
DATE OF BIRTH:	21.11.1961
N.I.C.# :	274-61-317768
NATIONALITY:	Pakistani
MARITAL STATUS:	Married
PRESENT OCCUPATION:	Professor in Botany
MAILING ADDRESS	
	Botany department University of the Punjab, Quaid-e-Azam Campus, Lahore 54590, Pakistan. Email address: firdaus@botany.pu.edu.pk

### QUALIFICATIONS

<i><b>Examination</b></i>	<i><b>Year</b></i>	<i><b>Div.</b></i>	<i><b>Marks</b></i>	<i><b>Subjects</b></i>
Matric	1978	1 <sup>ST</sup>	625/850	Science
F.Sc.	1980	1 <sup>ST</sup>	629/1000	Pre-Medical
B.Sc.	1982	1 <sup>ST</sup>	433/700	Botany, Zoology, Chemistry English
M.Sc.	1985	1 <sup>ST</sup>	855/1200	Botany
Ph.D	1998			Mycology

### EMPLOYMENT RECORD

**Current Position:**

**Professor:** Dept. of Botany, University of the Punjab, Lahore since 25.7.2004.

**Research Supervisor:** in a project titled “Phytoremediation of Tannery Effluents and associated Contaminated Soils in the Kasur District, sponsored by NDP (National Drainage Programme), WAPDA, Lahore, Pakistan. ( commenced in 2002). One Ph. D. student is involved in the project.

**Previous Positions:**

1. **Principal Investigator:** Research Project entitled “Mushroom Flora and its Role in the Survival and Growth of Important Forest Trees”, sponsored by the Punjab University, Lahore (1998-1999)
2. **Lecturer** (BPS-17) Dept. of Botany, University of the Punjab, Lahore from 22.11.1988 to 12.7.1996 (about 8 years).
3. **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)
4. **Ph.D Research Scholar** in Department of Botany, University of the Punjab, Lahore from 01.06.1987 to 13.06.1988 (about 1 year)
5. **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)

#### **AWARDS:**

1. Punjab University Merit Scholarship (1983-1985)
2. Punjab University Merit Certificate (M.Sc.)
3. Selected in an expedition to Nanga Parbat (Northern areas of Pakistan), 19-28 September, 1995, sponsored by the Pak- German Research Project, Culture Area Karakorum (CAK), University of Tübingen, Germany.

#### **RESEARCH INTERESTS:**

1. Taxonomy of Aquatic Hyphomycetes.
2. Ecology of Aquatic Hyphomycetes
3. Role of aquatic hyphomycetes in reducing heavy metal and other water pollution parameters.
4. Characterization and Taxonomy of Ectomycorrhizal Fungi.
5. Synthesis of Ectomycorrhizae on Important Forest Trees.
6. Phytoremediation of Tannery Effluents.
7. Phytoremediation of Tannery Effluent Logged Soils using Mycorrhizal fungi, rhizosphere fungi and phytochelatators.
8. Impact of Mycorrhizal Treatment and Hormone application on the propagation of cuttings of valuable ornamentals.

**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 (graduate level)

**LANGUAGE UNDERSTANDING:**

English, Urdu, Punjabi

**COUNTRIES VISITED:**

Bangladesh, Canada, Malaysia, Singapore, U.S.A.

**CONFERENCES ATTENDED:**

1. Second National Conference of Plant Scientists, Lahore (25-28 Nov, 1984)
2. National Science Conference, Lahore (1-3 Dec, 1991)
3. Culture Area Karakorum: Pak-German Seminar on "Problems of High Mountain Research in Karakorum", Gilgit (10-16 Aug, 1991)
4. 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".
5. 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."
6. All Pakistan Science Conference, Lahore (5-10 Dec, 1993).  
Worked as a member of the organizing committee.
7. 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".
8. Seventh Plant Science Conference, Lahore (14-16 Nov, 2000)  
Worked as convenor of the Invitation Committee.

**LIST OF PUBLICATIONS**

1. Firdaus-e-Bareen and Iqbal, S.H. Conidial concentration of freshwater hyphomycetes in a semi-tropical canal water habitat. **Mycopath, 1:** 39-47 (2003)
2. Khan, M.S. and Firdaus-e-Bareen. Occurrence of freshwater hyphomycetes in ground water. **Acta Scientia, 10:** 111-120 (2000).

3. Firdaus-e-Bareen and Iqbal, S. H. Snow group hyphomycetes of the Karakourm Range. **Karakorum, Hindukush, Himalaya: Dynamics of Change**. Stellrecht, I. (ed.) Rudiger Koppe Verlag, Germany, 243 – 248 pp (1998).
4. Firdaus-e-Bareen and Iqbal, S.H. The longitudinal distribution patterns of freshwater hyphomycetes along some mountain streams in the northern areas. **Karakorum, Hindukush, Himalaya: Dynamics of Change**. Stellrectht, I. (ed.) Rudiger Koppe Verlag, Germany, 229-242 pp (1998).
5. Firdaus-e-Bareen and Iqbal, S.H. Riparian vegetation and freshwater fungal flora of some lakes in the northern areas. **Karakorum, Hindukush, Himalaya: Dynamics of Change**. Stellrecht, I. (ed.) Rudiger Koppe Verlag, Germany, 215-228 pp (1998).
6. Khalid, A.N., Khurshid, S. and Firdaus-e-Bareen. *Pinirrhiza alba*, a new ectomycorrhizal type associated with *Pinus roxburghii* from Pakistan. **Pakistan Journal of Forestry**, **48**: 47 – 54 (1998).
7. Firdaus-e-Bareen and Iqbal, S.H. The autumn communities of freshwater hypomycetes in the tributaries of the River Neelum. **Canadian Journal of Botany**, **75**: 1046 – 1060 (1997).
8. Iqbal, S.H., Ishaque, H. and Firdaus-e-Bareen. Freshwater hyphomycete communities in a canal. 2 colonization patterns of the canal water borne hyphomycetes on intact roots of *Salix babylonica* L. **Science International**, **8**: 191 –196 (1996).
9. Firdaus-e-Bareen and Iqbal, S.H. The longitudinal distribution pattern of freshwater hyphomycetes along a mountain stream in the Karakorum Range, Pakistan. **Science International**, **8**: 181 – 187 (1996).
10. Iqbal, S.H., and Firdaus-e-Bareen Colonization of intact leaves by canal water borne hyphomycetes. **Science international**, **7**: 517 –524 (1995).
11. Iqbal, S.H., Akhtar, G. and Firdaus-e-Bareen. Endophytic freshwater hypomycetes of submerged leaves of some plants lining the canal bank. **Pakistan Journal of Plant Sciences**, **I**: 239 – 254 (1995).,
12. Firdaus-e-Bareen and Iqbal, S.H. Freshwater hyphomycetes of the Neelum Valley, Azad Jammu and Kashmir. **Science International**, **7**: 433 – 439 (1995).
13. Firdaus-e-Bareen and Iqbal, S.H. Freshwater hyphomycete spora of Bagrot and Kargah valleys, Northern areas. **Science International**, **7**: 321 – 324 (1995).

14. Iqbal, S.H., Firdaus-e-Bareen and Yousaf, N. Freshwater Hyphomycete communities in a canal. I Endophytic hyphomycetes of submerged roots of trees sheltering a canal bank. **Canadian Journal of Botany**, **73**: 538 – 557 (1994).
15. Firdaus-e-Bareen and Iqbal, S.H. Seasonal occurrence of freshwater hyphomycetes on submerged fallen leaves in canal waters. **Canadian Journal of Botany**, **72**: 1316 – 1321 (1994).
16. Firdaus-e-Bareen and Iqbal, S.H. Freshwater hyphomycetes of the Karakorum Range. **Annales Botanici Fennici**. **31**: 147 – 154 (1994).
17. Chattha, M.R.A., Chandhry, M.S., Khaliq, S., Iqbal, S.H. and Firdaus-e-Bareen. Vertical distribution of VAM propagules in the rhizosphere of some sand dune grasses in Cholistan. I. Influence of surface feeder roots on the distribution of spores. **Science International**, **5**: 391 – 394 (1993).
18. Mushtaq, S., Firdaus-e-Bareen and Iqbal, S.H. Allelopathic effects of bark and leaves of *Melia azedarach* L., on germination and subsequent VA mycorrhizal development in maize (*Zea mays* L.). **Science International**, **5**: 299 – 306 (1993).
19. Firdaus-e-Bareen and Iqbal, S.H. Induction of vesicular arbuscular mycorrhizal infections in un-infected wheat straw by mycorrhizal roots of *Cicer arietinum* L., and *Lathyrus aphaca* L. **Pakistan Journal of Agricultural Research**, **13**: 306 – 311.
20. Firdaus-e-Bareen and Iqbal, S.H. Role of mycorrhizae in natural propagation of medicinal plants in northern areas of Pakistan. **Science International**, **4**: 199 – 201 (1992).
21. Firdaus-e-Bareen and Ahmad, T. Survival of VAM endophytes colonizing scales of *Zephyranthus citrina* under different conditions of storage. **Science International**, **4**: 195 – 198 (1992).
22. Firdaus-e-Bareen and Iqbal, S.H. and Ahmad, T. Changes in morphology of *Sclerocystis* sporulating in a different ecological niche. **Transactions of the Mycological Society of Japan**, **33**: 337 – 342 (1992).
23. Iqbal, S. H. Firdaus-e-Bareen. Different ecological techniques employed in the study of conidial dynamics of freshwater fungi in the Karakorum Range. **Proceedings, Pak-German Joint Workshop, Lahore** (1 to 3 Dec., 1991), pp. 88 – 103.
24. Iqbal, S. H. Firdaus-e-Bareen Canal water borne hyphomycetes of early winter. **Science International**, **3**: 309 – 310 (1991).

25. Iqbal, S. H. Firdaus-e-Bareen Occurrence of freshwater hyphomycetes in a cave stream at Kargah (Gilgit) **Science International**, **3**: 307 – 308 (1991).
26. Firdaus-e-Bareen. Structures of VA mycorrhizal fungi associated with aquatic plants. **Science International**, **3**: 101 – 106 (1991).
27. Firdaus-e-Bareen and Ahmad, T. Mycorrhizae of the Liliflorae: V. Preferential association of Endogonaceous spores with scales on bulbs of *Zephyranthes citrina*. **Science International**, **3**: 75 – 78 (1991).
28. Iqbal, S. H., Shahjahan, Firdaus-e-Bareen and Nasin, G. Mycorrhizae of the Leguminosae: IV. Vesicular arbuscular mycorrhizal infections in root nodules of some common leguminous weeds. **Pakistan Journal of Agricultural Research**, **12**: 206 – 212 (1991).
29. Iqbal, S.H. and Firdaus-e-Bareen. Mycorrhizal associations in rock crevices: Vesicular arbuscular mycorrhizal infections in decaying aerial portions of *Adiantum capillus-veneris* L. induced by VA mycorrhizal bryophytes in rock crevices at Khanspur. **Pakistan Journal of Forestry**, **40**: 311 – 317 (1990).
30. Firdaus-e-Bareen Rauf, A and Dar, S.A., Vesicular arbuscular mycorrhizal status of some native plants of Quetta region. **Science International**, **2**: 335 – 338 (1990).
31. Iqbal, S.H. and Firdaus-e-Bareen. Vegetation in rock crevices and its possible role in reducing roadside erosion. **Science International**, **2**: 239 – 244 (1990).
32. Khalid, A.N., Firdaus-e-Bareen and Iqbal, S.H. Mycorrhizae of the Liliflorae: VI. Vertical distribution of VAM colonization in roots and endogonaceous spore numbers in the rhizosphere of some ornamental lilies. **Science International**, **2**: 151 – 153 (1990).
33. Firdaus-e-Bareen and Iqbal, S.H. Mycorrhizae of the Leguminosae: II. Decaying grassblades of *Cynodon dactylon* Pers., and *Dichanthium annulatum* Hack., penetrated by VA mycorrhizal rootlets of leguminous weeds often become mycorrhizal. **Biologia**, **36**: 47 – 56 (1990)
34. Firdaus-e-Bareen. Role of organic matter in conservation of vesicular arbuscular mycorrhizal endophytes in the rock crevices. **Biologia**, **36**: 41 – 46 (1990).
35. Firdaus-e-Bareen. Vesicular arbuscular mycorrhiza in aquatics In: **Current Trends in Mycorrhizal Research**. Proceedings of the National Conference on Mycorrhiza at Haryana Agricultural University, Hisar, Feb. 14 – 16, 1990. Jalali, B.L. and Chand, H. (eds.) TERI, 1 – 3 pp.

36. Firdaus-e-Bareen. Mycorrhizae of the Leguminosae: III. Invasion of testa of germinating seeds of *Lathyrus aphaca* L., by vesicular arbuscular mycorrhizal endophytes. **Science International, I:** 392 – 399 (1989).
37. Firdaus-e-Bareen and Iqbal, S.H. Mycorrhizae of the Leguminosae: I. Saprophytic existence of VA endophytes in fruit wall of *Medicago denticulata* Willd. **Biologia, 35:** 157 – 162 (1989).
38. Iqbal, S.H., and Firdaus-e-Bareen. Vesicular arbuscular mycorrhizal infections in the water ferns *Salvinia cucullata* Roxb., and *Azolla pinnata* R. Br. **Biologia, 35:** 149 – 156 (1989).
39. Firdaus-e-Bareen and Iqbal, S.H. Occurrence of vesicular arbuscular mycorrhizal infections and *Glomus* spores in leaf bases of the palm *Livistona chinensis*. **Transactions of the Mycological Society of Japan, 30:** 377 – 380 (1989).
40. Firdaus-e-Bareen, Iqbal, S.H. and Zain-ul-Abidin. Hormonal treatment of roots: a quick method for preparing pot cultures. **Biologia, 34:** 283 – 289 (1988).
41. Firdaus-e-Bareen, Iqbal, S.H. and Zain-ul-Abidin. Effect of IAA treatment of roots on vesicular arbuscular mycorrhizal infections at various development stages of *Allium sativum* L. **Biologia, 34:** 193 – 198 (1988).
42. Firdaus-e-Bareen, Iqbal, S.H. and Zain-ul-Abidin. Effect of IAA and VA mycorrhizal treatment on growth in *Allium sativum* L. **Biologia, 34:** 113 – 122 (1988).
43. Iqbal, S.H. and Firdaus-e-Bareen. Mycorrhizae of the Liliflorae. III. Morphogenesis of underground parts of field grown *Narcissus poeticus* L., in relation to vesicular arbuscular mycorrhizal infections. **Biologia, 32:** 371 – 382 (1986).
44. Iqbal, S.H. and Firdaus-e-Bareen. Mycorrhizae of the Liliflorae. II. Vesicular arbuscular mycorrhizal infections in foliar green leaves of *Narcissus poeticus* L. **Biologia, 32:** 363 – 369 (1986).
45. Iqbal, S.H. and Firdaus-e-Bareen. Mycorrhizae of the Liliflorae: 1: Vesicular arbuscular mycorrhizal infections in outer dried sheathing leaves from bulbs of some ornamental lilies. **Biologia, 32:** 323 – 340 (1986).
46. Firdaus-e-Bareen, Iqbal, S.H. and Zain-ul-Abidin. Vesicular arbuscular mycorrhizal infections in IAA induced roots of *Allium cepa* L. **Biologia, 32:** 183 – 192 (1986).