

# Dr. Muhammad Hanif



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## Personal Information

**Full Name:** Dr. Muhammad Hanif  
**Father's name:** Muhammad Rafiq  
**Date of Birth:** 20-06-1974  
**Designation:** Assistant Professor  
**Official address:** Department of Botany, Government College University,  
Lahore, Pakistan.

**Home address:** House No. 34, Street No. 138A.S,  
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## EDUCATION

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- **Ph.D. Botany (Specialization Mycology)** 2012  
*Department of Botany, University of the Punjab, Lahore, Pakistan*
  - **GRE International (Biology)** 2009  
*ETS, USA*
  - **M. Phil Botany (Specialization Microbiology)** 2005  
*Department of Botany, Punjab University, Lahore*
  - **M.Sc.** 2002  
*Department of Botany, Institute of Pure and Applied Biology,  
Bahauddin Zakariya University, Multan*
  - **B.Sc.** 1998  
*Govt. College of Science, University of the Punjab, Lahore*
  - **HSSC** 1995  
*Govt. Model Degree College, Model Town, Lahore.*
  - **SSC** 1991  
*Govt. Pilot Higher Secondary School, Wahdat Road, Lahore.*

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## EXPERIENCE

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**From Dec 2012 to date**

**Assistant Professor in Botany**

Department of Botany  
GC University,  
Lahore Job

**Responsibilities:**

- ☐ Teaching and Research

**From Nov 2011 till Nov 2012**

Lecturer in Biology  
Unique Group of Institutions, Lahore

**From Nov 2011 till Nov 2012**

Lecturer in Biology  
Jinnah Islamia College, Township, Lahore

**From Dec 2010 till May 2011**

Lecturer in Biology (Part  
Time) IBL College,  
Samanabad, Lahore Job

**Responsibilities:**

- ☐ Teaching

**From Feb 2010 to July, 2010**

**Internee,**

**Jodrell Laboratory**

**Royal Botanical Gardens, KEW, London,**

**UK Job Responsibilities:**

- ☐ Maintaining and cataloguing the Mycological  
Herbarium

**Research Scholar**

- **Imperial College of Science, Technology and Medicine  
London, UK**

**Job Responsibilities:**

- ☐ Molecular Fungal Ecology Research Project

**From Sep 2008 to Feb, 2009**

Honorary Lecturer in Department of  
Botany, University of the Punjab, Lahore.

**Job Responsibilities:**

- ☐ Teaching M.Sc.  
“Bacteriology and  
Virology” “Phycology and  
Bryology”

**From July 2006 to Feb 2007**

Lecturer in Biology  
Punjab College of Science,  
Lahore. Job Responsibilities:

- ☐ Teaching

**From Feb 2007 to May 2007**

Research Officer in School of Biological Sciences

University of the Punjab, Lahore, Pakistan

Job Responsibilities:

Involve in the project under the HEC “Development of Biosorption-Biodegradation System For The Removal of Dyes From Textile and Printing Industry Effluents By Saprophytic Fungi, White Rot Basidiomycetes and Plant Residues”.

**From Sep 2006 to Feb, 2007**

Honorary Lecturer in Mycology and Plant

Pathology, University of the Punjab, Lahore.

Job Responsibilities:

Teaching

Diseases of Field Crops” to B.Sc (Hons.).

**From Apr. 2005 to July 2006**

Lecturer in Biology at Unique Group of Institutions, Muslim Town LHR.

**Academic Programs Developed**

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**1. B.S. Biology (Regular and Self-Supporting)**

At Department of Botany, Government College, University, Lahore

**2. B.S. Botany (Self-Supporting)**

At Department of Botany, Government College, University, Lahore

**Courses taught**

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**B.Sc. (Hons.)**

Ectomycorrhiza in Forestry, Medical Mycology, Mycology and Plant Pathology, Diversity of Plants and Symbiotic Associations in fungi, Microbiology and Mycology

**M.Sc.**

Mycology, Plant Pathology, Ectomycorrhiza in Forestry and Microbiology,

**M.Phil.**

Forest Mycology

**PhD**

Phytopathology, Fungal Biology and Symbiotic Biomes

**RESEARCH INTERESTS**

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- Molecular Mycology, Taxonomy and systematics of Fungi/ Mushrooms
- Molecular Ectomycorrhizal Ecology
- Applications of Ectomycorrhizae
- rDNA-ITS based Interspecific and Intraspecific Genetic Variation Analyses
- DNA Barcoding of fungi specially mushrooms and ectomycorrhizae
- Biological screening and anticancer activities of wild mushrooms
- Green synthesis of myconanoparticles and their biological screening

from some mushrooms

## RESEARCH PROJECTS

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1. Taxonomic study and biological screening of some mushrooms of Kumrat valley, KPK, Pakistan
  - Principal Investigator
  - Higher Education Commission, Pakistan.
  - 5.9 Millions (PKR)
  - 3 Years (starting year 2023)
2. ORIC project details 0.3 Million (2024-25)

## MEMBERSHIPS

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1. International Society for Infectious Diseases, USA
  2. British Science Association, UK
  3. Pakistan Botanical Society, Pakistan
  4. Pakistan Biological Society
  5. Pakistan Mycological Society
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## TAXA DESCRIBED NEW TO SCIENCE

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No.	Taxon	Journal
1	<i>Clavariadelphus pakistanicus</i>	Canadian Journal of Botany (2014)
2	<i>Ramaria flavescentoides</i>	Mycotaxon (2019)
3	<i>Lepiota vellingana</i>	Mycological Progress 12 (2013)
4	<i>Thelephora iqbalii</i>	Mycotaxon (2017)
5	<i>Calocera himalayca</i>	Int. J. Agric. Biol (2013)
6	<i>Agaricus bisporiticus</i>	Mycologia (2014)
7	<i>Agaricus fuscopunctatus</i>	Mycologia (2014)
8	<i>Lepiota vellingana</i>	Mycological Progress (2013)

## Foreign Visits

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1. Visited **LONDON, UK** funded by HEC for Six (06) months for Pre-Doc. research Project at **Imperial College of Science, Technology and Medicine, LONDON, UK** from Feb 2010 to July 2010.
2. Visited Beijing, China funded by HEC to attend **Asian Mycological Congress 2013 & 13th International Marine and Freshwater Mycology Symposia**, August 19-24 2013, **Beijing, CHINA**.
3. Visited **Kuala Lumpur, Malaysia** funded by HEC to attend **International Congress on Agriculture, Food Nutrition, and Biological Sciences (ICAFNBS-2016)** Kuala Lumpur, Malaysia from 14-18 Nov, 2016
4. Visited **Springe, Germany** funded by HEC to attend **International Conference of the German Mycological Society**, from **September 27th to October 8th, 2025**

## Oral presentations

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1. **Hanif, M.**, Amna I., Khalid, A. N. Ectomycorrhiza of Himalayan alder (*Alnus nitida*) from Moist Temperate forests of Pakistan
  - Asian Mycological Congress 2013 & 13th International Marine and Freshwater Mycology Symposia, **August 19- 24 2013, Beijing, CHINA**
2. Sarwar, S. **Hanif, M.** Khalid, A. N. Guinberteau, J. 2011. Diversity of Boletes in Pakistan; Focus on *Suillus brevipes* And *Suillus sibiricus*, in Proceedings of the 7<sup>th</sup> International Conference on Mushroom Biology and Mushroom Products 4-7 October, 2011, Arcachon, France Vol. 1: Pp. 123-133
  - 7<sup>th</sup> International Mushroom Biology and Mushroom Products Conference, held in **FRANCE, 4<sup>th</sup> to 7<sup>th</sup> Oct, 2011.** (Virtual Participation)
3. **Muhammad Hanif**, and Abdul Nasir Khalid Community Structure, Composition, Species Richness and Diversity Analyses of Ectomycorrhizae from Chashma and Army Barracks Stand, Khanspur, KPK, PAKISTAN” in International Congress on Agriculture, Food Nutrition, and Biological Sciences (ICAFNBS-2016) **Kuala Lumpur, Malaysia** from 14-18 Nov, 2016.
4. **Hanif, M.**, Fatima Arif. *Macrolepiota procera* as a source for Ag-mycogenic nanoparticles (AgmyNPs) synthesis: their characterization, concentration optimization, and evaluation for bactericidal potential
  - **International Conference of the German Mycological Society**, from **September 29th to October 5th, 2025**

## Poster Presentations

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- Molecular description of *Calocera viscosa* using 5.8s gene of ribosomal DNA and PCR-RFLP
  - 2nd International Plant Scientists Conference and 11th Pakistan Botanical Society meeting, 22 to 24 Feb 2011 at GC University, Lahore.
- Two new records of Boletes from Himalayan Moist Temperate Forests of Pakistan
  - 2nd International Plant Scientists Conference and 11th Pakistan Botanical Society meeting, 22 to 24 Feb, 2011 at GC University, Lahore.

## Conferences and Workshops attended and Guest Lectures

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1. Chief Organizer 1<sup>ST</sup> NATIONAL SEMINAR ON MYCOSYMBIOSIS, Dec 2024.

2. Chief Organizer and Master Trainer 1<sup>ST</sup> HAND-ON TRAINING WORKSHOP ON MYCOSYMBIOSIS, Dec 2024.
3. Two Days training for Presiding Officers and Senior Presiding Officers for the conduct of General Elections – 2024 at MAO College, Lahore from 13-14 Jan 2024.
4. Participated Exhibition and Workshop on “Terranium: Design and Maintenance” organized by Department of Botany, GC University, Lahore on 27/09/2023
5. Participated/Attended an International Conference on "Recent Innovations in Plant Sciences and Natural Products" and “3<sup>rd</sup> Natural Product Exhibition” organized by Department of Botany, University of Okara, Okara, from 16/02/2023 to 17/02/2023
6. Five days training on “PIs Research Capacity building program” organized by Pak-UK Education Gateway is a collaborative Project of Higher Education Commission with the British Council. From 9th -13th May , 2022
7. Participated/Attended WEBINAR ON DRUG AWARENESS & STRESS MANAGEMENT Organized by GOVERNMENT COLLEGE UNIVERSITY LAHORE on 12/12/2020.
8. Participated/Attended an International Conference on "Smart Plantation" An ultimate solution to climate change organized by Department of Botany, Lahore College for Women University, Lahore from 02/03/2020 to 04/03/2020
9. Organized 3rd Mycological Model Competition at Department of Botany, GC University, Lahore on 19/11/2019
10. Participated/Attended International Seminar on "Application of Phytochemicals for Cancer Treatment" organized by Department of Botany, GC University, Lahore on 18/11/2019
11. Organized 2nd Mycological Model Competition at Department of Botany, GC University, Lahore on 27/12/2018
12. Organized 2nd International Conference on Plant Sciences at Government College University, Lahore from 23/11/2018 to 25/11/2018
13. Participated/Attended Seminar on Weed Science Research Management in 2050 organized by GOVERNMENT COLLEGE UNIVERSITY LAHORE on 04/11/2018.
14. Participated/Attended Training Workshop on "Mendeley software" at PG Lab Basement of Post Graduate Block, GC University, Lahore on 15/05/2018.
15. Participated/Attended as Invited Speaker in 1st International Conference on Current Scenario of Research in Plant Sciences: Challenges and Opportunities organized by Department of Botany, University of Sargodha, Sargodha from 09/05/2018 to 11/05/2018
16. Participated/Attended international Seminar on Social Media for Science Communication organized by Department of Botany, GC University, Lahore on 29/04/2018.
17. Participated/Attended international Workshop on "DNA Barcoding (Barcode of Life Data System)" organized by Department of Physics, GC University, Lahore on 20/12/2017.
18. Organized 1st Mycological Model Competition at Department of Botany, GC University, Lahore on 06/11/2017.
19. Participated/Attended and presented paper in International Congress on

- Agriculture, Food Nutrition, and Biological Sciences (ICAFNBS-2016) at Kuala Lumpur, Malaysia from 14/11/2016 to 18/11/2016.
20. Participated/Attended a Workshop on "Role of Imaging Techniques in Plant Disease Diagnosis" organized by University College of Agriculture, University of Sargodha, Sargodha on 05/05/2015.
  21. Participated/Attended and Chaired Session in "1st International Symposium on the Himalayas of Pakistan: resources and conservation issues" organized by Department of Botany, Hazara University Mansehra, Pakistan from 27/11/2014 to 30/11/2014.
  22. Participated/Attended and Presented Paper in "1st Asian Mycological Congress 2013 & 13th International Marine and Freshwater Mycology Symposia" Beijing, China from 19/08/2013 to 22/08/2013.
  23. Virtual participation in 7th International Mushroom Biology and Mushroom Products Conference in France from 04/10/2011 to 07/10/2011
  24. Participated/Attended and Presented Paper in 2nd International Plant Scientists Conference and 11th Pakistan Botanical Society meeting organized by GCU Lahore from 22/02/2011 from 24/02/2011 .
  25. Participated/Attended One day workshop on "Research Management" conducted by Institute of Quality & Technology Management, University of the Punjab, Lahore. Nov 12, 2010 on 12/11/2010.
  26. Delivered o lecture on "Potential of Aphyllophorales for Textile Industries Dyestuff Wastes Bioremediation" on 08/04/2008.
  27. Participated/Attended a Seminar on "Biomanufacture of Protease Production for leather and detergent industry" from 27-28 April, 2007 in P.C.S.I.R, Lahore.
  28. Participated/Attended a Symposium on "Protein biomarkers measurements in the complex systems" in School of Biological Sciences, University of the Punjab, Lahore form 25-26 April, 2007.
  29. Delivered o lecture on "Biotechnology and genetic variation" at SKANS School of Accountancy, Multan on 12/12/2006.
  30. Delivered a lecture on "The Potential Use of Modern Techniques for the Genetic Characterization the Organisms" at Department of Mycology and Plant Pathology, University of the Punjab. Lahore on 06/07/2006

## **SKILLS**

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### **Professional skills**

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#### **Molecular biology and microscopic techniques**

Genomics work (DNA & RNA extraction), PCR and Quantitative RT PCR, Sanger Sequencing, confocal microscopy, confocal fluorescent microscopy, SDS-PAGE, Synthesis of Myco-nanoparticles.

#### **Microbiological techniques**

Culture handling (fungal and bacterial culture), fermentation media preparation and optimization of fermenter condition, microscopic analysis of cells by Gram's staining and spore staining, auxins and antibiotics production.

#### **Statistical techniques**

GraphPad Prism, SPSS software.

## **IT Skills**

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- Windows 2007 & Micro Soft Office 2010, Adobe
- Bioinformatics softwares and online tools
  - SPSS, PAUP\* (Phylogenetic Analysis Using Parsimony and others), Mega5, Mesquite, ClustalW, BioEdit, DIVA, EstimateS, R (Statistical program for Biodiversity measurement) and several other softwares for phylogenetic analyses, Mega5, Graphpad Prism

## **Collaborations**

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- Mycology Laboratory, Chinese Academy of Science, Beijing, China
- Department of Plant Sciences, Imperial College of Science, Technology and Medicine, London
- Royal Botanic Gardens, Kew
- Jodrell Research Laboratories, London
- Centro de Ciências da Natureza, Campus Lagoa do Sino Universidade Federal de São Carlos (UFSCar) Buri, SP, Brasil
- University of Michigan Herbarium, Department of Ecology and Evolutionary Biology, Michigan, USA
- Bureau of Land Management, Salem, Oregon, USA
- Departments of Botany and Genetics, Hazara University, Mansehra
- Department of Botany, University of the Punjab, Lahore
- Department of Botany, Lahore College for Women University, Lahore
- Department of Botany, University of Education, Lahore
- Department of Plant Sciences, Quid-e-Azam University, Islamabad
- Department of Botany, University of Okara, Okara
- Department of Zoology, Government College University, Lahore
- Department of Physics, Government College University, Lahore
- Department of Chemistry, Government College University, Lahore
- Iranian Research Organization for Science and Technology, Iran
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## **Administrative Jobs, co-curricular and extra-curricular activities**

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1. Sector Incharge (Botany Block)
2. Advisor, Kashyap Society for Biology, Department of Botany, GCU, Lahore.
3. Departmental Timetable Incharge
4. Editor, Ravian Journal of Plant Sciences, Department of Botany, GCU, Lahore.



5. Principal Investigator, HEC-NRPU funded project “Taxonomic study and biological screening of some mushrooms of Kumrat valley, KPK, Pakistan”
6. Coordinator, BS Biology Programme, Department of Botany, Government College University, Lahore (September 2023- to-date)
7. Coordinator, M.Sc. Botany Programme, Department of Botany, Government College University, Lahore (December 2016- 2023)
8. Time table Incharge (BSc. Hons. Botany), Department of Botany, Government College University, Lahore
9. Coordinator Sports Department of Botany, Government College University, Lahore
10. Member, Purchase Committee, Department of Botany, Government College University, Lahore
11. Focal Person, Turnitin, Department of Botany, Government College University, Lahore
12. Member of Board of Studies, Department of Botany, Government College University, Lahore
13. Member of research allocation Committee, Department of Botany, Government College University, Lahore
14. Member of Departmental Tour Committee, Department of Botany, Government College University, Lahore
15. Member Board of Studies, Department of Botany, University of Okara, Okara
16. Member Board of Studies, Department of Life Science, University of Central Punjab, Lahore

### **Managerial, leadership and other skills**

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- Competent in communication, interpersonal and negotiation skills.
- Excellent knowledge of writing of all kinds of official letters.
- Ability to work as a team member.
- Ability to handle multiple tasks
- Administrative skills.
- Member of Mess Committee 2000, Abu Bakar Hostel, B.Z. University Multan.
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### **Reviewer of Scientific Journals**

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1. Pak-Euro Journal of Medical and Life Sciences
2. Biologia
3. Mycotaxon
4. Kuwait Journal of Science
5. Pakistan Journal of Botany
6. LGU Journal of Life Sciences
7. Asian Journal of Agriculture and Biology
8. Nature's Symphony

### **Research Students Supervised:**

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**B.Sc. (Hons.)**

Sr. No	Name	Class	Year	Title
1	Saliha Farooq	B.Sc. (Hons.)	2012-13	A Study of Phylloplane mycoflora of trees of Jinnah Garden, Lahore
2	Samina Nazir	B.Sc. (Hons.)	2012-13	A Study of Phylloplane mycoflora of shrubs of Jinnah Garden, Lahore
3	Samar Bashir	B.Sc. (Hons.)	2013-14	Characterization of some Mushrooms of Swat Valley, KPK: Focus on internal transcribed spacer region.
4	Muneeba	B.Sc. (Hons.)	2013-14	Characterization of some Mushrooms of Swat Valley, KPK: Focus on nuclear small subunit.
5	Bushra Arshad	B.Sc. (Hons.)	2013-14	Morpho-anatomic characterization of Ectomycorrhizae of <i>Pinus wallichiana</i> of Swat Valley, KPK.
6	Muqqadas Mushtaq	B.Sc. (Hons.)	2013-14	Characterization of some Mushrooms of Swat Valley, KPK: Focus on nuclear large subunit.
7	Marium Akhtar	B.Sc. (Hons.)	2014-15	Culturing of ECM fungi from Himalayan Moist Temperate Forests and <i>in vitro</i> synthesis of their ectomycorrhizae
8	Haleema Asif	B.Sc. (Hons.)	2014-15	Morpho-anatomical description of some ectomycorrhizas on <i>Pinus wallichiana</i> from Helipad, KPK, Pakistan
9	Khansa Rahim	B.Sc. (Hons.)	2014-15	Morpho-anatomical description of some ectomycorrhizas on <i>Abies pindrow</i> from Nathiagali, KPK, Pakistan
10	Anum Aslam	B.Sc. (Hons.)	2014-15	Investigation of Phylloplane fungi on leaves of few trees and shrubs of Mall Road, Lahore

11	Muhammad Ibrar	B.Sc. (Hons.)	2015-16	Extraction and characterization of oil from seeds of some wild shrubs of Lahore.
12	Samra Anum	B.Sc. (Hons.)	2015-16	Morpho-anatomic Investigation of some Gilled Mushrooms of Dunga Gali, KPK, Pakistan.
13	Kinza Hassan	B.Sc. (Hons.)	2015-16	Morphological and Anatomical Characterization of some Mushrooms of GCU Campus, Lahore.
14	Saman	B.Sc. (Hons.)	2015-16	Investigation of Mantle anatomy in some Ectomycorrhizal morphotypes of <i>Pinus wallichiana</i> .
15	Anum	B.Sc. (Hons.)	2016-17	Isolation and characterization of microbial flora from the ectomycorrhizosphere of <i>Abies pindrow</i> of Sudhan Gali, District Bagh, AJK.
16	Afzal	B.Sc. (Hons.)	2016-17	Screening of laccase like genes in some Mushrooms of Tehsil Zafarwal, District Narowal.
17	Shams Ullah	B.Sc. (Hons.)	2016-17	Isolation and characterization of ectomycorrhizae associated with <i>Cedrus deodara</i> of Dher Kot, District Bagh, AJK.
18	Nosheen Nazir	B.Sc. (Hons.)	2017-18	Seasonal variations in AMF infection in some wild plants of Tehsil Kamoke, District Gujranwala.
19	Rashida Parveen	B.Sc. (Hons.)	2017-18	Seasonal variations in AMF infection in some wild plants of District Pakpattan.
20	Baber Ali	B.Sc. (Hons.)	2018-19	Comparative investigation of MHB diversity associated with some Pines of Laam Leek Forest, Kumrat Valley KPK, Pakistan.

21	<b>Zaryab Khan</b>	B.Sc. (Hons.)	2018-19	Morpho-Anatomic and molecular characterization of some macromycetes of Laam Leek Forest, Komrat Valley, KPK, Pakistan.
22	<b>Kashmala Iftikhar</b>	B.Sc. (Hons.)	2018-19	Exploration of Microbial Communities Associated with Ectomycorrhiza of Abies pindrow of Mola Bunda forest Swat valley KPK Pakistan
23	<b>Ayesha Samanabad College, Lahore Co-Supervisor</b>	B.Sc. (Hons.)	2018-19	Assessment of the antimicrobial activities of some wild mushrooms of Miandam forests, Swat Velly, KPK, Pakistan.
24	<b>Aneela Samanabad College, Lahore Co-Supervisor</b>	B.Sc. (Hons.)	2018-19	Assessment of the antimicrobial activities of some wild mushrooms of Ayubia, KPK, Pakistan.
25	<b>Fatima tu Zohra</b>	B.Sc.(Hons.)	2019-2020	Seasonal variations in endomycorrhizae and sporal diversity of some wild plants of Shakargarh, District Narowal Punjab, Pakistan
26	<b>Atif Allah Rakha</b>	B.Sc.(Hons.)	2019-2020	Studies on distribution and incidence of sugarcane mosaic virus (SCMV) in Mandi Bahauddin and Sargodha districts of Punjab
27	<b>Kamishka Iftikhar</b>	B.Sc.(Hons.)	2019-2020	Seasonal variations in endomycorrhizae and sporal diversity of some wild plants of Tehsil Nowshera Virkan, District Gujranwala Punjab Pakistan
28	<b>Fatima Iftekhar</b>	B.Sc.(Hons.)	2020-2021	Evaluation of bioremediation potential of microbial flora isolated from pesticides affected soil in District Gujranwala.
29	<b>Ahtesham ul Haq</b>	B.Sc.(Hons.)	2020-2021	Isolation and Characterization of Soil Microbial Flora for Multi-enzyme production
30	<b>Shahida Ayub</b>	B.Sc.(Hons.)	2020-2021	Isolation and Biochemical characterization of some lichen from Green Spot, Nathia Gali , Pakistan

31	Nimra Amin	B.Sc.(Hons.)	2021-2022	Detection of Secondary Metabolites of ectomycorrhizal helper bacteria isolated from ectomycorrhizosphere of <i>Pinus wallichiana</i> and <i>Abies pindrow</i>
32	Khuzaima Zahra	B.Sc.(Hons.)	2021-2022	Study of comparative Auxin production by some ectomycorrhizal helper bacteria isolated from ectomycorrhizosphere of different conifers and their effect on rice ( <i>Oryza sativa</i> L. cv )
33	Haisam Arshad	B.Sc.(Hons.)	2021-2022	Isolation and characterization of some ectomycorrhizal helper bacteria isolated from ectomycorrhiza of different conifers
34	Aiman Ibrahim	B.Sc.(Hons.)	2021-2022	Comparative investigation of auxin production from some indigenous bacterial strain from ectomycorrhizosphere of different conifers and their effect on maize ( <i>Zea mays</i> )
35	Tayyaba Iqbal	B.Sc.(Hons.)	2021-2022	Production and characterization of antibiotics by ectomycorrhizal helper bacteria isolated from ectomycorrhizosphere from some conifers
36	Areesha Shafqat	B.Sc.(Hons.)	2021-2022	Isolation of mycorrhizal helper bacteria from ectomycorrhizosphere of some conifers and effect of pH, salt concentrations and temperature on their growth
37	Abdul Sami Butt	0119-BH-BOT-19	2022-23	Morpho-anatomical, molecular characterization and biological screening of some wild mushrooms associated with some pines at Point 3, Kumrat valley, KP, Pakistan.
38	Saman Noreen	125-BH-BOT-19	2022-23	Morpho-anatomical, molecular characterization and biological screening of some mushrooms associated with <i>Pinus wallichiana</i> A.B.

				Jacks. near Kumrat Waterfall, KP, Pakistan
39	Tooba Butt	0143-BH-BOT-19	2022-23	Morpho-anatomical, Molecular Characterization and Biological Screening of some Mushrooms of Kumrat Valley. KP, Pakistan.
40	Maheen Amjad	0149-BH(E)-BOT-19	2022-23	Morpho-anatomical, Molecular characterization and biological screening of some mushrooms of Kumrat Water-Fall, KP, Pakistan
41	Nimra Amir	0145-BH(E)-BOT-19	2022-23	Morphoanatomical and Molecular characterization and Biological screening of some Mushrooms of Point 3, Kumrat Valley Pakistan.
42	Mahum Ali	0125-BH-BOT-20	2023-24	Additions to the mushroom flora of Kumrat Valley, KP, Pakistan
43	Zainab Asgher	0141-BH-BOT-20	2023-24	Characterization and antimicrobial evaluation of some mushrooms of Rosheydut Forest, Kumrat Valley.
44	Rizwana Razzaq	0226-BS-BOT-21	2024-25	Taxonomy and Molecular Phylogeny of Selected Macrofungi from Kumrat Valley, Khyber Pakhtunkhwa, Pakistan
45	Umm e Saeeda	0240-BS-BOT-21	2024-25	Antimicrobial evaluation of some wild mushrooms collected from Kumrat Valley, KP
46	Sania Saeed	0211-BS-BOT-21	2024-25	Sustainable Mushroom Cultivation: A Study on Wild Mushrooms of Kumrat Valley

#### M.Sc.

Sr. No.	Name	Class	Year	Title
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1	<b>Aneeqa Ghafoor</b>	M.Sc.	2015-16	Morpho-anatomic and Molecular Characterization of some Mushrooms of Green spot, Nathia gali, KPK, Pakistan
2.	<b>Zikra Mehak</b>	M.Sc.	2017-18	Molecular Identification of some mushrooms of Chashma Forest, Khanspur, KPK, Pakistan.
3.	<b>Fawar Ehsan</b>	M.Sc.	2017-18	Morphological and Anatomical Characterization and identification of some mushrooms of Helipad, Khanspur, KPK, Pakistan.
4.	<b>Farwa Ghaffar</b>	M.Sc.	2017-18	Effectiveness of molecular markers in the identification of some mushrooms of Helipad, Khanspur, KPK, Pakistan.
5.	<b>Muhammad Ramzan</b>	M.Sc.	2017-18	Morpho-anatomic and molecular characterization of some mushrooms of Chadhai Forest, Miandam, Swat Valley, Pakistan
6	<b>Fatima Munawar</b>	M.Sc.	2019-2020	Morpho-Anatomic and molecular characterization of some mushrooms of Purdon Forest, Kumrat Valley, KPK, Pakistan.
7	<b>Atta ul Mustafa Zain</b>	M.Sc.	2020-2021	Isolation and characterization some microbial communities associated with ectomycorrhizosphere of some Pines of Khanspur, KP, Pakistan
8	<b>Hafsa Shafiq</b>	M.Sc.	2020-2021	Bioremediation of effluents from textile industries near Sheikhpura by microflora
9	<b>Sidra Shafiq</b>	M.Sc.	2021-2022	Additions of some macromycetes in Moola Banda Forest, Swat, KP, Pakistan

**M.Phil.**

Sr. No.	Name	Class	Year	Title
1	Adnan Qadir	M.Phil.	2014-15	Investigation of microbial communities from mycorrhizosphere of some conifers growing at Nathia Gali, KPK, Pakistan
2	Muhammad Khan	M.Phil.	2014-15	A comparative investigation of ectomycorrhizal communities growing at Nathia Gali, KPK, Pakistan
3	Madiha Majeed	M.Phil.	2014-15	Investigation of Coprophilous fungi from dung of some herbivores from Lahore Zoo.
4	Nasira Mumtaz	M.Phil.	2015-16	Morpho-anatomic and molecular characterization of some mushrooms of Swat Valley, KPK, Pakistan
5	Irshad Mayar	M.Phil.	2015-16	Effect of different growth promoting rhizobacteria and indigenous fungal antagonists in controlling <i>Fusarium</i> wilt of tomato.
6	Iqra Arshad	M.Phil.	2016-17	Intraspecific rDNA-ITS variations among gilled mushrooms of Sudhan Gali, district Bagh, AJK.
7	Sibgha Hanif	M.Phil.	2016-17	Molecular characterization based on non-coding 5.8s ribosomal RNA gene of the large subunit of some mushrooms of Miandam, Swat Velly, KPK.
8	Tariq Mehmood Okara University Co-Supervisor	M.Phil.	2016-17	Screening for auxin producing bacterial strains from the ectomycorrhizosphere of <i>Abies pindrow</i> of Sudhan Gali, District Bagh, AJK.
9	Humera Okara University Co-Supervisor	M.Phil.	2016-17	Morpho-anatomic and molecular characterization of some mushrooms of Sudhan Gali, District Bagh, AJK.



10	Farheen Okara University Co-Supervisor	M.Phil.	2016-17	Morpho-anatomic and molecular characterization of some mushrooms of Maindam, Swat, Velly, KPK.
11	Muhammad Ahmad	M.Phil.	2017-18	Morphological and Molecular Characterization of some Mushrooms of Danda Forest Miandam Swat Valley, KPK, Pakistan.
12	Rizwan Amanat	M.Phil.	2017-18	Evidence of ectomycorrhizae inhabiting bacterial communities in ectomycorrhiza associated with <i>Cedrus deodara</i> (Roxb.) G.Don from Kalam, Swat Valley, KPK, Pakistan
13	Shariq Khawaja	M.Phil.	2018-19	Identification, Morphological, Anatomical and Molecular analysis and characterization of some mushrooms of forest Mullah Banda, Miandam, District Swat, KPK Pakistan.
14	Muhammad Hassan	M.Phil.	2018-19	Morpho-Anatomical and Molecular Characterization of some Mushrooms of Kala Chashma Forest of, Kumrat Valley, District Upper Dir, KPK, Pakistan.
15	Seyahauddin, Hazara University, Mansehra (Co-Supervisor)	M.Phil.	2018-2019	Morpho-anatomical and Molecular Characterization of some Mushrooms of Batoot Forest, Kumrat Valley, District Upper Dir, KPK, Pakistan.
16	Faiza Suleman	M.Phil.	2019-2020	Biological Screening and Characterization of some wild Mushrooms of Barti Raj Forest, Chagharzai Valley, District Buner, KPK, Pakistan.
17	Sumbal Fatima	M.Phil.	2019-2020	Investigation and characterization of microbial flora from rhizosphere of <i>Thuja orintalis</i> from Ziarat Juniper

				forest, Baluchistan, Pakistan.
18	Kiran Bajwa	M.Phil.	2019-2020	Biological Screening and Characterization of some wild Mushrooms of Barti Raj Forest, Miandam, Swat Valley, KPK, Pakistan.
19	Uzma Afzal	M.Phil.	2020-2021	Green mycosynthesis of nanoparticles and their biological screening from some mushrooms of Batoot forest, Kumrat valley, KP
20	Mobeen Arshad	M.Phil.	2020-2021	Green mycosynthesis of nanoparticles and their biological screening from some mushrooms of Chagharzai Forest, Buner, KPK.
21	Sidra Shafiq	M.Phil.	2021-2022	Mycosynthesis of Ba-Nanoparticles and their biological screening from some mushroom of Purdon Forest, Kumrat valley, KP Pakistan.
22	Zunaira	M.Phil.	2021-2022	Molecular and phylogenetic studies of some mushrooms of Batoot Forest, Kumrat Valley, KP, Pakistan
23	Aleena Farooq	M.Phil.	2021-2022	Mycosynthesis of Cu-Nanoparticles, Pharmacological Studies and characterization of some mushrooms of Barti Raj Forest, Chagharzai Valley, District Buner, KP, Pakistan.
24	Zainab Najab	M.Phil.	2021-2022	Mycosynthesis of Zn-Nanoparticles and their biological screening from some mushrooms of Chamney Forest, Maindam, Swat Valley, KP, Pakistan
25	Attia Amin	M.Phil.	2021-2022	Mycosynthesis of Mn-Nanoparticles and their biological screening from some wild mushrooms of Chamney Forest Miandam, Swat Valley, KP, Pakistan.
27	Ammara Basharat	M.Phil.	2022-23	Green synthesis of Silver doped nanoparticles, their

				biological screening and pharmacological activities of some wild mushrooms of Kumrat, KP, Pakistan
28	Aqsa Tariq	M.Phil.	2022-23	Mycosynthesis of Zn-Nanoparticles from some mushrooms associated with <i>Pinus wallichiana</i> A. B. Jacks., growing at Point 3, Kumrat Valley, KP, Pakistan: their characterization and biological screening
29	Faiza Khushi	M.Phil.	2022-23	Mycosynthesis and biological screening of silver nanoparticles from some mushrooms of Kala Chashma forest, Kumrat Valley, KP, Pakistan
30	Atta-UI-Mustafa Zain	M.Phil.	2022-23	Mycosynthesis of Zn-Nanoparticles, their biological and phytochemical screening from some mushrooms of Roshay Dutt Forest, Kumrat Valley, KP, Pakistan
31	Fatima Arif	M.Phil.	2022-23	Green synthesis of silver nanoparticles and their potential applications from some wild mushrooms found near the waterfall, Kumrat Valley, KP, Pakistan
32	Alveena Nazir	M.Phil.	2023-24	Mycosynthesis and biological screening of silver nanoparticles of some mushrooms of Laam Leak Forest, Kumrat Valley, KP, Pakistan.
33	Maham Mujahid	M.Phil.	2023-24	Characterization and Partial Purification of Bacterial Free and Silver coated alginate lyase, its exogenous applications on <i>Ocimum</i>

				<i>sanctum</i> L.
34	Farwa Nazir	M.Phil.	2024-25	Pharmacological Evaluation and Therapeutic Potential of Bioactive Compounds of some wild mushrooms from Kumrat Valley, KP
35	Ansa	M.Phil.	2024-25	

Sr. No.	Name	Class	Year	Title
1	Zeeshan Rasheed	PhD.	2016	Isolation, characterization and screening of ectomycorrhizae associated bacterial communities of some conifers from Khanaspur KP.
2.	Rizwan Amanat	PhD	2020	Pharmaceutical evaluation, characterization and profiling of some wild Mushrooms of Kumrat Valley, KP, Pakistan
3.	Zubairia Ashraf	PhD	2020	Cross-linking of <i>Bacillus licheniformis</i> alginate lyase on glutaraldehyde-functionlized Al <sub>2</sub> O <sub>3</sub> nanocrystals for biological application
4.	Samar Bashir	PhD	2021	Covalent immobilization of <i>Aspergillus oryzae</i> intracellular tyrosinase on amine-functionalized and silica-coated silver nanoparticles for biological applications
5.	Rabia Mushtaq	PhD	2022	Ameliorative effects of <i>Armillaria</i> spp. against streptozotocin induced diabetes in mice
6	Atta Ul Mustafa Zain	PhD	2023	Biological Screening and Exploration of Photocatalytic of Potential of Mushroom Mediated Greenly Synthesized Myconanoparticles from some mushrooms of Kumrat Valley, KP, Pakistan.
7				

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1. Atta Ul Mustafa Zain, **Muhammad Hanif**, Nousheen Yousaf and Samina Sarwar. A Mycological Survey of Roshay Dutt Forest, Kumrat Valley, KP. 2025. Ravian Journal of Plant Sciences, 02(01): 45-50, Jun 2025
2. Asghar, A., S. Sarwar and **M. Hanif**. Comparative diversity analysis of micromycetes in the rhizospheric soil of selected crops and vegetables from Faisalabad and Pattoki. 2025. Pak. J. Bot., 58(1): DOI: [http://dx.doi.org/10.30848/PJB2026-1\(8\)](http://dx.doi.org/10.30848/PJB2026-1(8))
3. Uzma Fazal, Ahmad Zada, Dr Sohail, **Muhammad Hanif\***. Green Myco-Synthesis of Zinc Oxide Nanoparticles Using *Cortinarius* sp.: Hepatoprotective, Antimicrobial, and Antioxidant Potential for Biomedical Applications. 2025. Microorganisms, 13(5), 956. <https://doi.org/10.3390/microorganisms13050956> (IF=4.1)
4. Imama Arif, Iqra Muneer, Asad Abbas, Tasmia Amanuallah, Farhat Yasmeen, Dilawar Ali, **Muhammad Hanif**. 2025. Eco-friendly synthesis of Nb-doped Fe<sub>2</sub>O<sub>3</sub> nanoparticles using *Acacia nilotica* leaf extract for photocatalytic and antibacterial applications. In Press. Optik <https://doi.org/10.1016/j.ijleo.2025.172334> (IF=3.1)
5. D. Ali, Curie Marie, Tanzeela Ejaz, **Muhammad Hanif**, Iqra Muneer. 2025. Green-mediated sol-gel fabrication of CuO/ZnO nanoparticles from orange peel extract for environmental remediation: Insights from X-ray diffraction analysis using various models. Physica Scripta. Volume 100, Issue 1, id.015980, 14 pp. DOI: [10.1088/1402-4896/ad9d9f](https://doi.org/10.1088/1402-4896/ad9d9f) (IF=2.6)
6. Tayyaba Khalil, Samina Sarwar, Sumera Javad, Aqsa Abid, **Muhammad Hanif**, Hajra Khalil and Amina Abrar. 2025. Green Synthesis of Silver Nanoparticles Using Wild Mushroom *Lepista Sordida* and Its Antifungal Activity. Pak. J. Bot., 57(3): DOI: [http://dx.doi.org/10.30848/PJB2025-3\(11\)](http://dx.doi.org/10.30848/PJB2025-3(11))

### Publications 2024

7. Muhammad Hanif, Shehwar, Samar Bashir, Zubairia Ashraf, Rizwan Amanat, Atta ul Mustafa Zain, Shaukat Ali, and Samina Sarwar. **2024**. Review Article: Green Nanoparticles in Crop Plants Disease Control. Volume 1, Issue 2, June-2024, pp.09-15
8. Sadaf Saeedullah, Maryam Nawaz, Nousheen Yousaf, Saliha Rukhsar, Khadija Malhi, **Muhammad Hanif**. 2024. *Ganoderma curtisii*, Firstly Reported from Districts Lahore and Gujranwala of Punjab Province, Pakistan.. LGU. J. Life Sci 8(3): 362-380
9. Ukasha Iqbal, Nousheen Yousaf, Alishba Chudhrey, Shumaila Rasheed, **Muhammad Hanif**, Samina Sarwar. 2024. First Report of an edible mushroom, *Termitomyces umkowaan* from Punjab, Pakistan. LGU. J. Life Sci 8(2): 172-184
10. Aleena Iqbal, Samina Sarwar, Irmgard Krisai-Greilhuber, Talha Sajad, Muhammad Fiaz, **Muhammad Hanif**, 2024 Molecular phylogeny and phenology reveal a new fungistic record of *Pseudoomphalina khanspurensis* (Agaricales, Tricholomataceae) from Pakistan. Journal of Tianjin University Science and Technology. 57(08):131-140 (IF=0.722)
11. **Muhammad Hanif**, Abdul Nasir Khalid and Samina Sarwar. 2024. First Report of *Sparassis latifolia* (Basidiomycota) from Pakistan: Evidence from Morpho-Anatomical and Nuclear rDNA data. *Pak. J. Bot.*, 56(4). DOI: [http://dx.doi.org/10.30848/PJB2024-4\(5\)](http://dx.doi.org/10.30848/PJB2024-4(5)) (IF= 1.28)
12. Zeeshan Rasheed, Atta-UI-Mustafa Zain, **Muhammad Hanif**, Rizwan Amanat, Baber Ali, Muhammad Nauman Khan and Uzma Fazal. 2024. Production of some secondary metabolites of antibiotic nature from mycorrhizal helper bacteria associated with conifers. *Polish Journal of Environmental Studies*. 33(4):1-10 (IF= 1.800)

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14. **Muhammad Hanif**, Muhammad Usman, Malik Athar Iqbal, M. Shariq Khawaja, Wasim Abbas, Samina Sarwar, Shaukat Ali, Atta-

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  16. Aniq Rani, Rabia Ghaffar, Muhammad Shoaib Butt, Muneeb Isrhad, Mohsin Saleem, **Muhammad Hanif**, Muhammad Arshad, Suleman Ahmad, Abid Aleem, Abdul Ghaffar. 2023 Antibacterial and photocatalytic properties of Ag-doped CeO<sub>2</sub>:BaO synthesized by simple solution combustion method. *Materials Letters* 353:135270. <https://doi.org/10.1016/j.matlet.2023.135270> (IF=2.7)
  17. Tayyaba Khalil, Samina Sarwar\*, Sumera Javad, Aqsa Abid, **Muhammad Hanif**, Hajra Khalil and Amina Abrar. 2023. Green synthesis of silver nanoparticles using wild mushroom *Lepista sordida* and its antifungal activity. *Pakistan Journal of Botany*, PJB-2023-116. (X Category, IF: 1.28).
  18. Hajra Khalil, \*\*, Sobia Ilyas, **Muhammad Hanif**, Amina Abrar, and Mobina Ulfat. 2023. Filamentous Fungi for Bioremediation of Oily Effluents of a Local Ghee Industry in Pakistan: An Environmental Perception. *Proceedings of the Pakistan Academy of Sciences: Part B (Life and Environmental Sciences)*, Accepted for September 2023 Issue [Vol. 60, Issue 3]. (X Category, IF: 0.46)
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  20. **Muhammad Hanif**, Zubaria Ashraf, Samar Bashir, Fatima Riaz, Rizwan Amanat, Nousheen Yousaf and Samina Sarwar. 2023. Ectomycorrhizal Fungi as Biofertilizers in Forestry: Book Chapter. *Ectomycorrhizal Fungi as Biofertilizers in Forestry*. Arbuscular Mycorrhizal Fungi in Agriculture - New Insights. IntechOpen. doi:10.5772/intechopen.110090.
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22. Samina Sarwar, Malka Saba, **Muhammad Hanif**, Amina Abrar, Mobina Ulfat and Hajra Khalil. 2022. Utilization of fruit peels to

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23. Usman M, Awan AN, Yousaf N, Murtaza G, **Hanif M**, Khalid AN 2022. First records of *Bolbitius coprophilus* (Agaricales, Bolbitiaceae) from Pakistan. Check List 18 (3): 525–533. (IF= 0.60)
  24. Muhammad Waqas, Rabia Ghaffar, Muneeb Irshad, Mohsin Saleem, **Muhammad Hanif**, Abdul Ghaffar. Materials. 2022. Synergistic effect of morphology on the biocidal response of Ce-doped ZnO nanomaterial synthesized by facile autocombustion method. Chemistry and Physics 282:125980. (IF= 4.094)
  25. **Muhammad Hanif**, Abdul Nasir Khalid, Samina Sarwar & Nousheen Yousaf. 2022. Ectomycorrhizal status of *Pinus wallichiana* (Blue Pine) growing in Himalayan Moist Temperate forests of Pakistan. Pak. J. Bot., 54(1): 275-283. (IF= 1.1)
  26. **Muhammad Hanif**, Bushra Arshad, Samina Sarwar & Nousheen Yousaf. 2022. First report of ectomycorrhizae of *Clavariadelphus pakistanicus* with *Pinus wallichiana*: Evidence from tracing method supported with rDNA- ITS sequence. Bangladesh J. Plant Taxon. 29(1):129-136. (IF= 0.679)

## 2021 Publications

27. Synthesis, characterization and antibacterial performance of transparent c-axis oriented Al doped ZnO thin films. 2021. Dilawar Ali, M. Z. Butt; I. Muneer; F. Bashir; **M. Hanif**; Taj M. Khan; Shahab Ahmed Abbasi. Surfaces and Interfaces 27:101452. (IF= 4.837)

## 2020 Publications

28. Ayesha Alam, Shabnum Shaheen, Samina Sarwar, Mehwish Jaffer , Malka Saba, **Muhammad Hanif**, Sumera Sajjad and Farah Khan. 2020. Pollen morphological assessment of specific selected species of district Sheikhpura, Punjab, Pakistan under LM and SEM. *Microsc Res Tech.*;1–12. (IF=2.769)
29. Samina Sarwar, Tanzeela Aziz, **Muhammad Hanif**, Sobia Ilyas, Malka Saba, Sana Khalid And Muhammad Fiaz. 2020. Plectological and molecular identification of economically important wild Russulales mushrooms from Pakistan and their antifungal potential against food pathogenic fungus *Aspergillus niger*. *Bangladesh J. Plant Taxon.* 27(1): 67–77. (IF= 0.679)

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30. Samina Sarwar, Tanzeela Aziz, **Muhammad Hanif**, Sobia Ilyas and Shabnum Shaheen. 2019. *Russula swatica*: a new species of *Russula* based on molecular and SEM analyses from Swat Valley of Khyber Pakhtunkhwa province of Pakistan. *Microscopy Research and Technique*, 82(10):1700–1705. (IF=2.769)
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- Pakistan. Mycotaxon Volume 134, pp. 399–406. (IF=0.545)
32. Muhammad Islam and **Muhammad Hanif**, 2019. Four new records of the genus *Pyrus* (Rosaceae) from Pakistan. The Journal of Animal and Plant Sciences. The J. Anim. Plant Sci. 29(2): 483-491. (IF= 0.570)

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### 2017 Publications

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41. Rizwana Nawaz, A. N. Khalid, **Muhammad Hanif**, A. Razaq. 2013.

*Lepiota vellingana* sp. nov. (Basidiomycota, Agaricales) A New Species from Lahore, Pakistan. Mycological Progress. 12, :727–732. (IF= 2.538)

## 2012 Publications

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## References

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