SIDDRA IJAZ

Professor

Incharge of "Molecular Biology of Plant Disease Resistance Laboratory", CABB, UAF

Father's Name: Ijaz Ahmad Khan

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: University of Agriculture Faisalabad, Pakistan, Faisalabad, Punjab.

Birth Date: 05/11/1981
Gender : Female
Religion : Islam
Marital Status : Single
Nationality : Pakistani

Dr. Siddra IJAZ, with a vibrant career in agriculture and biotechnology, has PhD from University of Agriculture Faisalabad, Pakistan, and Post Doc from plant Reproductive Biology Laboratory, University of California Davis, USA. She is currently serving as Associate Professor in the Center of Agricultural Biochemistry and Biotechnology (CABB), University of Agriculture, Faisalabad, Pakistan. She is also serving as Managing Editor of an international Impact factored Journal, Pakistan Journal of Agricultural Sciences. She has supervised more than 60 M.Phil and Ph.D. students. She had been the member of National Curriculum Revision Committee during 2013-2014. She has published **more than 50 articles**, **11 books**, and several book chapters. She is the Incharge of "Molecular Biology of Plant Disease Resistance Laboratory", CABB, UAF. She is the curator Fungal Molecular Biology Laboratory Culture Collection (FMB-CC-UAF), an affiliated member of the World Federation for Culture. Collections (WFCC). Her research focus includes genome probing and engineering for fungal disease resistance in plants and management through nanobiotechnology. With particular emphasis on *Dalbergia sissoo* (Shisham) for dieback *Trifolium alexandrinum* (berseem clover) for stem and crown rot, *Vigna radiata* (mungbean) for *Cercospora leaf spot,* and *Saccharum officinarum* (Sugarcane) for red rot.

- Silver Medal in M.Sc (Hons.)
- Mungbean variety MPP-15024 approved
- Developed molecular marker for marker assisted selection in mungbean (*Vigna radiata*) for cercospora leaf spot disease resistance
- Reported novel fungal species *Ceratocystis dalbergicans sp. nov*., causing dieback disease in *Dalbergia sissoo*
- Unlocked the genetics involved in dieback resistance in *Dalbergia sissoo* through probing the NBS-LRR family and identifying R genes that contribute in disease resistance and immune response regulation.
- Identified antimicrobial peptide regions with the signature domain of PR-5-like protein and the AMP family Thaumatin.
- Functionally characterized the ethylene response factors of the ethylene response element-binding protein (EREBP) family and demonstrated the role of the DDTFR10/A (SlERF-B1)

and StERF3 genes in contributing to susceptibility against Fusarium wilt in *Solanum lycopersicum* and late blight disease in *Solanum tuberosum*, respectively, using the CRISPR/Cas9 approach.

- Identified and reported eight metabolites for the first time in *Chenopodium quinoa*.

- **Addition in the fungal taxonomy**

Sr#	New Spp/forma specialis	Reference
1	***Ceratocystis dalbergicans sp. nov.*** I.U Haq, **S. Ijaz**, I.A. Khan & M. Z. Latif sp. nov. MycoBank # 841380	Frontiers in Genetics, 14:1136688 DOI 10.3389/fgene.2023.1136688
2	***Neopestalotiopsis guajavae sp. nov.*** I.U Haq, S. Ijaz & N. A. Khan, sp.nov. MycoBank 840596	Genealogical concordance of phylogenetic species recognition-based delimitation of Neopestalotiopsis species associated with leaf spots and fruit canker disease affected guava plants. Pak. J. Agri. Sci. 202. 58:1301-1313)
3	***Neopestalotiopsis psidii sp. nov.*** I.U Haq, **S. Ijaz** & N. A. Khan, sp.nov. MycoBank MB840638	
4	***Neopestalotiopsis perukae sp. nov.*** I.U Haq, **S. Ijaz** & N. A. Khan, sp.nov. MycoBank MB840637	
5	***Neopestalotiopsis guajavicola sp. nov.*** I.U Haq, **S. Ijaz** & N. A. Khan, sp.nov. MycoBank MB840639	
6	***Fusarium oxysporum f. sp. dactyliferum*** I.U Haq, **S. Ijaz**, I.A. Khan & N. A. Khan MycoBank # 840871	Plants, 11, no. 19: 2643 https://doi.org/10.3390/plants11192643

- Reported 06 new diseases on hosts, such as *Psidium guajava*, *Chamaedorea seifrizii*, *Trifolium alexandrinum*, *Trifolium alexandrinum*, *Archontophoenix alexandrae*, and *Chamaedorea cataractarum*.
- Developed Integrative Pathogenicity (IP) postulates by reshaping Koch postulates' features with the help of omics and fill the loopholes of Koch postulates that make put the pathogenicity in question due to systemic microbes.
- Unraveled the potential of biosynthesized AgNPs against *Cercospora canescens* challenge in *Vigna radiata*, pointing toward its application in plant disease management.

EDUATION

DEGREE	SUBJECT	INSTITUTION	YEAR	DIVISION
PhD	Biotechnology	University of Agriculture, Faisalabad, Pakistan	2012	AWARDED

M.Sc (Hons)	Agri. Biotechnology	University of Agriculture, Faisalabad, Pakistan	2008	1st Division
B.Sc. (Hons)	Plant Breeding and Genetics	University of Agriculture, Faisalabad, Pakistan	2006	1st Division

RESEARCH TITLE Post-Doc
CRISPR-Cas9 knockout construct preparation and evaluate the contribution of aquaporins proteins in water stress tolerance in *Setaria viridis* by expression profiling using real time PCR (qPCR) Under US-Pakistan Center for Advanced Studies in Agriculture and food security Scholarship Exchange program.

RESEARCH TITLE PhD
Engineering Sugarcane genome to develop resistance against *Colletotrichum falcatum* to control red rot disease

Developed Red rot resistant sugarcane transgenic lines

RESEARCH TITLE M. Sc. (Hons.)
Molecular evaluation of wheat germplasm with microsatellite markers

Distinction in M.Sc (Hons) ***Silver Medal***

EMPLOYMENT HISTORY

Professor- University Of Agriculture, Faisalabad, Punjab, Pakistan

03 October 2024 - Till Date

Associate Professor - University Of Agriculture, Faisalabad, Punjab, Pakistan

28 October 2021 - 02 October 2024

Assistant Professor - University Of Agriculture, Faisalabad, Punjab, Pakistan

02 August 2013– 27 October 2021

Lecturer - University Of Agriculture, Faisalabad, Punjab, Pakistan

12 October 2009 – 01 August 2013

Responsibilities:

Teaching and Research

ADMINITRATIVE SERVICES/RESPONSIBILITES

1. Hall Warden Female, University of Agriculture Faisalabad, Pakistan
2. Managing Editor, Pakistan Journal of Agricultural Sciences (PAKJAS)
3. Member Syndicate, University of Agriculture Faisalabad, Pakistan (2020-2021)
4. Member Harassment Committee, University of Agriculture Faisalabad, Pakistan
5. Member Discipline Committee, University of Agriculture Faisalabad, Pakistan

RESEARCH PUBLICATIONS (IMPACT FACTORED HEC RECOGNIZED JOURNAL) Total Impact Factor: 100.5

S#	Authors	Title	Year	Journal Detail	Impact Factor	HJRS Category
1.	**Siddra Ijaz**, Imran Ul Haq, Zakia Habib, Muti-Ullah, Irfan Afzal, Nasir Ahmad Khan and Abdullah	Genome-wide identification, and gene expression analysis of NBS-LRR domain containing R genes in Chenopodium quinoa for unveiling the dynamic contribution in plant immunity against Cercospora cf. chenopodii	2024	Physiol Mol Biol Plants https://doi.org/10.1007/s12298-024-01475-0	**3.5**	W
2.	Zakia Habib, **Siddra Ijaz**, and Imran Ul Haq, Hashem A, Avila-Quezada GD, Abd_Allah EF and Khan NA	Empirical phenotyping and genome-wide association study reveal the association of panicle architecture with yield in Chenopodium quinoa	2024	Front. Microbiol. 15:1349239. https://doi: 10.3389/fmicb.2024.1349239	**4.0**	W
3.	Muhammad Kaleem Sarwar, Imran ul Haq, **Siddra Ijaz**, Nazir Javed and Nadeem Akbar	Molecular and Analytical Approaches Based Characterization of Aflatoxins Producing Aspergillus Species Affecting Groundnut	2024	Pak. J. Agri. Sci., Vol. 61(03), 931-940; https://doi: 10.21162/PAKJAS/24.254 - 2024-09-29	**0.8**	X
4.	Zakia Habib, **Siddra Ijaz**, and Imran Ul Haq	Comparative metabolomic profiling and nutritional chemistry of Chenopodium quinoa of diverse panicle architecture and agroecological zones.	2023	Physiol Mol Biol Plants 29(12):1959-1979 https://doi.org/10.1007/s12298-023-01398-2	**3.5**	W
5.	Imran Ul Haq, **Siddra Ijaz**, Abeer Hashem, Graciela Dolores Avila-	Selection and validation of reference genes for normalizing qRT-PCR gene expression in	2023	Front. Plant Sci. 14: 1235848 DOI:	**5.6**	W

	Quezada, Elsayed Fathi Abd_Allah	Colletotrichum gloeosporoides and interaction with the guava plants		10.3389/fpls.2023.1235848		
6.	**Siddra Ijaz** , Imran Ul Haq, Hafiza Arooj Razzaq, Bukhtawer Nasir , Hayssam M. Ali and Sukhwinder Kaur	In silico structural-functional characterization of three differentially expressed resistance gene analogs identified in Dalbergia sissoo against dieback disease reveals their role in immune response regulation	2023	Front. Plant Sci. 14:1134806. DOI: 10.3389/fpls.2023.1134806	**5.6**	W
7.	Muhammad Zunair Latif, Imran Ul Haq, Siddra Ijaz, Amer Habib and Iqrar Ahmad Khan	Etiology and management of shisham die-back disease in Pakistan forests	2023	Pak. J. Agri. Sci., Vol. 60(3),407-418 DOI:10.21162/PAKJAS/23.103	**0.8**	X
8.	Hafiza Arooj Razzaq , Siddra Ijaz , Imran Ul Haq and Faisal Saeed Awan	In silico Prediction and Analysis of Potential Off-Targets and Off-Target Mutation Detection in StERF3-Gene Edited Potato Plants	2023	Phyton-International Journal of Experimental Botany, 92(8), 2451-2460. DOI: 10.32604/phyton.2023.030501	**1.7**	X
9.	Muhammad Zunair Latif, Imran ul Haq , Siddra Ijaz and Muhammad Kaleem Sarwar	Morphology, pathogenicity and physiology of Ceratocystis fimbriata causing black rot disease of *Colocasia esculenta*	2023	Pak. J. Agri. Sci., Vol. 60(2), 265-272. DOI:10.21162/PAKJAS/23.635	**0.8**	X
10.	**Siddra Ijaz**, Imran Ul Haq, Riffat Malik , Ghalia Nadeem , Hayssam M. Ali and Sukhwinder Kaur ,	In silico characterization of differentially expressed short-read nucleotide sequences identified in dieback stress-induced transcriptomic analysis reveals their role as antimicrobial peptides	2023	Frontiers in Plant Science 14:1168221 DOI 10.3389/fpls.2023.1168221	**5.6**	W
11.	Imran Ul Haq , **Siddra Ijaz** , Muhammad Zunair Latif , Iqrar Ahmad Khan , Hayssam M. Ali and Sukhwinder Kaur	Phylogenomics resolves the etiology of dieback disease and deciphers *Ceratocystis dalbergicans* sp. nov., causal agent of *Dalbergia sissoo* decline	2023	Frontiers in Genetics, 14:1136688 DOI 10.3389/fgene.2023.1136688	**3.7**	W
12.	Maria Babar, **Siddra Ijaz**, Imran Ul Haq, and Muhammad Sarwar Khan	Development of Molecular Marker Linked with Cercospora Leaf Spot (CLS) Disease Resistance in Vigna radiata, Cloning, and Expression for Evaluating Antifungal Activity against Cercospora canescens	2023	Phyton-International Journal of Experimental Botany, 92(4), 1289-1300. DOI: https://doi.org/10.3	**1.7**	X

				2604/phyton.2023.026469		
13.	Bukhtawer Nasir, **Siddra Ijaz**, Imran Ul Haq, Nasir Ahmad Khan, Amer Habib	Identification, in silico characterization, and expression analysis of NBS-LRR class of R genes against stem and crown rot disease in Trifolium alexandrinum L	2023	SCIENCEASIA 49 (1): 85–93. Doi: 10.2306/scienceasia1513-1874.2022.141	**1.2**	X
14.	**Siddra Ijaz**, Imran Ul Haq, and Hafiza Arooj Razzaq	Mutation introduced in DDTFR10/A gene of ethylene response element-binding protein (EREBP) family through CRISPR/ Cas9 genome editing confers increased Fusarium wilt tolerance in tomato	2023	Physiol Mol Biol Plants 29(1), 1–10. DO1: https://doi.org/10.1007/s12298-022-01273-6	**3.5**	W
15.	Imran Ul Haq, **Siddra Ijaz**, Nabeeha Aslam Khan, Anjum Faraz, and Muhammad Kaleem Sarwar	Neopestalotiopsis guajavicola sp. nov. causing a new leaf spot on Psidium guajava in Pakistan	2023	Journal of Plant Pathology, 105, 377. DOI: https://doi.org/10.1007/s42161-022-01294-w	**2.2**	X
16.	Imran Ul Haq, **Siddra Ijaz**, Nabeeha Aslam Khan, Iqrar Ahmad Khan, Hayssam M. Ali, and Ernesto A. Moya-Elizondo	Integrative Pathogenicity Assay and Operational Taxonomy-Based Detection of New Forma Specialis of Fusarium oxysporum Causing Datepalm Wilt	2022	Plants, 11, no. 19: 2643 DOI: https://doi.org/10.3390/plants11192643	**4.5**	W
17.	Anjum Faraz., Imran Ul Haq, **Siddra Ijaz**, S. T. Sahi and I. Khan	Phylogenomic appraisal of morpho-pathogenicity try-out based identified pathogen causing stem and crown rot in Trifolium alexandrinum L.	2022	Pak. J. Agri. Sci. 59(3), 493-501 DOI:10.21162/PAKJAS/22.07	**0.8**	X
18.	**Siddra Ijaz**, Imran Ul Haq, Iqrar Ahmad Khan, Hayssam M. Ali, Sukhwinder Kaur, Hafiza Arooj Razzaq	Identification of resistance gene analogs of the NBS-LRR family through transcriptome probing and in silico prediction of the expressome of Dalbergia sissoo under dieback disease stress	2022	Frontiers in Genetics, 7;13:1036029 DOI 10.3389/fgene.2022.1036029	**3.7**	W
19.	Hafiza Arooj Razzaq, **Siddra Ijaz**, Imran Ul Haq, Iqrar Ahmad Khan	Functional inhibition of the StERF3 gene by dual targeting through CRISPR/Cas9 enhances resistance to the late blight disease in Solanum tuberosum L	2022	Molecular Biology Reports, 49:11675–11684 DOI: https://doi.org/10.1007/s11033-022-07958-1	**2.8**	W

20.	Maria Babar, **Siddra Ijaz**, Imran Ul Haq, Iqrar Ahmad Khan	Morpho-functional characterization, in vitro study, and tripartite interaction assay evaluate the potential of biosynthesized silver nanoparticles to manage Cercospora leaf spot disease in Vigna radiata	2022	Journal of Plant Pathology. 104:1371–1381 DOI: https://doi.org/10.1007/s42161-022-01168-1	**2.2**	X
21.	Iqra, Imran Ul Haq, R. W. K. Qadri, L. Amrao and **Siddra Ijaz.**	Effect of environmental conditions (temperature and precipitation) on severity of guava die-back caused by Colletotrichum spp. under climatic conditions of Pakistan	2022	Journal of Plant Pathology, 104: 179–190 DOI: https://doi.org/10.1007/s42161-021-00968-1	**2.2**	X
22.	Imran Ul Haq, **Siddra Ijaz**, A. Faraz, M. K. Sarwar and N. A. Khan	First report of Curvularia leaf spot of Chamaedorea seifrizii caused by Curvularia lunata in Pakistan	2021	Journal of Plant Pathology, 103, 2: 713-713. DOI: https://doi.org/10.1007/s42161-021-00794-5	**2.643**	X
23.	Imran Ul Haq, **Siddra Ijaz**, Anjum Faraz, and Nabeeha Aslam Khan	Characterization of Curvularia buchloes causing leaf spots on Medicago sativa L. (alfalfa) and its management through fungicides	2021	J. Plant Dis. Prot. 128:493-500. DOI: https://doi.org/10.1007/s41348-020-00414-x	**1.847**	X
24.	Imran Ul Haq, **Siddra Ijaz**, Anjum Faraz, and Nabeeha Aslam Khan	First report of Curvularia lunata leaf spot on Trifolium alexandrinum in Pakistan	2021	Journal of Plant Pathology, 103:373-373. DOI: https://doi.org/10.1007/s42161-020-00699-9	**2.643**	X
25.	Anjum Faraz, Imran Ul Haq and **Siddra Ijaz**	First report of Sclerotinia trifoliorum stem and crown rot on Trifolium alexandrinum in Pakistan	2021	Journal of Plant Pathology, 103:735-736. DOI: https://doi.org/10.1007/s42161-021-00806-4	**2.643**	X
26.	Bukhtawer Nasir, **Siddra Ijaz** , Faisal Saeed Awan and Imran Ul Haq	Genome-wide probing of NBS-LRR encoding genes in red clover (Trifolium pratense L) for the identification of resistance gene analogs in Trifolium alexandrinum L.	2021	SCIENCEASIA 47: 425-433. DOI: 10.2306/scienceasia1513-1874.2021.054	**0.995**	X
27.	Hafiza Arooj Razzaq, **Siddra Ijaz**, F. S. Awan	Establishment of in vitro regeneration system for genome	2021	Pak. J. Agri. Sci. 58(6):1795-1804	**0.856**	Y

	and Imran Ul Haq	editing in potato cv. Lady Rosetta		DOI: 10.21162/PAKJAS/21.651		
28.	Latif M. Z., Imran Ul Haq, **Siddra Ijaz**, A. Habib and Iqrar Ahmad Khan.	Assessment of the distribution, incidence, and severity of Shisham (Dalbergia sissoo) dieback disease in Pakistan	2021	Pak. J. Agri. Sci. 58(6): 1825-1532. DOI: 10.21162/PAKJAS/21.132	**0.856**	Y
29.	Maria Babar, **Siddra Ijaz**, M. S. Khan and Imran Ul Haq	Computational genomics based probing of resistance gene analogs (RGAs) in mungbean under cercospora leaf spot disease challenge	2021	Pak. J. Agri. Sci. 58(5): 1523-1536. DOI: 10.21162/PAKJAS/21.439	**0.856**	Y
30.	Imran Ul Haq, **Siddra Ijaz** and N. A. Khan.	Genealogical concordance of phylogenetic species recognition based delimitation of Neopestalotiopsis species associated with leaf spots and fruit canker disease affected guava plants	2021	Pak. J. Agri. Sci. 58(4),1301-1313;2021 DOI: 10.21162/PAKJAS/21.1045	**0.856**	X
31.	**Siddra Ijaz** , Imran Ul Haq and Bukhtawer Nasir	In silico identification of expressed sequence tags based simple sequence repeats (EST-SSRs) markers in Trifolium species	2020	SCIENCEASIA, 46: 6-10 DOI: 10.2306/scienceasia1513-1874.2020.001	**0.615**	X
32.	Imran Ul Haq, **Siddra Ijaz** , A. Faraz, and N. A. Khan	First report of Curvularia tuberculata leaf spot on Archontophoenix alexandrae in Pakistan	2020	Journal of Plant Pathology, 102:1329-1329 DOI: https://doi.org/10.1007/s42161-020-00614-2	**1.729**	X
33.	Imran Ul Haq, **Siddra Ijaz**, A. Faraz, and N. A. Khan	Potted ornamental Chamaedorea seifrizii, Chamaedorea cataractarum and Rhapis excels palm species: hosts for the opportunistic fungal pathogen	2020	Pak. J. Agri. Sci. 57:433-437 DOI: 10.21162/PAKJAS/19.9195	**0.748**	X
34.	Imran Ul Haq, **Siddra Ijaz** , A. Faraz, M. K. Sarwar, M. Z. Latif and N. A. Khan	First report of leaf spots in Caryota mitis L. caused by Alternaria alstroemeriae in Pakistan.	2020	Journal of Plant Pathology, 102: 585 https://doi.org/10.1007/s42161-019-00471-8	**1.729**	X
35.	Imran Ul Haq, **Siddra Ijaz** , A. Faraz, N. A. Khan, M. Z. Latif, M. K. Sarwar and B. Nasir	First report of Chamaedorea cataractarum (Cat palm) wilt caused by Fusarium solani in Pakistan	2020	Journal of Plant Pathology, 102: 243-243 https://doi.org/10.1007/s42161-019-00379-3	**1.729**	X

36.	Anjum, F., Imran Ul Haq, **Siddra Ijaz** , F. Mubeen, A. Habib, R. W. K. Qadri and N. A. Khan	Morphgenomics based identification of Fusarium proliferatum causing Syagrus romanzoffiana wilt and exploitation of antifungal potential of Trichoderma species against this pathogen	2020	Journal of Plant Pathology, 102: 1097-1105 https://doi.org/10.1007/s42161-020-00572-9	**1.729**	X
37.	Naeem, A. K., Imran Ul Haq, **Siddra Ijaz** , S. A. Khan, R. Waseem and K. Qadri	Unveiling the Fusarium proliferatum association with Ficus dieback from Punjab, Pakistan	2020	Pak. J. Agric. Sci. 57:1337-1344 DOI: 10.21162/PAKJAS/20.643	**0.748**	X
38.	Imran Ul Haq and **Siddra Ijaz**	Assessment of genetic diversity based on ISSR markers in neopestalotiopsis species collected from guava (Psidium guajava l.) Plants affected with canker disease in Pakistan	2019	Applied Ecology and Environmental Research 17:11803-11811 DOI: http://dx.doi.org/10.15666/aeer/1705_1180311811	**0.712**	W
39.	Imran Ul Haq, **Siddra Ijaz** , and M. Z. Latif	Multilocus sequence typing (MLST) based genetic variation analysis of shisham dieback associated strains of Ceratocystis fimbriata sensu lato species complex in Pakistan.	2019	Applied Ecology and Environmental Research 17:12573-12582. DOI: http://dx.doi.org/10.15666/aeer/1705_1257312582	**0.712**	W
40.	**Siddra Ijaz**, Imran Ul Haq, Hafiza Arooj Razzaq, Bukhtawer Nasir, and Maria Babar	ISSR-based population genetics study for tagging a diverse population of shisham (Dalbergia sissoo) in Pakistan	2019	Appl. Ecol. Environ. Res. 17(3): 5851-5861. DOI: http://dx.doi.org/10.15666/aeer/1703_58515861	**0.712**	W
41.	**Siddra Ijaz**, Imran Ul Haq, and M. Babar	Jukes-cantor evolutionary model based phylogenetic relationship of economically important ornamental palms using maximum likelihood approach	2019	Appl. Ecol. Environ. Res. 17(6): 14859-14865. DOI: http://dx.doi.org/10.15666/aeer/1706_1485914865	**0.712**	W
42.	Naheed, R., M. Arfan, **Siddra Ijaz** and M. Shahbaz**.**	Induction of Somaclonal Variation in Selected Drought Sensitive Genotype of Sugarcane (Saccharum officinarum)	2018	Int. J. Agric. Boil. 20(4):777-783. DOI: 10.17957/IJAB/15.0	**0.802**	W

				564		
43.	Saeed, U., I. A. Rana, **Siddra Ijaz** and Z. Ali	Improving Regeneration from Mature Embryo Derived Callus in Wheat (Triticum aestivum) by Pre-and Post-callus Induction Treatment	2017	Int. J. Agric. Biol. 19(5):969-975. DOI: 10.17957/IJAB/15.0324	**0.869**	W
44.	**Siddra Ijaz**., H. A. Sadaqat and M. N. Khan	A review of the impact of charcoal rot (Macrophomina phaseolina) on sunflower	2013	J. Agric. Sci. 151: 222-227. DOI:10.1017/S0021859612000512	**2.891**	W
45.	**Siddra Ijaz**., I. A. Rana, I. A. Khan and M. Saleem	Establishment of an in vitro regeneration system for genetic transformation of selected sugarcane genotypes	2012	Genet. Mol. Res. 11(1): 512-530. DOI: http://dx.doi.org/10.4238/2012.March.6.4	**0.994**	W
46.	Rehman, H.M., I. A. Rana, **Siddra Ijaz**, G. Mustafa, F. A. Joyia, I. A. Khan and Pijut, P.M**.**	In vitro Regeneration of Dalbergia sissoo Roxb and the Potential for Genetic Transformation	2012	Not Bot Horti Agrobo, 40(2): 140-147. DOI: https://doi.org/10.15835/nbha4028248	**0.590**	W
47.	**Siddra Ijaz.**	Mitochondrial plasmid: could this be the next hit for genetic engineering?	2011	Genet. Mol. Res. 10: 391-392. DOI: 10.4238/vol10-1gmr1092	**1.184**	W
48.	**Siddra Ijaz**	Microsatellite markers: An important fingerprinting tool for characterization of crop plants	2011	Afr. J. Biotechnol. 10(40):7723-7726	**0.573**	W
49.	**Siddra Ijaz**	Plant mitochondrial genome: "A sweet and safe home'' for transgene	2010	Afr. J. Biotechnol. 9: 9196-9199.	**0.573**	W
50.	**Siddra Ijaz** and I. A. Khan	Molecular characterization of wheat germplasm using microsatellite markers	2009	Genet. Mol. Res. 8(3): 809-815. DOI: 10.4238/vol8-3gmr608	**0.844**	W

RESEARCH PUBLICATIONS **(ISI INDEXED, WITHOUT IMPACT FACTORED HEC Recognized Journal)**

S#	**Authors**	**Year**	**Title**	**Journal Detail**	
1.	Owais Yasin, Imran Ul Haq, Siddra Ijaz, Amir Habib and Rashid Waseem Khan Qadri	2022	The role of different intercrops in guava orchards for dieback disease development and inoculum buildup in Pakistan.	Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/Journal of Xi'an Shiyou University, Natural Sciences Edition. 65: 181-198. DOI 10.17605/OSF.IO/8SVCK	X
2.	Muhammad Kaleem Sarwar, Imran Ul Haq, Siddra Ijaz, Nazir Javed and Nadeem Akbar	2022	Morphocultural characterization and qualitative assessment of aflatoxins producing aspergillus flavus associated with Arachis hypogaea in Punjab, Pakistan.	Plant Cell Biotechnology and molecular biology, 23(31-32), 28-41. https://doi.org/10.56557/pcbmb/2022/v23i31-327789	Y
3.	Anjum Faraz, Imran Ul Haq, Siddra Ijaz, Shahbaz Talib Sahi, and Imran Khan	2022	Antimycotic potential assessment of Trichoderma species and fungicides for sustainable management of Sclerotinia trifoliorum causing stem and crown rot of Trifolium alexandrinum L	International Journal of Phytopathology 11 (02): 195-205 DOI: 10.33687/phytopath.011.02.4271	X
4.	Rashda Naheed, Muhammad Arfan, Fozia Farhat, **Siddra Ijaz**, Hamza Khalid	2020	Acclimatization of drought tolerance with Somaclonal variants of sugarcane (Saccharum officinarum L.)	DV. LIFE SCI. 8(1): 57-62	Y
5.	Siddra Ijaz, R. Naheed, I. Ul Haq, F. Hassan and M. Hasnain	2019	Assessing Epigenetic Variation in Tissue Culture Based Plants of Sugarcane using High Performance Liquid Chromatography Approach.	Int. J. Biosci. 14:65-71	ISI Master Journal List
6.	Siddra Ijaz., Ul Haq. I, H. A. Razzaq and M. Babar.	2018	Assessment of population genetics of shisham (Dalbergia sissoo) based on genetic structure and diversity analyses.	Int. J. Biosci. 13: 209-2022	ISI Master Journal List

BOOKS

1. **Imran Ul Haq,** Siddra Ijaz **and Mohamad Hayssam Ali.** 2025. Fungal Omics: Methods and Applications. **CRC Press, Taylor & Francis Group. U.S. ISBN: 9781032587424.**
2. **Siddra Ijaz**, Imran Ul Haq, Hayssam Mohamed Ali. **2024.** Trends in Plant Biotechnology. Springer, Nature. ISBN: 978-981-97-0813-0 **(hbk) ISBN: 978-981-97-0816-1(sbk) ISBN: 978-981-97-0814-7 (ebk). https://doi.org/10.1007/978-981-97-0814-7.**
3. Imran Ul Haq, **Siddra Ijaz** and Mohamad Hayssam Ali. **2023.** Sustainable Summer Fodder: Production, Challenges, and Prospects. CRC Press, Taylor & Francis Group. U.S. **ISBN: 978-1-032-20833-6 (hbk) ISBN: 978-1-032-20899-2 (pbk) ISBN: 978-1-003-26580-1 (ebk)**
4. Imran Ul Haq and **Siddra Ijaz**. **2022**. Trends in Plant Disease Assessment. Springer, Nature. UK**. ISBN: 978-981-19-5895-3 (hbk) ISBN: 978-981-19-5898-4(pbk) ISBN: 978-981-19-5896-0 (ebk)**
5. Imran Ul Haq, **Siddra Ijaz** and Iqrar Ahmad Khan. **2022**. Phytomycology and Molecular Biology of Plant Pathogen Interactions. CRC Press. Taylor & Francis Group. U.S. **ISBN: 978-0-367-75506-5 (hbk) ISBN: 978-0-367-75507-2 (pbk) ISBN: 978-1-003-16274-2 (ebk)**
6. Imran Ul Haq and **Siddra Ijaz**. **2021**. Sustainable Winter Fodder: Production, Challenges, and Prospects. CRC Press, Taylor & Francis Group. U.S**. ISBN: 978-0-367-51798-4 (hbk) ISBN: 978-0-367-51836-3 (pbk) ISBN: 978-1-003-05536-5 (ebk)**
7. **Siddra Ijaz** and Imran Ul Haq. **2021.** Dalbergia sissoo: Biology, Ecology and Sustainable Agroforestry. CRC Press, Taylor & Francis Group. U.S. **ISBN: 9781032008196 (hbk) ISBN: 9781003175940 (ebk) ISBN: 9781032008226 (pbk)**
8. Imran Ul Haq and **Siddra Ijaz**. **2020**. Etiology and Integrated Management of Economically Important Fungal Diseases of Ornamental Palms. Springer, Nature. UK. **ISBN 978-3-030-56329-5 ISBN 978-3-030-56330-1 (eBook)**
9. Imran Ul Haq and **Siddra Ijaz**. **2020**. Plant Disease Management Strategies for Sustainable Agriculture through Traditional and Modern Approaches. Springer, Nature. UK**.** (Web of Science core collection). **ISBN 978-3-030-35954-6 ISBN 978-3-030-35955-3 (eBook)**
10. **Siddra Ijaz** and Imran Ul Haq**. 2019.** Recombinant DNA Technology. Publisher, Cambridge Scholar Publishing, United Kingdom (UK). **ISBN (10): 1-5275-3758-7 ISBN (13): 978-1-5275-3758-3**
11. **Siddra Ijaz. 2017.** Molecular Basis of Life. Publisher, University of Agriculture Faisalabad Pakistan. **ISBN 978-969-8237-90-5**

BOOK CHAPTERS

1. Ayesha Javaid, **Siddra Ijaz**, Imran Ul Haq. (2024). Molecular Techniques for Improving Biotic Stress Tolerance. In: Al-Khayri, J., Alnaddaf, L.M., Jain, S.M., Penna, S. (eds) Innovative Methods in Horticultural Crop Improvement. Advances

in Plant Breeding Strategies, vol 1. Springer, Cham. https://doi.org/10.1007/978-3-031-61081-3_4

2. Sukhwinder Kaur, Siddra Ijaz, Bukhtawer Nasir. (2024). Tissue Culture and Somatic Fusion in Plants. In: Ijaz, S., Ul Haq, I., Mohamed Ali, H. (eds) Trends in Plant Biotechnology. Springer, Singapore. https://doi.org/10.1007/978-981-97-0814-7_1
3. Siddra Ijaz Imran Ul Haq, Habib, Z., Ali, H.M. (2024). Genomics. In: Ijaz, S., Ul Haq, I., Mohamed Ali, H. (eds) Trends in Plant Biotechnology. Springer, Singapore. https://doi.org/10.1007/978-981-97-0814-7_3
4. Graciela Dolores Ávila Quezada, Siddra Ijaz, Riffat Malik. (2024). Genetic Transformation in Plants: Methods and Applications. In: Ijaz, S., Ul Haq, I., Mohamed Ali, H. (eds) Trends in Plant Biotechnology. Springer, Singapore. https://doi.org/10.1007/978-981-97-0814-7_2
5. Siddra Ijaz Imran Ul Haq, Ghalia Nadeem, Riffat Malik, Tuba Amjad, and Nasir Ahmad Khan. **(2023**). Conventional and Biotechnological Interventions in Summer Fodders. In: Sustainable Summer Fodder: Production, Challenges, and Prospects.
6. **Siddra Ijaz**., Imran Ul Haq, Babar, M., Nasir, B. **(2022).** Disease Resistance Genes' Identification, Cloning, and Characterization in Plants. In: Cereal Diseases: Nanobiotechnological Approaches for Diagnosis and Management. Springer, Singapore.
7. Imran Ul Haq and **Siddra Ijaz**. **(2022).** Phytopathometry: A trans-disciplinary concept. In: Trends in Plant Disease Assessment. Springer Nature
8. **Siddra Ijaz**, Imran Ul Haq and Maria Babar. **(2022).** Fluorescent imaging system-based plant phenotyping for disease recognition. In: Trends in Plant Disease Assessment. Springer Nature
9. Imran Ul Haq, **Siddra Ijaz**, Shehla Riaz, Muhammad Kaleem Sarwar, and Hayssam M. Ali. **(2022).** Application of Biosensors in Plant Disease Detection. In: Trends in Plant Disease Assessment. Springer Nature
10. **Siddra Ijaz**, Imran Ul Haq, Samara Mukhtar, and Zakia Habib. **(2022).** Molecular Phytopathometry. In: Trends in Plant Disease Assessment. Springer Nature
11. Imran Ul Haq, **Siddra Ijaz** and Iqrar Ahmad Khan. **(2022)**. A Journey from Koch's Postulates to Molecular System Biology. In: Phytomycology and Molecular Biology of Plant Pathogen Interactions. CRC Press. U.S. pp 1-26.
12. Muhammad Kaleem Sarwar, Imran Ul Haq, **Siddra Ijaz**, Iqrar Ahmad Khan and Askim Hediye Sekmen Cetinel. **(2022)**. Pathogenicity Genes. In: Phytomycology and Molecular Biology of Plant Pathogen Interactions. CRC Press. U.S. pp 75-86.
13. Muhammad Kaleem Sarwar, Anita Payum, **Siddra Ijaz**, Qaiser Shakeel and Ghedir Issam. **(2022)**. Fungal Gene Expression and Interaction With Host Plants. In: Phytomycology and Molecular Biology of Plant Pathogen Interactions. CRC Press. U.S. pp 111-124.
14. **Siddra Ijaz**, Imran Ul Haq, Nabeeha Aslam Khan and Bukhtawer Nasir. **(2022)**. Molecular Identification and Detection of Phytofungi. In: Phytomycology and Molecular Biology of Plant Pathogen Interactions. CRC Press. U.S. pp 139-148.
15. **Siddra Ijaz**, Imran Ul Haq, Zakia Habib, Samara Mukhtar, and Bukhtawer Nasir. **(2021).** Biotechnological Applications for Developing Resistance Against Biotic and

Abiotic Stresses and Other Quality Traits in Fodder Crops. In: Sustainable Winter Fodder; Production, Challenges, and Prospects. CRC Press. pp 31-82.

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17. Nabeeha Aslam Khan, Imran Ul Haq, **Siddra Ijaz**, and Barboras Cetinel. **(2021).** Medicago sativa: Diseases, Etiology, and Management. In: Sustainable Winter Fodder; Production, Challenges, and Prospects. CRC Press. pp 83-110
18. Anjum Faraz, Imran Ul Haq, **Siddra Ijaz**, and Muhammad Zunair Latif, **(2021)**. Trifolium Species: Diseases, Etiology, and Management. In: Sustainable Winter Fodder; Production, Challenges, and Prospects. CRC Press. pp 111-132
19. Muhammad Zunair Latif, Imran Ul Haq, **Siddra Ijaz**, and Anjum Faraz. **(2021)**. Rapeseed and Mustard: Diseases, Etiology, and Management. In: Sustainable Winter Fodder; Production, Challenges, and Prospects. CRC Press. pp 199-223
20. Muhammad Kaleem Sarwar, Imran Ul Haq, **Siddra Ijaz**, and Nabeeha Aslam Khan. **(2021).** Application of Precision Agriculture: Mitigating the effect of Climate Change on Winter Fodders. In: Sustainable Winter Fodder; Production, Challenges, and Prospects. CRC Press. pp 225-271.
21. **Siddra Ijaz**, Imran Ul Haq, and Maria Babar. **(2021).** Reproductive Biology, Botany, and Taxonomical Description of Dalbergia sissoo. In: Dalbergia sissoo: Biology, Ecology and Sustainable Agroforestry. CRC Press. pp 3-12
22. **Siddra Ijaz**, Rashda Naheed, Hafiza Arooj Razzaq, and Bukhtawer Nasir. (2021). Physiological and Biochemical Dynamics of Dalbergia sissoo. In: Dalbergia sissoo: Biology, Ecology and Sustainable Agroforestry. CRC Press. pp 27-52.
23. Imran Ul Haq, **Siddra Ijaz**, and Muhammad Zunair Latif. **(2021)**. Diseases of Dalbergia sissoo: Etiology and Integrated Management of Economically Important Diseases. In: Dalbergia sissoo: Biology, Ecology and Sustainable Agroforestry. CRC Press. pp 63-88.
24. Mariam Hassan, **Siddra Ijaz**, Sehrish Sarwar, and Ali Hassan Khan. **(2021).** Genetics and Breeding of Dalbergia sissoo. In: Dalbergia sissoo: Biology, Ecology and Sustainable Agroforestry. CRC Press. pp 103-114.
25. Imran Ul Haq, **Siddra Ijaz**, and Nabeeha Aslam Khan. **(2021).** Environmental Influences and Productivity of Dalbergia sissoo. In: Dalbergia sissoo: Biology, Ecology and Sustainable Agroforestry. CRC Press. pp 139-154.
26. Imran Ul Haq and **Siddra Ijaz**. **(2020).** History and Recent Trends in Plant Disease Control: An Overview. In: Plant Disease Management Strategies for Sustainable Agriculture through Traditional and Modern Approaches. Springer Nature, pp 1-13.
27. Imran Ul Haq, **Siddra Ijaz** and Nabeeha Aslam Khan. **(2020)**. Application of Nanotechnology for Integrated Plant Disease Management. In: Plant Disease Management Strategies for Sustainable Agriculture through Traditional and Modern Approaches. Springer Nature, pp 173-185.
28. **Siddra Ijaz** and Imran Ul Haq. **(2020).** Genome Editing Technologies for Resistance Against Phytopathogens: Principles, Applications and Future

Prospects. In: Plant Disease Management Strategies for Sustainable Agriculture through Traditional and Modern Approaches. Springer Nature, pp 237-245

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30. Imran Ul Haq, **Siddra Ijaz**, Qaiser Shakeel, Guoqing Li, Long Yang, Ifrah Rashid. **(2020).** Fungi: Cynosure of Ornamental Palms Diseases. In: Etiology and Integrated Management of Economically Important Fungal Diseases of Ornamental Palms. Springer Nature, pp 85-113.
31. Muhammad Kaleem Sarwar, Rashda Naheed, **Siddra Ijaz**, Imran Ul Haq. **(2020).** Fungal Diseases of Lady Palm (Rhapis excelsa) and Fishtail Palm (Caryota mitis). In: Etiology and Integrated Management of Economically Important Fungal Diseases of Ornamental Palms. Springer Nature, pp 237-249.
32. **Siddra Ijaz** and Maria Babar. **(2020).** Ornamental Palms: Molecular Taxonomy, Ecology and Distribution. In: Etiology and Integrated Management of Economically Important Fungal Diseases of Ornamental Palms. Springer Nature, pp 41-72.
33. Imran Ul Haq and **Siddra Ijaz**. **(2019).** Use of Metallic Nanoparticles and Nanoformulations as Nanofungicides for sustainable disease management in plants. In: Nanobiotechnology in Bioformulations, Springer Nature, pp 289-316.
34. **Siddra Ijaz** and Imran Ul Haq. **(2019).** Gene Cloning: An Overview. In: Recombinant DNA Technology. Cambridge Scholars Publisher. pp 1-17.
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36. **Siddra Ijaz** and Imran Ul Haq. **(2019).** Concept and Approaches in Plant Genetic Transformation. In: Recombinant DNA Technology. Cambridge Scholars Publisher. pp 25-39
37. **Siddra Ijaz** and Imran Ul Haq. **(2019).** Marker Genes: Tools For Tracking Plant Transformation Events. In: Recombinant DNA Technology. Cambridge Scholars Publisher. pp 41-50
38. **Siddra Ijaz** and Imran Ul Haq. **(2019).** Techniques in Molecular Biology. In: Recombinant DNA Technology. Cambridge Scholars Publisher. pp 51-66
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41. **Siddra Ijaz**. **(2017).** An Introduction to DNA. In: Molecular Basis of Life. University of Agriculture Faisalabad Pakistan Publisher. pp 1-10.
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43. **Siddra Ijaz**. **(2017)**. Genes and Genetic Code. In: Molecular Basis of Life. University of Agriculture Faisalabad Pakistan Publisher. pp 23-36.

44. **Siddra Ijaz**. **(2017**). Mechanism of Transcription in Prokaryotes. In: Molecular Basis of Life. University of Agriculture Faisalabad Pakistan Publisher. pp 37-46.
45. **Siddra Ijaz**. **(2017).** Mechanism of Transcription in Eukaryotes. In: Molecular Basis of Life. University of Agriculture Faisalabad Pakistan Publisher. pp 47-55.
46. **Siddra Ijaz**. **(2017).** Post Transcriptional Modifications of Eukaryotic Messenger RNA. In: Molecular Basis of Life. University of Agriculture Faisalabad Pakistan Publisher. pp 56-69.
47. **Siddra Ijaz**. **(2017).** Concepts of Protein Synthesis. In: Molecular Basis of Life. University of Agriculture Faisalabad Pakistan Publisher. pp 70-85.
48. **Siddra Ijaz**. **(2017).** Regulatory Mechanisms of Gene Expressions in Prokaryotes. In: Molecular Basis of Life. University of Agriculture Faisalabad Pakistan Publisher. pp 86-98.
49. **Siddra Ijaz**. **(2017).** Regulation of Gene Expression in Eukaryotes. In: Molecular Basis of Life. University of Agriculture Faisalabad Pakistan Publisher. pp 99-106.
50. **Siddra Ijaz**. **(2017).** DNA Mutation and Repair Mechanisms. In: Molecular Basis of Life. University of Agriculture Faisalabad Pakistan Publisher. pp 107-117.
51. **Siddra Ijaz**. **(2017).** Molecular Genetics and Biotechnological Application. In: Molecular Basis of Life. University of Agriculture Faisalabad Pakistan Publisher. pp 118-161.
52. **Siddra Ijaz**, Iqrar Ahmad Rana and Iqrar Ahmad Khan **(2016).** "Red rot resistant transgenic sugarcane". 101 Innovations Catalogue: Technologies for commercialization. 1st Edition, ISBN 978-969-7705-16-0.

Abstract PUBLICATION **in Proceedings of International and National Conferences**

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1. M. Farooq Haider, Imran Ul Haq, Siddra Ijaz, A. Habib and M Kaleem Sarwar. Assessment of antagonistic potential of Trichoderma spp against Neopestalotiopsis Spp causing Guava Scab in Pisidium guajava L. and the development of Trichoderma formulation for its management
2. Nabeeha Aslam Khan, Imran Ul Haq, Siddra Ijaz and Abdurehman. Guava fruit canker: an emerging threat to the Guava orchards in Pakistan
3. Muhammad Hassan, Imran Ul Haq, Anjum Faraz, Amer Habib and Muhammad K. Sarwar. 2021. Etiology and management of wilt in dioon palm (Dioon spinulosum) in Pakistan.
4. Ali Ilyas, Nasir Ahmad Khan, Abdul Rehman, Imran Ul Haq, Sajid Aleem Khan, Ali Raza, M. Muzamil Jahangir. 2021. Use of tea waste (lipton) with combination of various mixture of agricultural waste materials (wheat straw, cotton waste, corn meal, thatch grass) for cultivation of Pleurotus pulmonaious.
5. Aisha Khalid Naeem, Siddra Ijaz and Imran Ul Haq. 2021. Chemical management of ficus dieback disease: severe threat to ficus spp in Pakistan.

6. Hafiza Arooj Razzaq, Siddra Ijaz and Imran Ul Haq. (2019). Editing the stERF3 gene using CRISPR-Cas9 approach as strategic control against the late blight disease in potato (Solanum tuberosum L.) 6th International Conference, Sustainable Agriculture in changing climate: Strategies and Management. June 19-21, 2019.
7. Maria Babar, **Siddra Ijaz** and Imran Ul Haq. **(2019).** Transcriptomics and computational biology based identification and characterization of resistance gene analogues (RGAs) involved in Cercospora leaf spot resistance in mungbean (Vigna radiata L.) and disease management through nanobiotechnology. 6th International Conference, Sustainable Agriculture in changing climate: Strategies and Management. June 19-21, 2019.
8. Bukhtawer Nasir, Siddra Ijaz and Imran Ul Haq. **(2019).** Functional Characterization of resistance gene analogues (RGAs) for stem and crown rot disease resistance in Trifolium alexandrinum. 6th International Conference, Sustainable Agriculture in changing climate: Strategies and Management. June 19-21, 2019.
9. Usman Saeed, Iqrar Ahmad Rana, Siddra Ijaz and Zulfiqar Ali. **(2019).** Heterologous expression of synthetic stPR-10 gene into wheat. 6th International Conference, Sustainable Agriculture in changing climate: Strategies and Management. June 19-21, 2019.
10. Siddra Ijaz and Imran Ul Haq. **(2017).** CRISPR-Cas9 based genome editing for developing fungal disease resistance in crop plants. 3rd International Conference on "Agriculture, Food Security and Biotechnology" at NIGAB, NARC Islamabad, Pakistan. April 26-27, 2017.
11. Rashda Naheed, Muhammad Arfan, Siddra Ijaz, Shahzad M.A. Basra, Fozia Malik and Farah Gul. **(2017).** Evaluating drought tolerance in somaclonal variants of sugarcane (Saccharum officinarum L.). 2nd International symposium on advances in molecular biology of plants and Heath sciences, at University of The Punjab, Pakistan, November 21-23, 2017.
12. Siddra Ijaz. **(2016).** CRISPR-Cas9: a multiplex genome editing technique in Plants. International conference on sustainable agriculture in Pakistan. November 17-19, 2016, ISBN: 978-969-9035-13-5.
13. Maria Hasnain, Siddra Ijaz, Faiza Hassan and Imran Ul Haq. **(2016)**. Detection of epigenetic variation in in vitro regenerated plants of sugarcane using HPLC technique. International conference on sustainable agriculture in Pakistan. November 17-19, 2016, ISBN: 978-969-9035-13-5.
14. Muhammad Ashraf, Siddra Ijaz, Imran Ul Haq and Faisal Saeed Awan. **(2016).** Assessing the genetic variation in Colletotrichum falcatum isolates from sugarcane genotypes using RAPD marker approach. International conference on sustainable agriculture in Pakistan. November 17-19, 2016, ISBN: 978-969-9035-13-5.
15. Rana Muhammad Sabir Tariq, Imran Ul Haq, Siddra Ijaz. **(2016)**. Antagonistic Potential of Aspergillus niger as a successful biocontrol agent against plant pathogenic Fusarium spp. International conference on sustainable agriculture in Pakistan. November 17-19, 2016, ISBN: 978-969-9035-13-5.
16. Imran Ul Haq, Komal Ambreen, Sajid Aleem Khan, Siddra Ijaz and Rana Muhammad Sabir Tariq. **(2016).** Dynamics of total Proteins during stress alleviation in tomato

infected with cucumber mosaic virus. International conference on sustainable agriculture in Pakistan. November 17-19, 2016, ISBN: 978-969-9035-13-5.

17. Iqrar Ahmad Rana, Siddra Ijaz and Iqrar Ahmad Khan. **(2012).** Engineering sugarcane genome to improve tolerance against ascomycetic fungi. International conference on Biotechnology and Plant Breeding Perspectives towards food security and sustainability, POLAND, 10-12 September.
18. Siddra Ijaz, Azeem Iqbal Khan, Iqrar Ahmad Rana and Iqrar Ahmad Khan. **(2012).** A light on the Engineering of mitochondrial genome. SAARC Regional Conference on "New Frontier in Agricultural Genomics and Biotechnology. June 5-7, 2012.
19. **Siddra Ijaz**, Iqrar Ahmad Rana and Iqrar Ahmad Khan. **(2012).** Genetic transformation of sugarcane with antifungal genes. DAAD Life Sciences Alumni congress, Islamabad.
20. **Siddra Ijaz**, Iqrar Ahmad Rana and Iqrar Ahmad Khan. **(2012).** Engineering sugarcane with antifungal genes to enhance resistance Red rot. SAARC Regional Conference on "New Frontier in Agricultural Genomics and Biotechnology. June 5-7, 2012.
21. Naweed Anjum, **Siddra Ijaz**, Iqrar Ahmad Rana, Tariq Manzoor Khan, Ghulam Mustafa, Faiz Ahmad and Iqrar Ahmad Khan. **(2011).** Establishment of an in vitro regeneration system as a milestone for genetic transformation of sugarcane (Saccharum officinarum) against Ustilago scitaminea. .DAAD Life Sciences Alumni congress at NARC, Islamabad.
22. **Siddra Ijaz** and Iqrar Ahmad Rana. **(2011).** Little finger domain: A unique domain of Y- Family Polymerases. International Conference on Applied Genetics and Biotechnology organized by University of Agriculture, Faisalabad Pakistan. December, 8-10, 2011.
23. Muhammad Ammar, Ghulam Mustafa, Iqrar Ahmad Rana, Faiz Ahmed Joyia, Muhammad Sarwar Khan, **Siddra Ijaz**, Iqrar Ahmad Khan. **(2011).** Engineering elite sugarcane genotypes for herbicides resistance International Conference on Applied Genetics and biotechnology organized by University of Agriculture, Faisalabad Pakistan. December, 8-10, 2011.
24. Rana, I.A., Rehman, H.M., Mustafa, G., **Siddra Ijaz**., Joyia, F.A., and Khan, I.A. **(2011).**Establishment of Regeneration System for Micropropagation and Genetic Transformation of Dalbergia sissoo. Abstract published in the proceedings of Botanical congress held in Berlin, Germany. September, 22-26, 2011.

POPULAR ARTICLES

1. CRISPR-CAS 9: Aik Jadeed Inqalabi Technology. Daily Ace News, 20 May 2017 (Urdu)
2. Mungbean: A new hope for cancer patients. The Nation, Lahore 4 April 2017 (English)
3. Genetic Engineering Kay Zareay Kamad Mein Rata Roag Bemarii Kay Khilaaf Quwat-e-mudafiat. Zaraii Digest, University of Agriculture Faisalabad. July-September, 2012 (Urdu)
4. Biotechnology, a new horizon for crop improvement. Published online on 2011 at www.Agri-hunt.com (English)

RESEARCH PROJECTS Granted

PRINCIPAL INVESTIGATOR

DNA barcoding of Quinoa (Chenopodium quinoa) germplasm and its associated pathogens for taxonomic identification to improve crop diversification

Funding Agency: ALP PARC
Amount: 10.010 Million Rs
Duration: 36 months
Status: On going

Resistance gene analogues based molecular identification for dieback disease resistance in Shisham
Funding Agency: USPCAS- AFS and PARB
Amount: 13.873 Million Rs **(**$USD75000 and 6.373 Million Rs)
Duration: 36 months
Status: Completed

Transcriptomics based understanding of Cercospora Leaf Spot Resistance in mungbean and disease management through nanotechnology.
Funding Agency: Higher Education Commission (HEC), Pakistan
Amount: 2.217327 Million Rs
Duration: 36 months
Status: Completed

Development of short duration, high yielding and disease resistant mungbean cultivars for Rice-Wheat cropping system
Funding Agency: Punjab Agricultural Research and Development Board (PARB), Pakistan
Total Amount: 30.440 Million Rs
Duration: 60 months
Status: Completed

Co-PRINCIPAL INVESTIGATOR

Combined application of microbial antagonists and chemicals to avoid Clogging of emitters in drip irrigation system. Funding Agency: ALP-PARC
Amount: 6.991 Million Rs
Duration: 36 months
Status: Ongoing

Biological control of Potato diseases, including Fusarium Dry rot, scab, and disease caused by Phoma spp. Funding Agency: Pepsi Cola International (Pvt.) Ltd. Lahore
Amount: 4.88 Million Rs
Status: Ongoing

Fusarium wilt of cut flower crops (Gladiolus, Mari Gold and Chrysanthemum): selection for resistance and sustainable control.
Funding Agency: Higher Education Commission (HEC), Pakistan
Amount: 1.96 Million Rs
Duration: 36 months
Status: Completed

Ph.D. Students Supervised as Major Supervisor and Co-Supervisor

S. #	Name of Student	Year	Deptt.	Title	Status
1	Zakia Habib	2025	CABB	Hierarchical analysis of Chenopodium quinoa and associated fungal pathogens to improve crop diversification	Supervisor
2	Maria Babar	2023	CABB	Resistance Gene Analogs (RGAs) probing and nanobiotechnology based management of Cercospora leaf spot disease in mungbean (Vigna radiata L.)	Supervisor
3	Hafiza Arooj Razzaq	2023	CABB	Dissecting the *StERF3* gene with CRISPR/Cas9 approach against *Phytophthora infestans* to evaluate it for the late blight disease in potato (Solanum tuberosum L).	Supervisor
4	Bukhtawer Nasir	2022	CABB	Functional characterization and expression analysis of NBS-LRR class of R genes against stem and crown rot disease in Trifolium alexandrinum L	Supervisor
5	M Zunair Latif	2023	Plant Pathology	Shisham Dieback Disease: Operational Taxonomy of Fungal Pathogen(s) and Disease Management	Co-Supervisor
6	Owais Yasin	2022	Plant Pathology	Development of integrated disease management plan for guava die back in Pakistan	Co-Supervisor
7	Anjum Faraz	2022	Plant Pathology	Management of Stem and crow rot of Berseem Clover (Trifolium alexandrinum) in Pakistan	Co-Supervisor
8	Aisha Naeem Khalid	2019	Plant Pathology	Molecular characterization of fungal pathogen associated with Ficus Anthracnose and its integrated management.	Co-Supervisor
9	Rashda Naheed	2018	Botany	Enhancing and evaluating drought tolerance	Co-Supervisor

				in Saccharum officinarum L. using molecular tool box	

List of Ph.D. Students Supervised as Member Supervisory Committee

S. #	Name of Student	Year	Deptt.	Title	Status
1	Usman	2019	CABB	Heterologous Expression of Potato PR-10 Gene against Biotic and Abiotic Stresses In Wheat (Triticum Aestivum L.)	Member
2	Iqra	2022	Plant Pathology	Characterization of Colletotrichum spp. associated with guava dieback in Pakistan using pathological and molecular approaches	Member

List of M.Sc. (Hons.)/M.Phil. Students Supervised as Major Supervisor

Sr. #	Student Name	Thesis Title	Passing Year
1.	Riffat Malik	In silico characterization of Dieback induced differentially expressed identified RGA (Ds-DbRCaG-07-Rga1p) for deciphering the role in genetics relays resistance in *Dalbergia sissoo*	2023
2.	Ghalia Nadeem	In silico characterization of differentially expressed resistance gene analog (RGA), Ds-DbRCaG-10-Rga13p) identified in Dieback induced transcriptome in *Dalbergia sissoo*	2023
3.	Tuba Amjad	In silico characterization of resistance gene analog (RGA), Ds-DbRCaG-05p-Rga5p) identified in Dieback induced transcriptome in *Dalbergia sissoo*	2023
4.	Misha Shahzadi	Genome wide in silico analysis of heat shock protein (HSP) family in *Vigna* species	2023
5.	Muti-Ullah	Assessing the intraspecific diversity in *Cannabis sativa* population using *rbcL*, a DNA barcode marker	2023
6.	Hafiz Mohsin Akram Babar	Assessment of intraspecific diversity in *Cannabis sativa* population using *trnH-psbA* DNA barcode marker	2023
7.	Muhammad Faizan Malik	Assessing the intraspecific diversity of *Cannabis sativa* population using *matK* a DNA barcode marker	2023
8.	Usama Raza	Genetic diversity analysis of *Cannabis sativa* using RAPD markers	2023
9.	Maham Farid (2016-ag-6214)	ISSR based DNA profiling of *Skimmia laureola* population in Pakistan	2022
10.	Muhammad Asif (2020-ag-1476)	Assessing the geographic intraspecific variation of endangered plant species, *Fagonia cretica* and *Tecomella undulata*	2022
11.	Sadia Ali (2020-ag-1459)	DNA barcoding of an endangered plant species, *Salvadora oleoides*	2022
12.	Aqsa Latif (2015-ag-7056)	Marker-assisted selection of M4 population (Segregating material I) of mungbean for Yellow Mosaic Virus Disease (MYMVD) resistance	2021
13.	Ayesha Javaid (2019-ag-3576)	Fingerprint identification and analysis of Berseem germplasm using expressed sequence tags based simple sequence repeats	2021

		(EST-SSRs) molecular markers	
14.	Bilal Mujtaba (2019-ag-2510)	DNA profiling of mungbean population (M4) of segregating material I based on SCAR and RGAs markers linked to Mungbean Yellow Mosaic Virus (MYMVD) resistance	2021
15.	Hafsa Ahmad Nawaz (2015-ag-5446)	Marker assisted screening of M3 population (segregating material II) of mungbean for Yellow Mosaic Virus Disease (MYMVD) resistance	2021
16.	Hira Khalid (2013-ag-2374)	Cloning of sgRNA Expression cassette of DDTFR10/A gene of *Solanum lycopersicum* for CRISPR/Cas9 guided Genome Editing	2021
17.	Mahwish Mustafa (2015-ag-5458)	DNA profiling of mungbean population (M3) of segregating material II based on SCAR and RGAs markers linked to mungbean yellow mosaic virus (MYMVD) resistance	2021
18.	Gohar Azeem (2018-ag-4044)	Marker assisted screening of F4 (Segregating material I) population of Mungbean for Yellow Mosaic Virus Disease (MYMVD) resistance genotypes	2020
19.	Samara Mukhtar (2018-ag-4444)	Marker assisted screening of F3 (Segregating material II) population of Mungbean for Yellow Mosaic Virus Disease (MYMVD) resistance	2020
20.	Zakia Habib (2018-ag-4445)	Genome wide analysis of DNA binding one zinc finger (DOF) family in *Vigna* species	2020
21.	Anam Mushtaq (2017-ag-3611)	DNA profiling of M3 population of mungbean for screening of Mungbean yellow mosaic virus disease (MYMVD) resistance based on sequence characterized amplified region (SCAR) and resistance gene analogues (RGAs) Marker	2019
22.	Amina Bashir (2017-ag-3613)	Molecular characterization of mungbean candidate genotypes of M3 population using SSR markers	2019
23.	Hina Asghar (2017-ag-3609)	Molecular characterization of mungbean genotype of M3 population for mungbean yellow mosaic virus disease resistance	2019
24.	Kiran Sher Muhammad (2015-ag-3345)	SSR marker assisted selection of F3 population of mungbean for Mungbean yellow mosaic virus disease resistance	2019
25.	Mubbasher Karim (2013-ag-3316)	Screening of Mungbean Yellow Mosaic Virus Disease (MYMVD) Resistant Population Using Sequence Characterized Amplified Region (SCAR) and Resistance Gene Analogues (RGAs) Markers	2019
26.	Saira Nawaz (2017-ag-3610)	DNA barcoding of *Dalbergia* species in Pakistan based on *mat*K and ITS loci	2019
27.	Syeda Tahseen Zahra (2017-ag-3612)	Molecular screening of F3 population of mungbean using SCARs and RGAs markers linked to mungbean yellow mosaic virus disease (MYMVD) resistance	2019
28.	Asma Karamat Ali (2016-ag-1590)	Marker assisted screening of mungbean genotypes for Mungbean Yellow Mosaic Virus Disease (MYMVD) resistance	2018
29.	Hafiza Arooj	ISSR based genetic diversity in shisham (*Dalbergia sissoo*	2018

	Razzaq (2012-ag-2902)	Roxb.) population of lower Punjab, Pakistan	
30.	Maria Babar (2012-ag-2851)	ISSR based genetic diversity in shisham (*Dalbergia sissoo* Roxb.) population of upper Punjab, Pakistan	2018
31.	Mayra Naeem (2016-ag-295)	Upshot on the level of glutathione peroxidase by ascorbic acid in rabbits during health trauma	2018
32.	Muhammad Asif Sakhawat (2016-ag-2028)	DNA Barcoding of Shisham (Dalbergia Sissoo) of Upper Punjab of Pakistan	2018
33.	Mubashir Abbas (2012-ag-3164)	DNA Barcoding of Shisham (*Dalbergia Sissoo*) population of Lower Punjab, Pakistan	2018
34.	Nadia Ahmad Ali (2016-ag-2333)	Molecular characterization of mungbean genotypes using SSR based marker assisted approach	2018
35.	Sahrash Naz (2012-ag-3373)	Random Amplified Polymorphic DNA (RAPD) marker based DNA profiling of mungbean genotypes	2018
36.	Hadia Hussain (2015-ag-710)	Molecular screening of Mungbean Yellow Mosaic Virus (MYMV) resistant candidate genotypes using *MYR-1* gene based primer	2017
37.	Nuzhat Hameed (2015-ag-675)	Simple sequence repeats (SSR) based DNA profiling of *Vigna radiata* L.	2017
38.	Asma Sikandar (2014-ag-1529)	Genotyping of *in vitro* regenerated plants of sugarcane using RAPD approach	2016
39.	Ayaz Ahmad (2014-ag-8047)	Resistance gene analogues based genetic profiling of sugarcane germplasm for red rot resistance	2016
40.	Hafiza Maryam Ashfaq (2014-ag-1065)	Tissue culture system establishment in frost sensitive sugarcane genotypes for genetic transformation	2016
41.	Muhammad Ashraf (2007-ag-2487)	Assessing the genetic variation in *Colletotrichum falcatum* isolates from sugarcane genotypes using RAPD marker approach	2016
42.	Muhammad Tasin (2010-ag-3609)	Genotyping of Sugarcane genotypes for red rot disease using resistance gene analogues	2016
43.	Muhammad Irfan Arshad (2007-ag-2549)	Establishment of an in vitro micropropagation system in selected frost tolerant local genotypes of potato (solanum tuberosum, L.) for their disease free launching in farmers' field	2016
44.	Muhammad Hasan (2014-ag-8742)	Isolation and cloning of galactinol synthase gene, *AtGolS3* from *Arabidopsis thaliana*	2016
45.	Maria Hasnain (2014-ag-833)	Assessing epigenetic variation in *in vitro* regenerated plants of sugarcane using HPLC Technique	2016
46.	Muhammad Asif Nawaz (2010-ag-2590)	Molecular Characterization of frost sensitive and frost tolerant sugarcane genotypes	2016
47.	Maria Mushtaq (2014-ag-1170)	Assessing tissue culture based genetic variation in sugarcane	2016

48.	Ayesha Shafi (2009-ag-2683)	Isolation and cloning of heat shock protein gene *HSP70* from *Trichoderma harzianum*	2015
49.	Erum Shah (2009-ag-2527)	Optimization of photomixotrophic conditions for an efficient and expedite *in vitro* tuberization system in selected germplasm of *Solanum tuberosum* and their effect on morphological, anatomical, physiological and biochemical characteristics of microtubers	2015
50.	Saba Idrees (2013-ag-643)	Protocol optimization for *in vitro* regeneration system in frost sensitive potato cultivars: as a basis for genetic transformation studies along with the optimization of PCR conditions for the isolation of ZmGolS3 gene from *Zea mays* L.	2015
51.	Bukhtawer Nasir (2008-ag-2100)	Isolation of small heat shock protein gene, *HSP24* from *Trichoderma harzianum* and construction of transformation vector	2014
52.	Syed Shan-e-Ali Zaidi (2007-ag-2015)	Development of source independent micropropagation system in *Dalbergia sissoo* Roxb.	2013
53.	Farooq Saeed (2010-ag-1208)	Screening of Wheat Germplasm for Regeneration and Transformation Potential along with PCR analysis of Rust Related Resistance Gene Analogues (RGAs)	2012
54.	Naweed Anjum (2010-ag-44)	Establishment of an *in vitro* regeneration system as a milestone for genetic transformation of sugarcane (*Saccharum officinarum* L.) against *Ustilago scitaminea*	2012

FOREIGN TRAININGS

1. **USA (California):** Visiting Research Scholar in Plant Reproductive Biology Lab, University of California Davis, USA (2015-2016). **Supervisor:** Prof. Dr. Eduardo Blumwald; **Training program Detail**: CRISPR/cas9 construct designing

AWARDS

1. Six Months Research/Training Program Awarded Under Exchange Program At University Of California (Davis) Under The Project Titled U.S-Pakistan Center For Advanced Studies In Agriculture And Food Security (USPCAS-AFS) University Of Agriculture, Faisalabad (2015-2016)
2. Merit scholarship throughout B.Sc. (Hons.) and M.Sc. (Hons.) degrees
3. Appreciation letter with prize for PhD degree

4. Letter of appreciation and honorarium (80000/-) received from Vice Chancellor/Chairman of BoD, for writing a book.

TRAININGS/WORKSHOPS/ CONFERENCE ATTENDED

1- One-day symposium on Nanomedicine: Current scenario and Future Perspectives. August 6, 2019. Organized by Institute of Pharmacy, Physiology and Pharmacology, University of Agriculture Faisalabad, Pakistan

2- 6th International Conference on Sustainable Agriculture in Changing Climate: Strategies and Management. June 19-21, 2019. Organized by University of the Poonch, Rawalakot, Pakistan

3- International Entomological Congress-2019. April 08-10, 2019. Organized by Department of Entomology and Pakistan Entomological Society, University of Agriculture Faisalabad, Pakistan

4- International Training Workshop on Biotechnology, Bioinformatics and Biochemistry. April 2-3, 2019. Organized by Center of Agricultural Biochemistry and Biotechnology (CABB), University of Agriculture Faisalabad, Pakistan **(as a Resource Person)**

5- Agroforestry on Problematic Soil in Faisalabad and Adjoining District. March 28, 2019. Organized by Department of Forestry and range Management, University of Agriculture Faisalabad, Pakistan

6- 2nd National One day Symposium on One-Health. December 12, 2018. Organized by Faculty of Veterinary Science University of Agriculture Faisalabad and The Brook Pakistan

7- Soybean: Challenges and Opportunities. September 17-18, 2018. Organized by Department of Agronomy and Department of Plant Breeding and Genetics, University of Agriculture Faisalabad, Pakistan

8- Two days training of Presiding officers, General Election **2018**, Organized by Election Commission of Pakistan

9- 6th International Conference of Pakistan Phytopathological Society "Plant Health for Sustainable Agriculture" A focused approach for food security under Changing Climate, November 20-22, **2017**. Organized by Department of Plant pathology, Bahauddin Zakariya University, Multan and Central Cotton Research Institute, Multan, Pakistan

10- International Seminar and Training Workshop on CRISPR/Cas based genome Editing. September 19-20, **2017**. Organized By, US.-Pakistan Center for Advanced Studies in Agriculture and Food Security, University of Agriculture Faisalabad, Pakistan **(as a Resource Person)**

11- 3rd International Conference on "Agriculture, Food Security and Biotechnology" April 26-27, **2017** organized by NIGAB, NARC Islamabad, Pakistan **(as a SPEAKER)**

12- Capacity Building Workshop "Biosafety Measures in Agriculture" February 20-21, **2017**, organized by ORIC, University of Agriculture, Faisalabad

13- International conference on sustainable agriculture in Pakistan, November 17-19, **2016**, organized jointly by University of California, Davis, USA and US-Pakistan Center for Advanced Studies in Agriculture and Food Security (USPCAS-AFS) at University of Agriculture, Faisalabad (**as a SPEAKER**)

14- A seminar on ' HEC Technology Development Fund', October 01, **2016**, jointly organizing by ORIC and USPCAS-AFS, University of Agriculture Faisalabad, Pakistan

15- Workshop on Biotechnology for Crop Improvement: GM crops production, challenges and opportunities, September 5-7, **2016**. Organized By, US.-Pakistan Center for Advanced Studies in Agriculture and Food Security, University of Agriculture Faisalabad, Pakistan **(as a Resource Person)**

16- National Workshop on Organic Food and Heath: Avenues of Innovation and entrepreneurship, August 29, **2016**, Lahore, Organized by Pakistan Council for Science and Technology.

17- National One Day Symposium on One-Health, August 08, **2016**, Organized By, US.-Pakistan Center for Advanced Studies in Agriculture and Food Security, University of Agriculture Faisalabad, Pakistan

18- SPS compliance through the fresh produce supply chain, August 3-4, **2016**, Phytosanitory Risk Management program in Pakistan, CAB International, Central a d West Asia.

19- Public-Private partnership (PPP) workshop organized by USP CAS- AFS, UAF at Serena Faisalabad, July 25-26, **2016** Faisalabad Pakistan

20- Hybrid Rice: A Global Perspective, University of California Davis' seed central forum event , April 14, **2016**, UC Davis, USA

21- The Collaboration for Plant Pathogen Strain Identification (CPPSI), University of California Davis' seed central forum event. March 10, **2016**, UC Davis, USA

22- Featuring Pacific Biosciences of California, Afingen and Trace Genomics February 11, **2016**, UC-Davis, USA

23- Grain legume breeding in California and East Africa: contrasting endeavors speaker Dr. Paul Gepts, February 11, **2016** , UC-Davis, USA

24- Nursery/Green house General safety training January 15, 2016, UC-Davis, USA

25- Special Event Roundtable January 14, **2016**, UC-Davis, USA

26- EndNote Introduction for Biological / Agricultural / Environmental Sciences Researchers, organized by Library Instruction Service December 16, **2015**, UC Davis, USA

27- Forum presentation with speaker Dr. Etienne Rabe of the wonderful Company December 10, 2015, UC-Davis, USA

28- Initial Health and safety training December 7, **2015**, UC-Davis, USA

29- Food, Ag & Health solution summit December 2-3, **2015**, UC-Davis, USA

30- 7th National Seminar for Capacity Building of CAM practitioners and Demonstration activities of Silymarin extraction, Feb, 27, **2015**, organized by Department of Biochemistry at University of Agriculture Faisalabad

31- Site-specific and economical crop production technology and its dissemination through ICT, June, 6, **2015** held at University of Agriculture Faisalabad

32- Workshop/training on Self-Assessment and Quality improvement in Research Reports, on 21-01-**2014**, organized by QEC-UAF

33- International workshop on Enquiry based learning, March 01, **2014**, organized by ORIC-UAF.

34- Workshop/training on Self-Assessment Reports (SARs), on 24-03-**2014**, organized by QEC-UAF

35- Project formulation workshop, December 3-4, **2013**, organized by Pakistan Science Foundation and ORIC at UAF

36- Learning By Doing: Tools and techniques for Working as a team, May, 2,3, 6 &7, **2013** organized by office of the Senior Tutor, University of agriculture Faisalabad, Pakistan

37- Training Workshop for testing Transgenic Crop, September 5, **2012.**

38- International Conference on Applied Genetics and Biotechnology, December, 8-10, **2011**

Interview Published:

Interviewed by Levi McGarry on "Collaborative research on Shisham Dieback, published in UC Davis College of Agricultural and Environmental sciences and International Program

WORKSHOP ORGANIZED

i. Organized an International Workshop on Biotechnology for Crop Improvement: GM crops production, challenges and opportunities September 5-7, 2016

- Resource person
- Member of Publication committee
- Member of Hall management committee
- Member of on-site registration and reception committee
- Member of Publication committee
- Member of Food arrangement committee

ii. Organized an International Seminar and Training Workshop on CRISPR/Cas based genome editing, September 19-20, 2017

- Resource person
- Member of Publication committee
- Member of Hall management committee
- Member of on-site registration and reception committee
- Member of Publication committee
- Member of Food arrangement committee

2) Organized HEC felicitation event, October 7th, 2017

Professional Membership

6. Deputy Managing Editor, PAKJAS (2021-2023)

7. Member of Fungal Molecular Biology Laboratory Culture Collection (FMB-CC-UAF) affiliate member of the World Federation for Culture collections
8. Member of American Phytopathological Society (APS)
9. Member of American Society of Plant Biologists (ASPB)
10. Member of National Curriculum Revision Committee, (2013-2014)
11. Associate Senior Tutor, University of Agriculture Faisalabad, Pakistan
12. Tutor of TGM-131, University of Agriculture Faisalabad, Pakistan
13. Co-Tutor for Tutorial group Salahuddin Ayubi II
14. Reviewer of MDPI journals
15. Reviewer of Frontier in Plant Sciences
16. Reviewer of PLOS One
17. Reviewer of the SCIENCE DOMAIN international (SDI) journal
18. Reviewer of the Journal of the Science of Food and Agriculture - Wiley Online Library
19. Reviewer of journal PAKJAS
20. Team member for Filled out Quality Assurance Proforma
21. Secretary Board of Studies (CABB), UAF
22. Member Board of Studies (CABB), UAF. This board decides and approves curricula for various degree programs and other related teaching activities
23. Member of departmental committee for physical verification of chemicals purchased under research projects at CABB
24. Convener and Member of different committees for making arrangements of 20th convocation of University of Agriculture Faisalabad
25. Member of seminars evaluation committee of CABB
26. Member of Synopsis scrutiny Committee

RESEARCH FACILITY DEVELOPED

1	Developed Molecular Biology facility in CABB (Centre of Agricultural Biochemistry and Biotechnology), UAF Under the PARB Funded Project # 532. This facility includes PCR, centrifuge machine, Gel electrophoresis, Incubator and fridge for chemical storage. Now my lab has the capacity to conduct molecular biology work.

Extra-Curricular activities and Certificates:

- 2nd position in quiz competition on "international DNA DAY celebration" held on 23-25 April 2009 in University of Veterinary Sciences Lahore

Community Services

I am the curator of Fungal Molecular Laboratory Culture Collection, University of Agriculture, Faisalabad, Pakistan (FMB-CC-UAF), which is an affiliated member of World Federation of Culture Collection (WFCC). This Fungal Culture Collection was established in January 2017. Here microbial cultures are preserved and maintained in viable state without change to any of its genetics, physiological or morphological characteristics and different fungal strains are preserved as principal source of material for subsequent research. **Moreover, to supply the fungal culture and related services**

to the researchers working in institutions, universities and industries, is the core objective of FMB-CC-UAF. A diverse array of phytopathogens and microbes have been preserved and identified based on morphology and DNA barcoding using different housekeeping genes such as ITS, Translation Elongation Factor 1- α (TEF1-α), Calmodulin, Tubulin, LSU, Actin, Glyceraldehyde 3-phosphate dehydrogenase etc. In addition to this, DNA barcoding of plants, Dalbergia sissoo, Dalbergia Latifolia, and different ornamental palms has also been performing using ITS, rbcl and matK regions.