

CURRICULUM VITAE

MAJID KHAN

Contact Information

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Home Address

Professor colony
Street #1, House #145A
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Khyber Pakhtunkhwa, Pakistan.

Objective

Looking for a group of high professionals with well equipped labs and resources to share and express my research skills and experience in the field of Molecular Biology, Biotechnology and Genetic Engineering, and learn from them.

Experience

Designation:	Assistant Professor (Current Position)
Employer:	Institute of Biotechnology and Genetic Engineering (IBGE) The University Of Agriculture Peshawar. (Pakistan)
Duration:	Since November 2017
Designation:	Lecturer
Employer:	Institute of Biotechnology and Genetic Engineering (IBGE) The University Of Agriculture Peshawar. (Pakistan)
Duration:	Since September 2011-October 2017
Designation:	Lecturer in Biology
Employer:	AUPS & College The University Of Agriculture Peshawar. (Pakistan)
Duration:	September 2007- September 2011
Designation:	Lecturer in Biology
Employer:	Gov't Post Graduate College Charsadda. (Khyber Pakhtunkhwa) Pakistan
Duration:	August 2006 to August 2007

Education

Ph.D (Biotechnology) Institute of Biology Leiden (IBL) Leiden University, The Netherlands	22 March 2017
M.Phil (Biotechnology) Institute of Biotechnology and Genetic Engineering, The University of Agriculture	Jan 2008–March2010

Peshawar (Pakistan)
CGPA 3.5

B.Sc. (Hons) Biotechnology
Center of Biotechnology
University of Peshawar, Pakistan
1st division/B Grade

January 2001– May 2005

B.Sc. (Zoology & Chemistry)
(Full Time 2-year post 14 years education)
University of Peshawar, Pakistan
1st division/B Grade

August 1999 – September 2000

Teaching (BS, Master & PhD Courses)

M.Phil. and PhD courses

Code	Course Title	Degree	Credit hrs
IBGE-725	Environmental Biotechnology	Ph.D. Biotechnology	4 (4-0)
IBGE-711	Genetic Engineering Lab-II		1 (1-0)

BS Biotechnology, Microbiology and Bioinformatics Courses

Code	Course Title	Degree	Credit hrs
IBGE-612	Downstream Technology	BS-Biotechnology	3 (3-0)
IBGE-512	Microbial Biotechnology	BS-Biotechnology	3 (2-2)
IBGE-606	Special Paper	BS-Biotechnology	3 (3-0)
IBGE-602	Skill Enhancement	BS-Biotechnology	1 (1-0)
Micro 515	Nano-Biotechnology	BS-Microbiology	3 (3-0)
IBGE-412	Biochemistry II	BS Bioinformatics	3 (3-0)
IBGE-304	Cell Biology	BSc-Biotechnology	3 (2-1)
Micro 515	Research Methodology and Skill Enhancement	BSc-Microbiology	3 (3-0)
IBGE-511	Environmental Biotechnology	BS-Biotechnology	3 (2-1)
BI-312	Molecular Biology	BSc-Bioinformatics	3 (2-1)
IBGE-501	Genetic Recourse conservation	BS-Biotechnology	3 (2-1)

IBGE-412	Ecosystem and Environment	BS Biotechnology 5 th	3(2-2)
IBGE-312	Principles of Genetics I	BS-Biotechnology 2 nd semester	3(2-2)

Student Supervision

	S.No	Student Name	Title	Status / Remarks
PhD	1	Muhammad Abdullah	Analysis of Leaf Rust Resistance in Wheat using <i>Agrobacterium</i> Mediated Translocation of Anti-Fungal Protein	Oral compressive exam and pre-BOS seminar are done; Synopsis and research are in progress
M. Phil				
	01	Hurya Javed	Study of the Chlorophyll content at different developmental stages in AHL15GR transgenic tobacco lines CH	Degree Awarded (2019)
	02	Nayab Ali	Study of the nicotine content at different developmental stages in AHL15GR transgenic tobacco lines	Degree Awarded (2019)
	03	Muhammad Owais	Evaluation of <i>Agrobacterium</i> -mediated transient GFP expression in tomato, potato and brassica	Degree Awarded (2021)
	04	Muhammad Abdur Rehman	Finding the transient transformation efficiency of GFP driven by 35Spromoter in wheat, rice and maize	Degree Awarded (2021)
	06	Farman Ullah	Induction of Polycarpy in <i>Brassica juncea</i> (Mustard) for enhanced seed production using <i>Arabidopsis AHL15/rejuvenator</i> gene	Degree Awarded (2021)
	01	Zindagi Shakeel	Evaluation of drought stress in <i>AHL15GR</i> inducible transgenic <i>Nicotiana tabacum</i>	Degree Awarded (2023)
	01	Hafsa Shahid	Induction of polycarpy in Mustard (<i>Brassica juncea</i>) for enhanced seed production using <i>Arabidopsis AHL15</i> gene	Degree Awarded (2024)
	02	Muhammad Salman	Induction of regeneration process in <i>Brassica juncea</i> using <i>Agrobacterium</i> -mediated translocation of developmental regulator proteins	Degree Awarded (2024)
	03	Aqsa Ali	Evaluation of genetic mutations causing Parkinson's disease in population of KhyberPakhtunkhwa	Degree Awarded (2025)
	04	Saqib Ullah	Molecular analysis of mutations causing epilepsy disease in Pashtoon consanguinity	Degree Awarded (2025)
	05	Aroba Bashir	Green Synthesis of Silver Nanoparticles from <i>Momordica balsamina</i> seed extract and their antimicrobial activity against <i>Xanthomonas citri</i>	Degree Awarded (2025)
	06	Tuba Zafar	Expression and Visualization of <i>Agrobacterium</i> -mediated antifungal protein translocation in plant cell using generic Split GFP system.	Degree Awarded (2025)
	07	Hafsa Urooj	In-vitro study of the <i>Agrobacterium</i> mediated Chitinase protein translation against different Phytofunga pathogens	Degree Awarded (2025)

	08	M. Farhan	To evaluate the impact of the newly developed Biofertilizer (by PCSIR labs) on plant growth and determine the optimal application rate for sustainable crop production.	Degree Awarded (2025)
	09	Maryam Shah	Green synthesis of silver nanoparticles from <i>Euphorbia helioscopia</i> exudates and their antibacterial and antifungal activity against selected bacteria and fungi	Thesis approved by BOS, waiting for Viva
	10	Hafiza Misbah	To study the effect of <i>Agrobacterium</i> -mediated Chitinase Protein translocation on Fungal disease in plants	Research completed & Thesis in progress
	11	Abid Mehmood	Evaluation of Biotic Stress Resistance in AHL15GR Transgenic <i>Nicotiana tabacum</i>	Synopsis approved, Research in progress
	12	Ahlam Murad	Evaluation of the potential of dandelion root extract as a natural option for managing oral infections and improving endodontic treatment outcomes.	Synopsis approved, Research in progress
	13	Uroosa Naz	Somatic Embryogenesis Induction via <i>Agrobacterium</i> -Mediated BBM Protein Translocation: A Novel Strategy for Vinblastine Enhancement in <i>Catharanthus roseus</i> .	Synopsis in progress

Research Work Titles

- **Ph.D Thesis** – Molecular engineering of plant development using *Agrobacterium*-mediated protein translocation. (**Supervisors: Prof. Dr. P. J. J. Hooykaas and Prof. Dr. Remko Offringa**) from **Leiden University Netherlands**
- **M.Phil Thesis** – *Agrobacterium*-mediated transformation of Tomato for enhanced resistance to fungal phytopathogens. (**Prof. Dr. Raham Sher Khan**) from **Agriculture University Peshawar Pakistan**.

Research Grants Awarded as PI

S. No.	Project	Title	Amount (Rs. in millions)	Funding Agency	Status
1.	SRGP	Genetic modification of <i>Brassica juncea</i> (Mustard) for enhanced seed production	0.5	Higher Education Commission of Pakistan (HEC)	Completed
2.	NSLP	Enhancement of leaf rust disease resistance in wheat using <i>Agrobacterium</i> -mediated protein translocation (a non GMO approach)	3.2	Pakistan Science Foundation (PSF)	On-Going
3.	Network of High-tech equipment Grant	Atomic Absorption Spectrophotometer	0.5	The Directorate General of Science and Technology Khyber Pakhtunkhwa	completed

Research Publications

1. Ahmad, A., Ibrahim, M., Yaqoob, **M. Khan et al.** (2026). Genome sequencing reveals genes under selection for olfactory transduction in highland sheep. *Mol Genet Genomics* 301, 155
2. Khalid, A., Assad, N., Naeem-ul-Hassan, **M. Khan et al.** (2026.) Synthesis of bio-inspired silver nanoparticles using *Geranium wallichianum* D. Don ex Sweet. (Geraniaceae) leaf extract for antibacterial activity and colorimetric detection of Hg^{2+} . *Discover Nano* 21, 231
3. Syed Muzammil Hussain Shah1, Aqsa Ali, Hafsa Urooj, Rabia Anum1, **Majid Khan**, Zainab Liaqat. (2026). A Case Report on Huntington's Disease Presenting with Progressive Motor and Cognitive Decline. *INTERNATIONAL JOURNAL OF APPLIED AND CLINICAL RESEARCH*, 4(01), 5-6.
4. Khan, F., **M. Khan**, Din, I. U., Mohamed, H. I., Rezk, A. A., Al-Dossary, O., Alsubaie, B., & Ismail, A. M. (2025). Influence of *Bacillus subtilis* bioinoculant application methods on growth, yield traits, and biochemical contents of wheat (*Triticum aestivum* L.) cultivars. *Research in Agricultural Research*, 43, 1–12.
5. Mustafa K., **M. Khan**, M. tayyab, A. Gul, Zaheer ullah, A. Khan, M.S. Muhmand, R. Ali, S. Mohammad. (2025). Study Of the Effect of MS, DKW, And Wpm Media on In-Vitro Micropropagation of Ginger. February 2025. *Journal of Survey in Fisheries Sciences* 11(4):428-436. DOI: 10.53555/sfs.v11i4.3234
6. Tahira Mir, Muhammad Ibrahim, Muhammad Siraj, SajidAli Khan Bangash, Sher Hayat Khan, **Majid Khan**, Muhammad Tayyab, Sohail Ahmad. (2024). Novel mutations in exon 2 of follistatin (FST) gene associated with wool fiber diameter in sheep. *Small Ruminant Research*, volume 243, pages 107426, ISSN 0921-4488
7. Alam K, Din IU, Tariq S, Hayat K, Khan FU, **Khan M**, Mohamed HI. Green Synthesis and Characterization of Zinc Oxide Nanoparticles Biosynthesized from Butea monosperma Flowers and Glycyrrhiza glabra Roots and their Antioxidant and Antibacterial Properties. *Appl Biochem Biotechnol*. 2024 Nov 27. doi: 10.1007/s12010-024-05102-2.
8. Zahoor Khan, Bushra Khan, Javaid Iqbal, **Majid Khan**, Jawad Saeed, Syed Tanveer Shah, Hina, & Sanan Abid. (2024). Elicitor-Mediated Augmentation Of Podophyllotoxin Biosynthesis In Podophyllum Hexandrum Royle: Unveiling A Remarkable Anticancer Potential. *Journal of Population Therapeutics and Clinical Pharmacology*, 31(5), 1067–1080.
9. Israr Ud Din, Salman Khan, Fahim Ullah Khan, **Majid Khan**; et al. (2023). Genetic Characterization of Advance Bread Wheat Lines for Yield and Stripe Rust Resistance. *ACS Omega* 8 (29), 25988-25998
DOI: 10.1021/acsomega.3c01981
10. Ullah S, Khan MN, Lodhi SS, Ahmed I, Tayyab M, Mehmood T, Din IU, **Khan M**, Sohail Q, Akram M. (2022). Targeted metabolomics reveals fatty acid abundance adjustments as playing a crucial role in drought-stress response and post-drought recovery in wheat. *Front Genet*. 10;13:972696.
11. Saeed, M.; Ahmad, W.; Ibrahim, **M.; Khan**, M.; Ullah, F.; Bari, A.; Ali, S.; Shah, L.; Ali, M.; Munsif, F.; et al. (2022) Differential Responses to Yellow-Rust Stress Assist in the Identification of Candidate Wheat (*Triticum aestivum* L.) Genotypes for Resistance Breeding. *Agronomy*, 12, 2038
12. Khan MN, Ahmed I, Ud Din I, Noureldeen A, Darwish H, **Khan M** (2022) Proteomic insight into soybean response to flooding stress reveals changes in energy metabolism and cell wall

13. Karami, O., Rahimi, A., **Khan, M.** *et al.* (2020) A suppressor of axillary meristem maturation promotes longevity in flowering **Plants. Nat. Plants** 6, 368–376. <https://doi.org/10.1038/s41477-020-0637-z>
14. Muhammad Salman, Rizwana Rizwana, Hayat Khan, Iqbal Munir, Muhammad Hamayun, Aquib Iqbal, Abdul Rehman, Khalid Amin, Ghayour Ahmed, **Majid Khan**, Ajmal Khan & Faiz Ul Amin (2019) Synergistic effect of silver nanoparticles and polymyxin B against biofilm produced by *Pseudomonas aeruginosa* isolates of pus samples in vitro, *Artificial Cells, Nanomedicine, and Biotechnology*, 47:1, 2465-2472, DOI: 10.1080/21691401.2019.1626864
15. **Book > Plant Response Mechanisms to Abiotic Stresses** OPEN ACCESS
PEER-REVIEWED CHAPTER - ONLINE FIRST **Heterologous Expression of Genes in Plants for Abiotic Stresses** WRITTEN BY: Shahzad Ali, Nadir Zaman, Waqar Ali, **Majid Khan**, Muhammad Aasim, Asmat Ali and Muhammad Usman Submitted: April 29th, 2022 Reviewed: May 5th, 2022 Published: August 17th, 2022
DOI: 10.5772/intechopen.105171

Professional Skills

- Gene Cloning Techniques
- Protein Engineering
- Bacterial and Plant Transformation
- Plant-microbe Interaction
- Plant development and regeneration analysis
- Biochemical analysis
- Mass Spectrometry
- Stereo and confocal microscopy
- Strong communication, Leadership and Writing skills

Conferences/Training workshops

a. Training Workshop attended as Departmental Focal person

S. No.	Title	Dates	Place
01	Training Workshop on Statistical Analysis of field data Using R-Software	25 th September 2025	NARC Islamabad
02	Self-Assessment report writing and evaluation criteria of Agricultural degree programe	(February 10, 2020)	Learning Innovation Hall, HEC, Islamabad. Pakistan

b. Conferences, Workshops & Trainings attended

S. No.	Title	Dates	Place
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01	International Conference on Bioscience Innovation (Invited Speaker)	20 th – 22 th September, 2025	Center for Biotechnology and Microbiology, University of Swat
02	International conference on Sustainable Agriculture and Food security. (Oral Presentation)	27-31 August, 2023	At Bara Gali (sammur campus) By The University of Agriculture Peshawar
03	7 th International Conference: Climate Smart Agriculture: Innovations and Adaptations. (Participation)	June 15-17, 2022	Faculty of Agriculture, University of Poonch Rawalakot
04	5 th International Conference: Advances in Biosciences: Bridging the Gap between Research and Sustainable Development Goals. (Oral Presentation)	May 24-26, 2022	Center for Plant Sciences & Biodiversity. University of Swat Pakistan
05	4 th International Symposium; Advances in Molecular Biology of Plants and Health Sciences. (Oral Presentation)	December 23-24, 2021	Center of Excellence in Molecular Biology (CEMB) University of Punjab. Pakistan
06	Training on Industrial Biotechnology and Plant Tissue Culture	December 2-4, 2021	National Center of Industrial biotechnology (NCIB) Arid Agriculture University Rawalpindi. Pakistan
07	Two-days training on Biorisk management by Association for Biorisk Management.	December 19-20, 2019	The University of Agriculture Peshawar
08	Strategies for ensuring food security in the changing climate.	October 23-24, 2019	The University of Agriculture Peshawar
09	One day workshop on “CRISPR/Cas Genome Editing Technology”	May 2, 2019	Center for OMIC Science, Islamia College Peshawar
10	One day workshop on “Integration of ICT in Agriculture and Applied Research”	February 21, 2019	The University of Agriculture Peshawar
11	Two-days training course on classical and molecular approaches in wheat breeding	January 29-30, 2019	IBGE, The University of Agriculture Peshawar
12	Developing a winning research proposal	Dec 26, 2018	The University of Agriculture Peshawar
13	Two days training of Presiding Officers and senior Assistant Presiding Officers	July 11-12, 2018	Election Commission of Pakistan, Peshawar
14	8 th European Plant Science Retreat (EPSR). Oral Presentation on: <i>Agrobacterium</i> -mediated translocation of Developmental Regulators to plant cell.	June 20-23, 2016	Barcelona, Spain
15	Annual Luntern meetings (Oral and Poster Presentations)	(2013-16)	Wageningen University Netherlands
16	Plant transformation and regeneration Collaborative meeting. (Oral Presentation)	2016	University of Versailles, Paris

Other administrative responsibilities and services

- **Plant Tissue Culture and Germplasm conservation Lab-I incharge** at IBGE, The University of Agriculture Peshawar, Pakistan.
- **Coordinator** of BS Biotechnology program at IBGE, The University of Agriculture Peshawar, Pakistan.
- IBGE Chemicals store In-charge.
- IBGE purchase Committee member.
- Member of the Postgraduate admission committee.
- Departmental responsibility of dealing matters related to Directorate of Advance studies and Research.
- IBGE Student's study tour incharge during 2017 and 2018.

Languages & hobbies

- Fluent in English, Urdu and Pashto
- Cycling, running, cooking and playing cricket

References:

1. Prof. Dr. Paul Hooykaas

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Leiden University the Netherlands.
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2. Prof. Dr. Remko Offringa

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Leiden University the Netherlands.
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1. Prof. Dr. Asad Jan (Director IBGE)

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Agriculture Peshawar. Pakistan
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2. Prof. Dr. Raham Sher Khan

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