

Dr. MARIYAM MASOOD

Work: Post-doctoral Fellow, UAF, Faisalabad, 38000

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LABORATORY AND MOLECULAR BIOLOGY TECHNIQUES

- Insect identifications using morphological and molecular data
- Microscopy
- DNA and RNA extractions
- cDNA synthesis
- Gene amplifications by Polymerase Chain Reaction (PCR)
- Gel electrophoresis
- Quantitative PCR (q PCR)
- Gene cloning and plasmid mini preps etc.
- Gene cloning using RCA (rolling circle amplification)
- Genome analysis
- Genome editing/CRISPR/Cas9
- Micropropagation
- Tissue culture

COMPUTER SKILLS

- MS Office (Word, powerPoint, Excel, Publisher)
- Use of bioinformatics tools and online search engines
- Sequence analysis using DNA Star/ other relevant software
- Efficient use of sequence analysis databases (NCBI etc)
- Efficient use of Linux for genome analysis

ACADEMIC QUALIFICATION

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| 2019 | PhD Biotechnology
National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad, Pakistan
Title of thesis: “Diversity of <i>Bemisia tabaci</i> , the Bacterial Endosymbionts it Harbours and the Geminiviruses it Acquires Across Pakistan” |
| 2011 | M. Phil. Biotechnology
National Institute for Biotechnology and Genetic Engineering |

Curriculum Vitae

(NIBGE), Faisalabad, Pakistan

Title of thesis: “DNA Based Identification and Phylogenetic Relationships of Common Termite Species of Punjab”

Isolated different genes e.g Barcode, COI-3', 18S and ITS1 for identification of termites from different areas of Pakistan.

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| 2008 | M.Sc. Zoology
University of Punjab, Lahore, Pakistan
1 st Division |
| 2006 | B.Sc. Botany, Zoology, Chemistry.
Bahauddin Zakariya University, Multan, Pakistan
1 st Division |
| 2004 | F.Sc. Biology, Physics, Chemistry.
Board of Intermediate and Secondary Education, Multan,
Pakistan
1 st Division |
| 2001 | S.S.C. Biology, Physics, Chemistry.
Board of Intermediate and Secondary Education, Multan,
Pakistan
1 st Division |

WORK/ RESEARCH EXPERIENCE

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| 11 Jun, 2024- till date | Post-doctoral Fellowship, National Center for Genome Editing (NCGE), CAS-AFS, University of Agricultural Faisalabad |
| 20 Oct, 2022- 5 Jun 2024 | Visiting Faculty, Department of Zoology, Government College Women University Faisalabad |
| Oct, 2021- 19 Oct. 2022 | Assistant professor, IPFP-Fellow, Department of Zoology, Government College Women University Faisalabad |
| Oct, 2020– 19-Oct, 2021 | Visiting Faculty, Department of Zoology, Government College Women University Faisalabad |
| Oct, 2019– Oct, 2020 | Visiting Faculty, Department of Bioinformatics and Biotechnology, Government College University Faisalabad |
| Mar, 2017– Aug, 2017 | Faculty/Staff, Department of Entomology, |

Curriculum Vitae

	Comstock Hall, Cornell University, Ithaca, New York, USA in the project “Whole genome sequencing of <i>Hamiltonella</i> and other bacteria inside <i>Bemisia tabaci</i> ”
May, 2012 – Feb, 2017	Researcher, Molecular Virology Lab, NIBGE, Faisalabad in the project “Study of Diversity of Cotton Leaf Curl Virus and its vector whitefly from Pakistan”
May, 2011 – Jan, 2012	Research Associate, Insect Molecular Biology Lab, NIBGE, Faisalabad in the project “Gene silencing and functional genome studies of cotton mealybug by RNA interference: implications in insect control”
July, 2009 – May, 2011	Research Associate, Department of Zoology, Lahore College for Women University, Lahore/ Insect Molecular Biology, NIBGE, Faisalabad in the collaborative project “Molecular diagnostics of subterranean termites of Pakistan”
Aug. 2008 – Jan. 2009	Trainee Fellow, Insect Molecular Biology Lab, NIBGE, Faisalabad

SCHOLARSHIPS/AWARDS

- One month training on “National Faculty Development program 2021 (NFDP-2021)” under HEC professional development program covering areas of pedagogy, writing skills, analytical capacity, research vision, and knowledge of professional norms and professional practices (30 July-31 August 2021)
- Fellowship awarded under “International Research Support Initiative Program” PIN: IRSIP 33 BMS 63.

PUBLICATIONS

- Z. Iqbal, **M. Masood**, M. Shafiq, R. W. Briddon. “Temporal changes in the levels of virus and betasatellites DNA in *Bemisia tabaci* feeding on CLCuD affecting cotton during the growing season”. *Frontiers in Microbiology*, **2024**
- R. Asrar, **M. Masood**, I. Bodlah, G. Rasool, N. Suleman, S. Yousaf. “Molecular characterization of mitochondrial COI gene sequences in *Micraspis allardi* from Pakistan”. **PLoS ONE** 18(12): e0294034, **2023**
- M. Ashfaq, A.M. Khan, A. Rasool, S. Akhtar, N. Nazir, N. Ahmed, F. Manzoor, J. Sones, K. Perez, G. Sarwar, A.A. Khan, M. Akhter, S. Saeed, R. Sultana, H.M. Tahir, M.A. Rafi, R. Iftikhar, M.T. Naseem, **M. Masood**, M. Tufail, S. Kumar, S. Afzal, J. McKeown, A.A. Samejo, I. Khaliq,

M. L. D'Souza, S. Mansoor, P. D. N. Hebert " A DNA barcode survey of insect biodiversity in Pakistan" *PeerJ*, 10 e13267, **2022**

- S. Yousaf, A. Rehman, **M. Masood**, *et al.* Occurrence and molecular identification of an invasive rice strain of fall armyworm *Spodoptera frugiperda* (Lepidoptera: Noctuidae) from Sindh, Pakistan, using mitochondrial cytochrome c oxidase I gene sequences. *Journal of Plant Disease and Protection*, **2021**.
- **M. Masood** and R. W. Briddon " Transmission of cotton leaf curl disease answer to a long-standing question" *Virus Genes*, 54(6), pp. 743-745, **2018**
- **Masood**, I. Amin, I. Hassan, S. Mansoor, J. K. Brown, and R. W. Briddon, "Diversity and Distribution of Cryptic Species of the *Bemisia tabaci* (Hemiptera: Aleyrodidae) complex in Pakistan," *Journal of economic entomology*, vol. 110, pp. 2295-2300, **2017**.
- M. Ashfaq, S. Akhtar, S. Akhtar, **M. Masood** "PCR-based detection of hyperparasitism in solenopsis mealybug, *Phenacoccus solenopsis* (Hemiptera: Pseudococcidae)" *Pakistan journal of zoology*, vol. 49(4), pp. 1-4, **2017**.
- M. Ashfaq, S. Prosser, S. Nasir, **M. Masood**, S. Ratnasingham and P. D. Hebert "High diversity and rapid diversification in the head louse, *Pediculus humanus* (Pediculidae: Phthiraptera)," *Scientific reports*, vol. 5, pp. 14188, **2015**.

PARTICIPATION IN SCIENTIFIC CONFERENCES

- ICGEB courses on "Basic Biotechnology Techniques", 15-17 March 2016, NIBGE Faisalabad
- 1st international Conference on Advancement in Biotechnology, 30-31 March 2016, GCWUF, Faisalabad
- 1st National Student Conference on Biological Sciences, 27-28 March 2014, NIBGE Faisalabad
- International conference of Biotechnology- Prospect and challenges in Agricultural, Industrial, Health and Environment, 18–26 April, 2013, NIBGE, Faisalabad
- DNA barcoding: A promising tool for species identification, 30 January, 2012, NIBGE, Faisalabad
- National Symposium on Biodiversity of Pakistan, 7–9 June, 2011, Islamabad
- Symposium Series on Entomology, at the Department of Entomology, 13–19 March, 2011, University of Agriculture, Faisalabad
- International Conference on Integrated Pest Management, 22–23 Feb, 2011, Lahore College for Women University, Lahore

Curriculum Vitae

- One day symposium on Insect genomic: Application and potential for Insect control, 25 March, 2009, National Institute for Biotechnology and Genetic Engineering Faisalabad

REFERENCES

Dr. Sultan Habib ullah Khan
Director
Center for Advance Studies Agriculture and Food security
University of Agriculture Faisalabad
Email: sultan@uaf.edu.pk

Dr. Muhammad Ashfaq
Research Scientist
Centre for Biodiversity Genomics
Biodiversity Institute of Ontario, University of Guelph
50 Stone Road East, Guelph, ON, N1G 2W1
Email: mashfaq@uoguelph.ca