

# Curriculum Vitae

**Prof. Dr. Muhammad Saleem Haider**  
**Ph.D., DIC (University of London, UK)**  
**Post Doctorate (University of Toronto, Canada)**  
**Professor & Director, Institute of Agricultural Sciences**  
**University of the Punjab, Lahore.**  
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**CNIC No. 31103-3820234-5**



## 1. Academic Background

Degree	Discipline	University/Country	Year
Post Doctorate	Agriculture (Resistance through RNAi)	University of Toronto, Canada	2008
PhD	Agriculture (Molecular Plant Virology)	University of London, Imperial College of Science, Technology and Medicine, London (United Kingdom)	1997
DIC	Agriculture (Plant Virology)	University of London, Imperial College of Science, Technology and Medicine, London (United Kingdom)	2003
M.Sc. (Hons.) Agri.	Agriculture (Plant Pathology)	University of Agriculture, Faisalabad/Pakistan	1991
B.Sc. (Hons.) Agri.	Agriculture (Plant Pathology)	University of Agriculture, Faisalabad/Pakistan	1989

## 2. Academic and Research Experience

Position	Institution	Period
Professor & Director	Institute of Agricultural Sciences, University of the Punjab, Lahore	07.03.2010 – Todate
Assistant Professor	School of Biological Sciences, University of the Punjab, Lahore	26.04.2003 – 06.03.2010
Assistant Research Officer	Plant Virology Section, AARI, Faisalabad	28.07.2002 – 25.04.2003
Agriculture Officer	Pest Warning and Quality Control of Pesticides, Punjab, Lodhran	19.09.1998 – 27.07.2002

Senior Scientific Officer	Central Cotton Research Institute, Multan	01.10.1997 – 18.09.1998
Research Officer	Centre for Advanced Molecular Biology, University of the Punjab, Lahore	21.01.1997 – 20.7.1997

### PhD Thesis Title

Characterization of whitefly transmitted geminiviruses from Pakistan

### 3. Research Interests

My research interest focuses on the control of plant diseases caused by whitefly-transmitted geminivirus pathogens (begomoviruses), based on an understanding of the mechanisms underlying the successful interactions between the components of these virus-vector-host complexes.

Current studies involve:

(1) begomovirus diversity, with respect to (a) viral genotype and phenotype, as these characteristics impact the molecular epidemiology of begomoviruses, and (b) the identification of important candidate viruses in the development of virus-resistant crop varieties,

(2) the *Bemisia tabaci* species complex: variability within populations using molecular markers, and

(3) the molecular basis for the specificity of whitefly-mediated transmission of begomoviruses

(4) development of diagnostic tests for unidentified or new viruses and virus like diseases.

(5) Use of fungus *Aspergillus sp.* for the cloning, expression and purification amylases enzymes.

(6) Exploiting viral coat protein gene for vaccine production against animal and human viruses and development of resistant plants against plant viruses.

### 4. Research Projects

Project Title	Duration	Total amount of grant	Funding Agency
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	3 years completed (2006-2009)	Rs. 4.3 Million	Higher Education Commission, Islamabad, Pakistan (As Co-PI)
Novel approach to generate wide spectrum virus resistance to all cotton infecting begomoviruses infecting cotton and other cultivated crops.	7 years Completed (2009-2015)	Rs. 32 Million	Punjab Agricultural Research Board (PARB) (As PM/PI)
Molecular analyses of Potato virus Y	1 years (2010-	Rs 0.25	University of the

infecting potato crop in different regions of Punjab.	2011) Completed	Million	Punjab, Lahore (As PI)
Genetic diversity of Entomopathogenic Fungi <i>Metarhizium</i> and <i>Beauveria spp.</i> isolated from the Soils of different Ecosystems (awarded vide Notification No. D/473/Est.I dated 25.01.2012)	1 year (2011-2012) Completed	Rs 0.25 Million	University of the Punjab, Lahore (As PI)
Impact assessment of water conservation and productivity enhancement through high efficiency irrigation system among vegetable growers of distt. Sheikhpura	9 months Completed	Rs.0.25 million	Higher Education Commission, Islamabad (As Co-PI)
Screening of diverse germplasm for the genetic studies of drought tolerance in rice ( <i>Oryza sativa</i> L)	9 months (2012) Completed	Rs.0.5 Million	Higher Education Commission, Islamabad (As Co-PI)
Cotton productivity enhancement project, Virology Component	6 years (2011-2017) Work is in progress	US \$ 0.500	United States Department of Agriculture (As PI)
Diversity of endosymbiotic bacteria associated with <i>Bemisia tabaci</i> from Pakistan (awarded vide Notification No. D/5227/Est.I dated 13.02.2013)	1 year (2012-2013) Completed	Rs.0.250 Million	University of the Punjab, Lahore (PI)
Molecular and biological characterization of begomoviruses and/or associated DNA-satellites from the vicinity of University of the Punjab, Lahore, Pakistan	1 year (2013-2014) Completed	Rs.0.250 Million	University of the Punjab, Lahore (PI)
Investigation of <i>in planta</i> accumulation and localization of cotton leaf curl Kokhran virus (CLCuKoV) at tissue and cellular level.	1 year (2014-2015) Completed	Rs.0.250 Million	University of the Punjab, Lahore (PI)
The studies to control Jassid ( <i>Amrsca</i> spp.) on the Brinjal ( <i>Solanum melongena</i> L.) through bio-pesticides and habitat management in Lahore Division.	9 months Completed	Rs.0.50 million	Higher Education Commission, Islamabad (As Co-PI)
Biochemical remodulation mechanisms underlying effects of chickpea chlorotic dwarf virus on tomato plant that mediate transmission by leafhopper vectors	1 year (2015-2016) Completed	Rs.0.250 Million	University of the Punjab, Lahore (PI)
Development of bio-pesticide for the control of soil-borne diseases of tomatoes and chilies caused by <i>Pythium</i> and <i>Phytophthora</i> spp.	4 years (01.02.2015 to 31.01.2019)	29.9157 Million	Punjab Agriculture Research Board (PARB) (Team Leader)
Functional characterization of Mastrevirus promoter – An alternative of CaMV 35S Promoter	1 year (2017-2018) Ongoing	Rs.0.250 million	University of the Punjab, Lahore (PI)

Awareness of climate smart agriculture practices among the agri communities for sustainable environment development (under Social Integration Outreach Program (SIOP) of HEC)	2018	Rs.1.0 million	Jointly funded by HEC and PU (PI)
Conservation tillage awareness for controlling air pollution from rice straw burning in Punjab (under Social Integration Outreach Program (SIOP) of HEC)	2018	Rs.1.0 million	Jointly funded by HEC and PU (PI)

## 5. Publications

- a) Books, Articles, Chapters and Annual Reports = 08
- b) Papers Published = 169
- c) Conferences/Seminars/Symposia Organized = 42
- d) Presentations/participation in national/international conferences = 50
- e) Publications in Proceedings = 10

## 6. Students Supervision

### 6.1 Supervised

- a) Ph.D. = 16
- b) M.Sc. (Hons.)/M.Phil. = 38

### 6.2 Under Supervision

- a) Ph.D. = 06
- b) M.Sc. (Hons.)/M.Phil. = 07

## 7. Computer Knowledge

Proficient knowledge of Microsoft word, Microsoft Excel, Microsoft PowerPoint and other Windows based packages, DNA analysis software; BLAST, Multiple sequence alignment, Phylogenetic analysis.

## 8. Invited Lectures

Delivered seminar as Invited Speaker on “Role of Academia in adaptive research and implementation in Agriculture” in ‘Launch of Sectoral Local Adaptation Plans of Action on Agriculture’ held at CEES, P.U. Lahore on 15.11.2018.

Delivered an Invited Lecture on “An overview of research activities at IAGS, PU” in a three-day workshop on ‘Advances in Agricultural Biotechnology and Regulatory Affairs, held at Forman Christian College (FC College), Lahore on 26.09.2017.

Delivered an Invited Lecture on “Advances in Geminivirus research in Pakistan” in the International Conference on Biosciences & Medical Engineering, held on 10-11 November, 2016 at Faculty of Biosciences & Medical Engineering, UTM, Malaysia.

Delivered an Invited Lecturer on “Whitefly: Vector of begomoviruses and its management”, in the workshop ‘The development and testing of transgenic for cotton leaf curl virus (CLCuV) disease resistance’, held at CEMB on 18-19 March 2014.

## 9. Training Courses Attended

Attended Fourth Training Workshop of PEs (Program Evaluators) as an expert, organized by National Agriculture Education Accreditation Council (NAEAC), HEC, held from 28-30 September 2017 in Margala Hotel, Islamabad.

A three days training workshop on Project Proposal Writing under Punjab Agricultural Research Board (PARB) Competitive Grant System (CGS) at Agriculture House, Lahore, Pakistan. November 9-11, 2009.

Training course on the hazards of ionizing radiation and safe handling of radioactive substances, 22nd June 1993 at Institute of Food Research (Norwich Laboratory)

Postgraduates Lectures on Molecular Techniques in Biology, January/February 1995 at John Innes Centre, Norwich.

Lectures on Plant Virology, Transmission-vector specificity, purification, serology and molecular biology (Oct. 1995-Dec. 1995, University of East Anglia, Norwich).

## 10. Patents

1. Ahmad, N, Rashid, N, **Haider, MS** and Akhtar, M. (2013). Single step liquefaction and saccharification of corn starch using an acidophilic, calcium independent and hyperthermophilic pullulanase. Patent with United States Patent and Trademark Office (USPTO), vide application No. 13/765,481 dated 12<sup>th</sup> February 2013.
2. **Haider, MS** (2013). Novel approach to generate wide spectrum resistance to cotton begomoviruses infecting cotton and other cultivated crops. Patent with Higher Education Commission, Islamabad, Pakistan. Submitted to Intellectual Property Organization of Pakistan (IPO), Government of Pakistan, vide receipt No.084208/LHR/18.

## 11. Distinctions

1. Awarded Gold Medal on great performance in Agriculture/Dairy & Livestock/ Poultry by Unity Human Well Wishers Council, Lahore, Pakistan – A registered social welfare department, Government of the Punjab (2013).
2. Awarded Quaid-e-Azam Gold Medal – 2014 by Tehreek-e-Istehkam-e-Pakistan Council (Regd.) Pakistan on 28<sup>th</sup> June 2014 on best performance in the field of Agriculture.
3. Awarded Publication Incentive Award 2013 (Rs.66,500/-) by the University of the Punjab.
4. Awarded Publication Incentive Award 2014 (Rs.65,667/-) by the University of the Punjab.

## 12. Membership of Scientific/Professional Organizations

- Member, Punjab University Projects Evaluation Committee (Faculty of Life Sciences)
- Member, Departmental Tenure Review Committee for the Discipline of Plant Pathology, University College of Agriculture & Environmental Sciences, Islamia University Bahawalpur
- Convener, Board of Studies in Agricultural Sciences (2010 – todate)
- President, Pakistan Phytopathological Society – since 2016
- Member, Board of Faculty of Life Sciences
- Editor In-Chief for Mycopath Journal
- Editor-in-Chief, Pakistan Journal of Phytopathology.
- Member-Editorial Board for Journal of Life Sciences, USA
- Member-European Federation of Biotechnology
- Member, Editorial Board, Quarterly Journal of Agricultural Research
- Fellow-The Zoological Society of Pakistan
- Member Myco-Phytopathological Society of Pakistan
- Member Bioinformatics.org
- Member-Pakistan Agricultural Research Scientists Association
- Member Association of Applied Biologists (1993-1996)
- Member world *Cucurbitaceae* Scientists
- Reviewer: Journal of Microbiology and Antimicrobials
- Reviewer: Journal of Life Sciences, USA
- Reviewer: Pakistan Journal of Botany
- Reviewer: Sarhad Journal of Agriculture
- Reviewer: Pakistan Journal of Agricultural Sciences
- Reviewer: African Journal of Biotechnology
- Reviewer: African Journal of Agricultural Sciences
- Warden, Boys Hostel No.19
- Warden, Boys Hostel No.15 (additional duty)
- Member, Departmental Tenure Review Committee (DTRC), CEMB (since 2015)
- Member, Departmental Tenure Review Committee (DTRC), CEES (since 2016)
- Member, Departmental Technical Review Committee (DTRC), BZU, Multan (since 2017)
- Member, Capacity Building of Government Departments (since 2016)
- Member, Committee to issue clearance certificate for submission of NRPU projects to HEC (since 2016).

## 13. Advisory & Administrative Services

- Director, Institute of Agricultural Sciences (IAGS), University of the Punjab, Lahore
- Convener, Doctoral Program Committee, IAGS, University of the Punjab, Lahore
- Chairman, Board of Studies, IAGS, University of the Punjab, Lahore
- Member Curricula Plant Pathology (Virology) Committee for Universities

- Member, Technical Organizing Committee, 5<sup>th</sup> Meeting of the Asian Cotton Research and Development Network, held Feb. 23-25, Pearl Continental Hotel, Lahore, Pakistan
- Member Board of Studies of Faculty of Life Sciences
- Off-Site Invigilator, York University, Toronto, Ontario, Canada
- Editor-In-Chief, Mycopath, IAGS, Punjab University, Lahore
- Technical Editor, Mycopath Virology Section
- Chairman, Purchase & Technical Committee of IAGS

**14. Accession Numbers obtained for the sequences submitted to the DNA database**

Total: 97