

ARVIND M

Assistant Professor (Plant Pathology), Rajasthan Agricultural Research Institute (SKNAU, Jobner),
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- **Date of Birth:** 12/08/1994
- **Marital status:** Single
- **Languages known:** Hindi, English, Malayalam, Tamil
- **Hobbies/Interests:** Stock investing, Playing sports, Mime, Drama

ABOUT ME:

A researcher with experience in plant disease diagnosis, genomics, transcriptomics, proteomics, bioinformatics, disease screening, mycology, virology, virus vector relationship, host pathogen interaction, microbiology, biological control and entomopathogenic fungi

CAREER OBJECTIVE:

To work in the environment where I can implement and excel my technical and professional skills in the field of agriculture for passionately delivering research-oriented solutions that will fulfil the requirements of the organization. I like to diagnose the emerging diseases and recommend management aspects to the farmer. I am keenly interested in developing the effective bio-agents and studying the host-pathogen interaction in depth with my experience in genomics, proteomics, transcriptomics and bioinformatics. I want a career wherein; I will not be restricted to just the science of Plant Pathology and can learn from the challenges around me and attain professional excellence.

TECHNICAL SKILLS:

- Experience in **molecular and serological techniques** such as **DNA, RNA, protein extraction, PCR, Q-PCR, RT-PCR, DAS ELISA, TA and full genome cloning, Orbitrap MS, omics**
- Preparation of contigs, BLAST analysis, primer designing, submission of sequence to NCBI and PRIDE, identification of ORFs
- Culturing of the **pathogens, microbial agents** and **entomopathogenic fungi**
- Preparation of **talc, oil and rice-based formulations** of bioagents.
- Applying **pathogen inoculum** in the field and artificial conditions for **disease screening studies**.
- Studying **virus vector relationships** by sap, aphid, whitefly and seed transmissions.

INTERPERSONAL SKILLS

- Good communication skills

- Ability to think multidimensionally for solving a problem
- Fast and keen learner
- Highly dependable and excellent attention to detail
- Hardworking and diligent
- Excellent **organizational** and **project management** skills
- Excellent **leadership** and **problem-solving** skills

EDUCATIONAL QUALIFICATION:

2019-2022

- Ph.D. (Plant Pathology)- UAS Dharwad (CGPA-9.30)
- Worked on dissertation entitled “**Identification of novel resistance sources and comparative proteomic analysis in rice-sheath blight disease interaction**”
- Major Advisor- **Dr. Prashanthi S. K.** (Professor, Department of Plant Pathology, UAS, Dharwad)

2016-2018

- M.Sc. (Ag.) Plant Pathology- Punjab Agricultural University, Ludhiana (CGPA 8.86)
- Worked on dissertation entitled “**Characterization of viruses associated with yellow mosaic disease of bitter gourd (*Momordica charantia* L.) in Punjab**”
- Major Advisor- **Dr. Abhishek Sharma** (Principal Virologist, Department of Vegetable Sciences, PAU, Ludhiana)

2012-2016

- B.Sc. Agriculture- Tamil Nadu Agricultural University, Coimbatore (CGPA-8.93)
- President of Rotaract Club-Madurai West (2014-15)
- Worked on dissertation entitled “**Preliminary Screening Studies of Rice (*Oryza Sativa* L.) Germplasm Lines for Phosphorus Use Efficiency**”
- Project Incharge- **Dr. Senthil Natesan** (Director, CPMB, TNAU, Coimbatore)

2011-2012

- Senior secondary (AISSCE 2012)- Rishikul Vidyapeeth, Sonipat, Haryana
- Percentage- **91%** (CBSE Board)

2009-2010

- Secondary (AISSE 2010)- Rishikul Vidyapeeth, Sonipat, Haryana
- Percentage- **91.5%** (CBSE Board)

COMPUTER SKILLS

- Data analysis with **MS Excel, OPSTAT, R-Studio** and other open-source tools
- **Adobe photoshop 7.0, MS Office**
- DNA sequence editing and analysis tools- **Bioedit, EditSeq, MegAlign, MEGA X, SDT**
- Protein analysis tools- **Panther database, Biobnet, ShinyGO, STRING**
- Sequence submission databases- **NCBI, PRIDE and PX Submission tool**

ACHIEVEMENTS, AWARDS AND FELLOWSHIPS

- Recipient of **ICAR-NTS (B.Sc.)**, **ICAR-JRF (M.Sc.)** and **ICAR-SRF (Ph.D.)** award.
- Received **Plant Pathology Alumni Gold Medal** and **Dr. T. S. Thind Medal** for academic excellence during M.Sc. degree programme
- Secured all India **36th** rank (Subject- Plant Sciences) in **21st AIEEA-PG-2016** conducted by ICAR
- Secured all India **6th** rank (Subject- Crop Science-II) in **24th AIEEA-SRF- PGS-2019** conducted by ICAR
- Qualified **ASRB-NET 2019** with a percentile of 68.00.
- **Second Prize** in quiz competition of **6th soil borne plant pathogens awareness day** held on 22 September 2020 organized by **Bayer Crop Science and AAPP, BCKV, West Bengal**.
- Submitted several nucleotide and protein sequences of rice, plant pathogens, biocontrol agents and insects in NCBI and PRIDE (MN527536, MN596924, MN596925, OQ318535, OQ318852, OQ476083, OQ476084, OQ476085, OQ512000, OQ512154, OQ588707, OQ913605, OQ913679, OQ913733, OQ915221, PQ382030, PQ387955, PQ387956, PQ387957, PQ388159, PQ399952, PQ409413, PQ417144, PQ432602, PQ465175, PQ465214, PQ465246, PQ468954, PQ468960, PQ468998PQ482413, PQ482426, , PQ484178, PQ654163, PQ656549, PQ656667, PQ656716, PQ656718, PQ658197, PQ660960, PQ661261, PQ661265, PQ661346, PQ663253, PQ663254, PQ663817, PXD040634)
- Prepared **training manual** on production protocol of biocontrol agents for the management of fall armyworm published by **FEEDFUTURE, US govt** and **ICAR-NBAIR, Bengaluru**
- Recipient of **Young Plant Pathologist Award** (reference number **ISAHRD/AW/2111**) by **ISAHRD** during the year 2023.
- Completed course on **Plant Biosecurity** organized by NIPHM, Hyderabad during 1st April 2023 to 30th June 2023 (**Certificate No-001-PBD(MOOC-1)/23-24**)
- Received **certificate of excellence in reviewing** from **International Journal of Plant and Soil Science (NAAS- 5.07)** for timely and quality reviewing of research paper during August 2023.

RESEARCH PUBLICATIONS:

- Mohanan, A., Prashanthi, S.K., Arun, Y.P., Raghunandana, A., Krishnaraj, P.U., Nayak, S.N. and Hegde, Y., 2025. Quantitative proteomic analysis deciphers mechanisms of sheath blight resistance in novel rice landrace against *Rhizoctonia solani*. *Scientific Reports*, 15(1), p.28242 (**NAAS-9.80**)
- **Arvind Mohanan and Abhishek Sharma, 2020**, Transmission studies on viruses associated with yellow mosaic disease of bitter gourd. *Indian Phytopathology*, 73(2): 329-337 (**NAAS- 5.90**)
- **Arvind Mohanan and Abhishek Sharma, 2020**, Prevalence and incidence of bitter gourd yellow mosaic disease in Punjab. *Plant Disease Research*, 35(1): 59-63 (**NAAS- 4.58**)
- **Arvind Mohanan, Abhishek Sharma and Mamta Pathak, 2020**, Germplasm screening and molecular characterization of begomovirus associated with bitter gourd yellow mosaic disease in Punjab. *Journal of Entomology and Zoology Studies*, 8(5): 331-335 (**NAAS- 5.53**)
- **Arvind Mohanan and Abhishek Sharma, 2021**, *Momordica balsamina*, a new natural host of begomovirus and its first report in India. *Indian Phytopathology*, 74: 859-861 (**NAAS- 5.95**)
- **Arvind Mohanan, Prashanthi S. K and Raghunandana A, 2022**, Analysis of sheath blight inoculation. *The Pharma Innovation Journal*, 11(9): 598-600 (**NAAS- 5.23**)

- **Arvind Mohanan and Prashanthi S. K., 2023**, Comparative analysis of two predominant methods of rice sheath blight inoculation. *Journal of Crop and Weed*, 19(1): 158-163 (NAAS- 5.46)
- **Udayakumar, A., Venu, H. S., Kandan, A., Arvind, M, Joshi, S. and Shivalingaswamy, T. M., 2024**, Nesting activity of the predatory wasp, *Carinostigmus costatus* Krombein (Sphecidae: Hymenoptera) in pithy stems of *Caesalpinia pulcherrima* (L.) and its natural regulation of the population of fennel aphid, *Hyadaphis coriandri* (Das). *Current Science*, 127(1): 85-90 (NAAS- 7.00)
- **Udayakumar, A., Shamappa, V. H., Kandan, A., Sampathkumar, M., Arvind, M. and Shivalingaswamy, T. M., 2024**, First report of *Trypoxylon clavicerum* (Crabronidae: Hymenoptera) from the Indian subcontinent: its nesting behaviour and prey preference. *Animal Biology*, 74(3): 309-322 (NAAS-7.20)
- **Choudhary, S., Prasanna, N.L., Ashwini, S., Nigam, R., Kumar, S., Rathor, S.K., Gireesha, D. and Arvind, M., 2024**. A Review on Molecular Mechanism of Plant Immunity against Fungal Pathogens. *Journal of Advances in Biology & Biotechnology*, 27(10): 71-81 (NAAS-5.30)
- **Udayakumar, A., Venu, H.S., Kandan, A., Arvind, M. and Shivalingaswamy, T.M., 2024**. A predatory wasp, *Carinostigmus costatus* Krombein (Hymenoptera: Sphecidae), its aphid prey spectrum and foraging behaviour: an ecological interplay. *Phytoparasitica*, 52(5), pp.1-9 (NAAS-7.40)
- **Kumar, S., Nikunj, C., Rathore, A., Nigam, R., Arvind, M., Nilesh, R. and Yuvarani, R., 2024**. Role of Biocontrol Agents in Suppressing Plant Pathogen: A Compressive Analysis. *Journal of Scientific Research and Reports*, 30(10): 1004-1015 (NAAS-5.17).
- **Hiremath, S.S., Prasanna, N.L., Nigam, R., Kumar, S. Arvind M, Nilesh R and Elangovan, M., 2024**. A Review on Role of Root Exudates in Shaping Plant-Microbe-Pathogen Interactions, *Journal of Advances in Microbiology*, 24(12): 1-17 (NAAS-5.14).
- **Sharma, V., Dhaked, M.K., Mohanan, A., Balamurugan, K. and Brindha, R., 2025**. Evaluate the Different Agro Wastes for the Production of Oyster Mushroom *Pleurotus ostreatus* var. *florida* (Jacq. Fr.) Kummer. *Journal of Scientific Research and Reports*, 31(12), pp.358-367.

BOOKS/BOOK CHAPTERS

- **Arvind M and Shikha Dubey (2023)** Acquiring Plant Immunity through Synthetic Elicitors. In: Current Research and Innovations in Plant Pathology (Volume – 25), AkiNik Publications, New Delhi pp. 19-36.
- **Arvind Mohanan and Shikha Dubey (2024)** Modern Pests and Diseases of rice and their management. In: General Agriculture for ICAR-JRF-Vol-1, BlueRose Publishers, UP, pp. 397-400.
- **C. Kannan, Shashi Kumari, Jitendra Kumar, Arvind M, Anupriya T and Sanjay Kumar (2024)** Field crop disease control modern techniques and tools, AkiNik Publications, New Delhi.
- **Arvind M and Shikha Dubey (2024)** Plant Pathology. In: A Competitive Book on General Agriculture Vol-2, BlueRose Publishers, UP, pp. 159-224.
- **Shikha Dubey and Arvind Mohanan (2024)** Population Improvement Strategies and Selection Modes. In: Fundamentals of Plant Breeding, National Press Associates, New Delhi, pp 118-127
- **Arvind Mohanan, Shikha Dubey and Shiv Kumar Yadav (2024)** Advances in the Use of Mycoparasites for Pathogen Control. In: Innovations in Bio-Control for Plant Pathogen, Golden Leaf Publishers, Lucknow, pp 1-20.

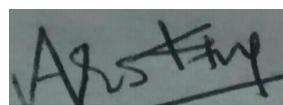
- Dubey, Shikha, and **Arvind Mohanan**. "Emerging Approaches Based on Genome-Wide Association Studies (GWAS) for Crop Disease Tolerance." In *Molecular and Biotechnological Tools for Plant Disease Management*, pp. 159-175. Springer, Singapore, 2025.

WORKSHOPS/CONFERENCES/WEBINARS ATTENDED:

- International workshop on “**Simulation modeling in Agricultural Research: Modelling Plant Disease Epidemics and Yield Losses**” during 13-15 November 2017
- Poster presentation at “**National symposium on plant disease management for food security under climate change scenario**” held during 9-10 January, 2020 at IIWBR, Karnal and “**Multidisciplinary approaches for plant disease management for achieving sustainability in agriculture**” held during 6-9 October, 2020 at UAHS, Bagalkot
- Bagged **first prize in oral presentation** at PG conference 2022 organized at UAS, Dharwad
- Ten days international workshop entitled “**Applications of bioinformatics tools in agricultural research**” organised by UBKV and IASRI held during 20-30 September 2021
- Attended 19 days international workshop entitled “**A toolbox to learn Bioinformatics, Genomics, and NGS data analysis**” organised by nextgenhelper during 12-30 December 2022
- **Winter school (21 days) on Emerging problems and Recent Advances in Applied Sciences** organized by Astha Foundation, Meerut from 26 February to 18 March 2023
- Bagged **third prize in poster presentation** at **4th International conference of ITAHAS 2023** organized during 21-23 June 2023
- Bagged **best poster presentation award** at **5th International conference of ICAAS 2023** organized during 10-216 July 2023

PROFESSIONAL EXPERIENCE

- **July, 2018-August, 2019**
Employed as **Development officer** Assistant manager grade at Federal Bank, Kerala
- **November, 2022- July, 2023**
Employed as **Senior Research Fellow (Plant Pathology)** at **ICAR-NBAIR, Bangalore**
Principal Investigator - **Dr. A. Kandan (Principal Scientist, ICAR-NBAIR, Bangalore)**
- **July, 2023- Till Present**
Joined as **Assistant Professor (Plant Pathology)** at **RARI, Durgapura (SKNAU, Jobner)**.
Involved in academics as well as research activities of AICRP schemes.



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