

SHREYA CHANDRASHEKARA POOJARY

M.Sc. (Agri.) Plant Pathology

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Motivated Plant Pathologist with hands-on experience in molecular plant pathology, disease diagnostics and bioinformatics. Passionate about advancing research in plant-microbe interactions through the integration of molecular biology and computational approaches, while continuously expanding expertise in emerging technologies for sustainable crop protection.

EDUCATION

M.Sc. (Agri.) Plant Pathology *Jan 2024 - Nov 2025*
University of Agricultural Sciences, GKVK, Bengaluru, India *CGPA: 9.309*

B.Sc. (Hons) Agriculture *Aug 2019 – Aug 2023*
Keladi Shivappa Nayaka University of Ag & Horticultural Sciences, Shivamogga, India *CGPA: 9.01*

RESEARCH INTERESTS

Plant-microbe interactions | Molecular plant pathology | Pathogenomics | Disease Diagnostics | Fungicide Resistance | Fungal Genomics | Bioinformatics

TECHNICAL SKILLS

- **Molecular Biology:** Genomic DNA extraction, PCR, agarose gel electrophoresis, NanoDrop-based DNA quantification.
- **Microbiological Techniques:** Isolation, purification, maintenance, and preservation of fungal and bacterial cultures; media preparation; sterilization and aseptic techniques.
- **Plant Pathology Techniques:** Pathogen isolation and inoculation, disease assessment, fungal spore identification, poisoned food technique, dual culture assay, and nematode isolation.
- **Bioinformatics & Data Analysis:** NCBI BLAST, BioEdit, MEGA 11, AutoDockTools, MetaboAnalyst, R, Microsoft Excel, Microsoft PowerPoint, Microsoft Word.

EXPERIENCE

Plant Pathology Lab, ICAR – Directorate of Cashew Research, Puttur, India

YOUNG PROFESSIONAL-I

July 2026-Present

LAB ASSISTANT

Mar 2026-July 2026

- Diagnose fungal pathogens associated with major cashew diseases, including flower drying, dieback, fruit anthracnose, and seedling blight.
- Process and characterize disease samples received from AICRP regional research stations for pathogen identification.
- Contribute to collaborative research on entomopathogenic fungi (EPF) with the Entomology Division.
- Supported a postgraduate dissertation project on cashew fruit anthracnose.
- Assists ongoing investigations on cashew seedling blight through disease assessment and pathogen identification.

RESEARCH PROJECTS

MASTER'S THESIS - Pathogenomics Lab, UAS, Bengaluru

Jan 2024-Nov 2025

“Molecular Grouping of Anastomosis Groups of *Rhizoctonia solani* from different host plants and its Fungicidal Resistance” under the supervision of Dr. M. K. Prasanna Kumar.

- Characterized 32 *Rhizoctonia solani* isolates from rice, millets, and potato using ITS sequencing, phylogenetic analysis, and AG-specific PCR, identifying AG1-IA, AG4-HG1, AG2-2-IIIB.

- Performed whole-genome analysis of isolate RS7 (37.2 Mb genome) and identified 50 putative virulence factors and secretory proteins, including CAZymes and proteases associated with pathogenicity.
- Conducted LC-MS metabolomics of healthy and infected rice leaf sheaths, identifying 313 metabolites in infected tissue, revealing infection-induced metabolic reprogramming and activation of defense-related pathways.
- Evaluated fungicide sensitivity of 15 isolates against azoxystrobin and carbendazim, identifying a carbendazim-tolerant isolate (RS18) and demonstrating reduced fungicide binding through β -tubulin sequencing and molecular docking.

UNDERGRADUATE PROJECT

Jun 2021-Jan 2022

“Effect of Phosphorus Fertilizer on Growth and Yield of Blackgram”

- Evaluated the effect of phosphorus fertilizer on growth and yield parameters of blackgram.
- Conducted a field experiment using a randomized complete block design (RCBD).
- Recorded growth and yield-related traits and analyzed experimental data using analysis of variance (ANOVA).

CONFERENCE PRESENTATION

- Poster presentation, Science Week 2025, UAS Bengaluru: “Molecular Grouping of Anastomosis Groups of *Rhizoctonia solani* from Different Host Plants.”

DEPARTMENTAL SEMINARS

- Oral talk: Regulation of Bacterial Growth and Development by Host Plants.
- Oral talk: The Use of Optical Irradiation in Management of the Disease: Shedding the Light on Powdery Mildew

WORKSHOPS

- Agri Nutri Biotech (ANB) theme “ONE WEEK ONE THEME” (OWOT) at CSIR – 4PI, Bangalore (2024) - Region-specific smart agrotechnology for enhancing soil and plant health.
- Training programme on “Seed Health Testing, Phytosanitary Certificate and Export of Seeds “(2024)- UAS, Bangalore
- Online Webinar on “Learning and Career Opportunities in Agribusiness, Plantation, Food and Agri Exports” (2023)-IIPM, Bengaluru.
- Two-Day International Conference on “BRIDGING THE GAP: On the Intersection of Science, Technology, Education, Commerce and Management”, organized by De Paul Degree College, Mysore.
- Foundation Course in Regenerative Agriculture (2022)- Nandi Foundation.
- Agro-Industrial Training at a nursery unit, G.M.R. Biotech, Shivamogga- learned the management aspects of different ornamental and fruit crops in the unit.