



RESEARCH ARTICLE :

Biochemical characterization of *Pseudomonas fluorescens* against *Alternaria alternata* in ashwagandha

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SUMMARY : A field survey was conducted from different ashwagandha growing areas of Tamil Nadu viz., Ottanchatram, Coimbatore, Periyakulam, Theni, Nilakottai, Chempatti, Palur, Vadipatti, Virudhunagar and Cumbum with a view to assess disease intensity. Ten isolates of *Pseudomonas fluorescens* were isolated from the rhizosphere soil. The effective isolates were also used as biocontrol agents. Among ten isolates were tested, three isolates of *Pseudomonas fluorescens* viz., Pf₅, Pf₁ and Pf₄ were effectively identified by different biochemical methods viz., KOH test, anerobic growth, Arginine dehydrogenase starch hydrolysis, siderophore and HCN production. Among the four isolates tested for HCN production, the isolate Pf₅ recorded as strong producer of HCN with OD value of 0.090 followed by isolate Pf₁ (OD value of 0.063). Based on these biochemical methods and characterization of the strains were identified as a gram negative *Pseudomonas* species. Among the ten isolates of *Pseudomonas fluorescens* were tested against *A. alternata*, Pf₅ recorded the highest inhibition of mycelial growth of *A. alternata* over control by recording 61.71 % inhibition. The lowest % inhibition (22.86%) of mycelial growth of *A. alternata* was recorded by Pf₈.

KEY WORDS :

Pseudomonas,
Alternaria alternata,
Ashwagandha,
Biochemical, *In vitro*

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