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Abstract

A total of 35 fuorescent *Pseudomonad*

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Name of the Isolate	Volatile toxic substance (HCN) Production	Extent of HCN production
PSTPT1	Brownish to orange coloration	Moderate
PSTPT2	Brownish coloration	Weak
PSTPT3	Brownish to orange coloration	Moderate
PSTPT4	Brownish to orange coloration	Moderate
PSTPT5	Complete orange coloration	Strong
PSTPT6	complete orange coloration	Strong
PSTPT7	No coloration	No
PSTPT8	No coloration	Weak
PSTPT9	No coloration	Weak
PSTPT10	Brownish	Weak
PSTPT11	No coloration	No
PSTPT12	Brownish	Weak
PSTPT13	No coloration	No
PSTPT14	Brownish	Weak
PSTPT15	Brownish	Weak
PSTPT16	Brownish	Weak
PSTPT17	Brownish	Weak
PSTPT18	No coloration	No
PSTPT19	Complete Orange	Strong

Table 3: Volatile toxicity of antagonistic Fluorescent *Pseudomonads.*

et al. [23] suggested that fungal growth is mainly inhibited by HCN production and siderophore production. Apart from the biocontrol potential, uorescent pseudomonads possess other functional properties like, mineral phosphate solubilisation, production of plant growth promoting substances and enzyme activity. Besides testing the uorescent pseudomonads for bene cial functions like Phosphate solubilisation, PGPS production and biocontrol potential, their ability to produce commercially important enzymes like protease and chitinase was also examined. Out of the 19 antagonistic isolates, all the isolates are able to produce protease but none of the isolates produced Chitinase and cellulase. e results of present investigation indicated a high degree of functional diversity among antagonistic uorescent pseudomonads isolated from forest litter of Eastern Ghats.

Conclusion

Strains reported in this study suppress Sclerotium e ectively by single or multiple modes of action. Results also revealed that the antifungal activities and other plant bene cial traits appear to be the general and genetically dispersed traits of uorescent pseudomonads. Knowledge on phenotypic and functional traits of antagonistic bacteria will help to determine their tness for successful bio-fertilization and biological control. is study reveals for the rst time the presence of bacteria with antagonistic activity against *Sclerotium rolfsii* in Eastern Ghats forest litter an untapped resource. It also provides essential information to develop broad spectrum biocontrol agent.

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