

Pseudomonas fluorescens* isolated from *Capsicum annuum* rhizosphere produces multiple antibiotics and exerts a broad spectrum of activity against different pathogenic fungi *in vitro

S Abeysinghe*

Department of Botany, Faculty of Science, University of Ruhuna, Matara

An isolate of *Pseudomonas fluorescens* from *Capsicum annuum* rhizosphere showed strong antagonism towards various important soil borne pathogens in Sri Lanka. The crude extraction of 72 h culture supernatant strongly inhibited mycelial growth in Petri plate assay. The crude extract recorded the highest inhibition zone of 25 mm with 38% inhibition of mycelial growth against *Pythium* spp. over control. It had a significant effect on the hyphal morphology of *Pythium* spp., *Sclerotium rolfsii*, *Rhizoctonia solani*, *Fusarium oxysporum* f. sp. *cubense* and *Macrophomina phaseolina*. The hyphal tips of different isolates were also affected. Moreover, complete inhibition of sclerotia germination of *S. rolfsii* and *R. solani* was observed. TLC analysis indicated that the presence of probably two Phenazine compounds in the crude extract and these compounds might be the reason of fungal inhibition by the *P. fluorescens* isolate. Further investigation is underway to identify the antifungal compounds and potential use of the bacterial isolate as a biological agent.

* saman@bot.ruh.ac.lk

Tel: 041-2227024