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Isolation and Characterization of antibiotic fungal bacterium A8-8, *Bacillus subtilis*.

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Antagonistic bacteria to plant pathogenic fungi were isolated from green house soil sample. An antagonistic bacterium A8-8 which strongly inhibit the growth of plant pathogenic fungi, *B. cineria* and *R. solani* was identified as *Bacillus subtilis* by API SYSTEM. To the localization test of antifungal substance, it was existed not only intracellular fraction but also extracellular fraction. And inhibition mycelia growth of extracellular fraction was stronger than intracellular substance. The crude extract of the culture supernant was extracted with several solvents and antagonistic activity was tested. The results indicate that the crude extract of butanol fraction was most effective. The substance of butanol fraction carried out Thin-layer chromatography(TLC) on silica gel plates developed with on chloroform/methanol/acetic acid/water (80:20:8:2 v/v/v/v). After air drying, the chromatogram was irradiated by UV 254nm and was stained for by ninhydrin and ethanol/sulfuric acid/5% phenol. The plates were observed 10 spot by UV 254nm, 6 spot by ninhydrin and 3 spot by ethanol/sulfuric acid/5% phenol.

Pure purification and analysis of the antifungal substance is studying the current.