

# **Fungichromin: A substance from *Streptomyces padanus* with inhibitory effects on *Rhizoctonia solani***

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## **Abstract**

*Streptomyces padanus* strain PMS-702 is an antagonist of *Rhizoctonia solani* AG-4, the causal agent of damping-off of cabbage. Treatment of cabbage seeds with the culture filtrate of *S. padanus* strain PMS-702 was effective in reducing the incidence of damping-off of cabbage. The major active ingredient from the culture filtrate of *S. padanus* strain PMS-702 was purified by silica gel column chromatography and identified as the polyene macrolide, fungichromin, by NMR and mass spectral data. Bioassay studies showed that fungichromin had a strong antifungal activity against *R. solani* AG-4, and its minimum inhibitory concentration (over 90% inhibition) was found to be 72 microg/mL. This is the first report of fungichromin from *S. padanus* as an active ingredient for the control of *Rhizoctonia* damping-off of cabbage.