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Isolation and Characterization of the Antibiotic from *Helicosporium* sp.

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Helicosporium sp. producing a significant activity of antibiotics was isolated from a variety of soil samples. The strain was identified based on morphological and cultural characteristics, and antibiotics production. The activity of the antibiotics was also investigated against phytopathogens such as *Rhizoctonia solani*, *Rhizoctonia solani* AG2-2 and *Fusarium oxysporium*. In addition, the extraction of the antibiotics was performed using ether, chloroform and ethylacetate. The structural assay by GC-MS and NMR proved that the antibiotics was 5-methyl resorcinol.

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Approach of a Biocontrol Agent by *Helicosporium* sp.

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Helicosporium sp. was investigated for a biocontrol agent replacing for a chemical fungicide and insecticide. The strain showed a strong antibiotic activity against *Rhizoctonia solani* and *R. solani* AG2-2. The longer dipping of the agent resulted in a high inhibition ration at its low concentration. Orcinol produces by the strain led to significant antifungal activity. The effect of the agent on the growth of cucumber, mown and earthworm was also investigated.