

## عنوان مقاله:

Assessment of the In vitro antifungal efficacy of soil Streptomycetes isolates against Fusarium oxysporum and Fusarium solani

## محل انتشار:

بیستمین کنگره بین المللی میکروب شناسی ایران (سال: 1398)

تعداد صفحات اصل مقاله: 1

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## خلاصه مقاله:

**Introduction and Objectives:** Members of the genus Fusarium are common soil saprophytes and significant plant pathogens, which also cause a wide spectrum of diseases ranging from superficial to the life-threatening systemic infections in human as well as animals. Since the Streptomycetes are the largest taxon of antibiotic producers we aimed to assess the inhibitory effects of Streptomyces isolated from soil samples against Fusarium species. **Materials and Methods:** Soil samples were collected from different regions of Kerman city in order to isolation of Streptomyces. Morphological as well as physiological characterization of the isolates was investigated according to the standard protocols. All isolates were evaluated in order to their antifungal activities against Fusarium oxysporum (PTCC 5115), and Fusarium solani (PTCC 5284). Afterwards, molecular identification of active Streptomyces isolates was conducted using 16Sr DNA gene. **Result:** Out of 250 soil collected samples, fifty Streptomyces isolates were obtained. Among these isolates two strains showed the most antagonistic in vitro effect on F. oxysporum and F. solani. Besides, these two Streptomyces isolates were showed valuable lipase, amylase, protease, and Chitinase activities. According to the analysis of 16S rRNA gene sequences these isolates were identified as Streptomyces rochei (99% similarity). **Conclusion:** The obtained results of this study indicated that S. rochei has obvious inhibitory effect against Fusarium species which could use as a potent source of bioactive compounds with antifungal activity

## کلمات کلیدی:

Fusarium oxysporum, Fusarium solani, Streptomyces, Antifungal, 16S rDNA

## لینک ثابت مقاله در پایگاه سیویلیکا:

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