

عنوان مقاله:

The ability of marine *Bacillus* spp. isolated from fish gastrointestinal tract and culture pond sediment to inhibit growth of aquatic pathogenic bacteria

محل انتشار:

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خلاصه مقاله:

In this research, antagonistic activity of two *Bacillus* species isolated from digestive tract of marine fish and culture pond of sea cucumber was studied. The inhibitory activity of *Bacillus* spp. isolates against some common pathogenic bacteria of fish was assessed using the agar diffusion method. The strain of *B. subtilis* G۰۲۴ exhibited antimicrobial activity against *Vibrio anguillarum*, *V. harveyi*, *V. vulnificus*, *Streptococcus* sp. and *Staphylococcus aureus*; the isolate of *B. amyloliquefaciens* N۰۰۴ inhibited growth in *V. anguillarum*, *V. campbellii*, *V. vulnificus*, *V. parahaemolyticus*, *Edwardsiella tarda*, *Streptococcus* sp., *B. cereus*. Scanning electron microscopy (SEM) investigation of indicator bacteria showed that cell morphologies were strongly affected by the cell-free supernatant of the two *Bacillus* spp. isolates. It is determined that the culture filtrates contained inhibitors against growth of some pathogenic bacteria with different degrees of inhibition, although none of the culture filtrates could inhibit the growth of *V. fluvialis*, *V. alginolyticus*, *V. splendidus*. Based upon these characteristics, both of the antagonistic *Bacillus* spp. isolates could be the potential probiotics used in the aquaculture production.

کلمات کلیدی:

Bacillus, Antagonistic activity, Scanning electron microscopy, Probiotic, Aquaculture

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