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## Antifouling Activity of Bacterial Symbionts of Seagrasses against Marine Biofilm-Forming Bacteria

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### Author(s)

Dietrich G. Bengen, Miftahuddin Majid Khoeri, Bintang Marhaeni, Ocky Karna Radjasa, Agus Sabdono, Herawati Sudoyo

### ABSTRACT

Marine biofouling has been regarded as a serious problem in the marine environment. The application of TBT and other heavy metal-based antifoulants has created another environmental problem. The present study explored the possible role of bacterial symbionts of seagrasses *Thalassia hemprichii*, and *Enhalus acoroides*, which were successfully screened for antifouling activity against marine biofilm-forming bacteria isolated from the surrounding colonies of seagrasses. Bacterial symbionts were isolated and tested against biofilm-forming bacteria resulted in 4 bacterial symbionts capable of inhibiting the growth biofilm-forming isolates. Molecular identification based on 16S rRNA gene sequences revealed that the active bacterial symbionts belonged to the members of the genera *Bacillus* and *Virgibacillus*. Further tests of the crude extracts of the active bacterial symbionts supported the potential of these symbionts as the alternative source of environmentally friendly marine antifoulants.

### KEYWORDS

Biofouling, Antifoulant, Bacterial Symbionts, Seagrasses

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