

ABSTRACT

Muhammad Ihsan Jamil 24020120140128. **Antibacterial Activity Against the Fish Pathogen *Vibrio* sp. And *Aeromonas hydrophila* As Bioactive Compound Profiling From Fungal Symbiont Of Sea Cucumber (*Stichopus* sp.).** Supervised by Anto Budiharjo and Hermin Pancasakti K.

Indonesia is an archipelagic country dominated by waters with an area of 26,606,000 ha. Indonesia's geographical condition with its vast water area means that there is huge potential that can be exploited. One of them is in the fisheries sector, Indonesia has large commodities in fisheries. Infection caused by pathogenic bacteria *V. alginolyticus*, *V. harveyi*, *V. vulnificus*, *A. hydrophila* is a serious problem in fisheries. Efforts to search for new bacterial antibacterial compounds produced by sea cucumber symbiont fungi need to be carried out to treat pathogenic bacterial infections. The aim of this research was to determine the antibacterial potential of the sea cucumber symbiont fungus against the pathogenic bacteria *V. alginolyticus*, *V. harveyi*, *V. vulnificus*, *A. hydrophila* and the content of their bioactive compounds. The antibacterial test was carried out using the agar plug method, then a qualitative test was carried out for bioactive compounds from the extract of isolates fungi and identified molecularly. The two isolates tested had antibacterial potential against *V. vulnificus*, *A. hydrophila*, while in the antibacterial test against *V. Alginolyticus*, *V. Harveyi* both isolates did not have antibacterial potential. CG 2 isolate contains alkaloids, while CG 4 contains alkaloids and hydroquinone phenol. Molecular identification using ITS markers showed CG 2 *Ascoritcha microspora* and CG 4 *Aspergillus sydowii*.

Keywords: Sea Cucumber Symbiont Fungus, Antibacterial, *V. alginolyticus*, *V. harveyi*, *V. vulnificus*, *A. hydrophila*, Bioactive Compounds