ABSTRACK

Heksa Raihan 24020220140075. **Antimicrobial Activity Test of Ethyl Acetate Extract of Endophytic Molds *Caulerpa* sp and *Euchema cottonii* against *Candida albicans*, *Escherichia coli*, and *Staphylococcus aureus*** under the guidance of Arina Tri Lunggani and Sri Pujiyanto.

Mold is a microscopic microorganism that can live in various habitats. Molds that protect the host from danger are usually called endophytic molds. Endophytic molds are molds that live inside their host's body and are usually found in plant tissue. The endophytic mold isolates FFC1, FFC2, FFC3, FFC4, FFE1, FFE2, FFE3, FFE4, and FFE5 are the results of isolation from *Euchema cottonii* and *Caluerpa* sp. The characteristics and antimicrobial activity of which have never been known. The aim of this research is to determine the morphological characteristics of endophytic molds from *Euchema cottonii* and *Caulerpa* sp., to determine the antimicrobial activity of ethyl acetate of endophytic molds in inhibiting the growth of *Candida albicans*, *Escherichia coli*, and *Staphylococcus aureus*, and to determine the species that are optimal in producing antibiotics with the best quality. Therefore, a number of the two best mold isolates that were isolated were extracted and then tested against *C. albicans*, *E. coli*, and *S. aureus* and identified molecularly. Testing was carried out using disc paper and molecular identification using the CTAB method. The best results show that the isolates to be extracted are FFE1 and FFE2. The test results showed that the FFE1 mold isolate had the best quality producing the highest inhibition zone of 11.8 mm but both did not produce a real effect on the growth of the test microorganisms. The compounds octadecanoic acid and hexadecanoic acid were the dominant compounds in the antimicrobial extracts for isolates FFE1 and FFE2, respectively. The isolation results showed that the FFE1 isolate was *Talaromyces allahabadensis*.

Keywords: *Caulerpa sp., Euchema cottonii, Endophytic Mold, Talaromyces allahabadensis, and Antimicrobial Activity Test*