

ABSTRACT**ANTIBACTERIAL ACTIVITY OF ORANGE JASMINE LEAVES (*Murraya paniculata*) EXTRACT AGAINST BACTERIAL GROWTH OF *Methicillin-Resistant Staphylococcus aureus* (MRSA) IN VITRO**

Increased cases of antibiotic-resistant bacterial infection become the world's concern because of its high morbidity and mortality. One of the pathogenic bacteria is *Methicillin-resistant Staphylococcus aureus* (MRSA). Antibiotics for MRSA infections are difficult to obtain and expensive, which often complicates the patient. Therefore, it is important to find new antibiotics that can kill resistant bacteria at cheap prices and easy to obtain. These antibiotics may be obtained from medicinal plants commonly used by communities such as orange jasmine or 'kemuning' in Indonesia. Therefore, this study aims to determine the antimicrobial effects of orange jasmine leaf extract (*Murraya paniculata*) on the growth of *Methicillin-resistant Staphylococcus aureus* (MRSA) bacteria in vitro.

This study based on laboratory experimental. The samples were ethanol extract of *Murraya paniculata* leaves. Minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) values were determined by dilution method in Microbiology Laboratory of Faculty Medicine of Airlangga University. The concentration used for this study were 1000 mg/ml, 500 mg/ml, 250 mg/ml, 125 mg/ml, and 62,5 mg/ml. The result analyzed by description method.

At this study, the MIC could not be determined due to turbidity of the extract. MBC could not be determined because even at the highest concentration of the extract, bacterial colonies still to be found. But, the growth of bacteria is decreasing in line with the higher concentration of extract. Thus, there is the possibility of orange jasmine leaf extract having antimicrobial activity against MRSA in higher concentration.

Keyword : (*Murraya paniculata*), *Methicillin-resistant Staphylococcus aureus* (MRSA), antibacterial, dilution method