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Antimicrobial activity of Mimosa pudica Linn. extract against mecA gene of methicillin-resistant *Staphylococcus aureus*

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Methicillin-resistant *Staphylococcus aureus* (MRSA) is a condition in which infections that caused by *Staphylococcus aureus* bacteria become resistant to antibiotic, especially to the β-lactam-type antibiotics such as penicillin. This bacterium is one of the unsuccessfulness of therapy process in hospital because of the resistance. Mimosa (*Mimosa pudica Linn.*) positively contains various polyphenolic compounds such as flavonoids, terpenoids, tannins and saponins that have been studied to have antibacterial effects with various mechanisms. The purpose of the study was to determine the effectiveness of mimosa leaves extract as an antibacterial and to determine the influence of its active compound on mecA gene of MRSA with completely randomized design. The MRSA isolates that were given mimosa ethanol and hexana extract into it. This study showed MIC for hexana extract sample was 30 mg/ml and for ethanol extract was 20 mg/ml. The study did not show the MBC for hexana extract sample but it showed MBC at 100 mg/ml for ethanol extract sample. Based on the results of in silico analysis, found possible factors to improve and overcome drug resistance problems in MRSA. Thus, the mimosa leaves extract is used as an antibacterial to MRSA.

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