

# ABSTRACT BOOK TEMU ILMIAH NASIONAL

## 2016

"Discovering The Potential of Indonesian Medicinal Herbs for Allergy, Degenerative and Infectious Diseases"

Medical Faculty, Malang Islamic University

On July 30, 2016

R-026

### The Effectiveness of Wani (*Mangifera caesia*) Leaves Extract Against MRSA (Methicillin-resistance *Staphylococcus aureus*) ATCC 33591 by In Vitro

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#### ABSTRACT

**Introduction:** MRSA (Methicillin-resistance *Staphylococcus aureus*) has one of significant role in the increasing number of serious infection which is becoming a serious problem. As existing antibiotics become less effective, we need to find innovative antibiotics to treat the infections. Wani (*Mangifera caesia*) is an indigenous plant which commonly grows in Bali and its leaf contains tannin that has been known could be used as antibiotic agent. Based on that, it is interesting to further investigate the effectiveness of Wani leaves extract against MRSA.

**Methods:** The experiment used a completely randomized design method, using the extract of Wani leaves with concentration of 100%, 50%, 25% as treatments. The extract was obtained by maceration. The bacterial strains used in this study were MRSA (Methicillin-resistance *Staphylococcus aureus*) ATCC 33591. The treatment was repeated four times. This research was conducted to determine the bacterial activity of Wani leaf by measuring the inhibition zone diameter (mm).

**Result:** The observation of inhibition zones diameter showed wide inhibition zone diameter towards MRSA ATCC 33591. Wani leaves extract in 100%, 50%, 25% concentration were able to inhibit the growth of bacteria with minimum inhibitory zone respectively  $20.45 \pm 0.21$  mm,  $22.65 \pm 0.88$  mm,  $19.95 \pm 0.55$  mm.

**Conclusion:** Wani leaves extract has potency as a new source of antibiotic compounds against MRSA (Methicillin-resistance *Staphylococcus aureus*). The widest inhibition zone was shown in 50% concentration.

**Keywords:** MRSA, antibiotic resistance, wani leaf

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