ABSTRAK

AKTIVITAS ANTIBAKTERI DARI FRAKSI EKSTRAK ETANOL TANAMAN FAMILI *Asteraceae* TERHADAP BAKTERI *Vibrio cholera*

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Famili *Asteraceae* memiliki senyawa bioaktif seperti terpenoid, alkaloid, flavonoid, tanin, saponin yang dapat digunakan sebagai bahan pengobatan seperti infeksi. Famili *Asteraceae* antara lain *Vernonia amygdalina, Ageratum conyzoides, Tithonia diversifolia, Blumea balsamifera*, dan *Gynura procumbens*. Penelitian ini bertujuan untuk menentukan fraksi yang efektif menghambat pertumbuhan bakteri *Vibrio cholera.* Metode yang digunakan adalah difusi cakram kertas. Potensi antibakteri fraksi ekstrak tanaman famili *Asteraceae* dievaluasi terhadap standar melalui perhitungan *Activity Index* (A.I.). Fraksi etil asetat *T. diversifolia* menunjukkan penghambatan tertinggi terhadap *V. cholera* pada KHM 0,75% dengan diameter zona hambat 8,15 mm. Potensi antibakteri dari kelima tanaman dibandingkan dengan nilai *Proportion Index* (P.I.). *T. diversifolia* menunjukkan potensi yang lebih besar sebagai antibakteri terhadap bakteri *V. cholera* dari tanaman lainnya sehingga dipilih dalam pengujian lanjutan *Scanning Electrone Microscope* (SEM). Hasil uji SEM menunjukkan adanya perubahan morfologi sel yaitu bentuk bakteri yang tidak utuh dan terjadinya pengkerutan pada dinding sel yang telah terpapar fraksi etil asetat *T. diversifolia* konsentrasi 10%. Hasil penelitian ini dapat disimpulkan bahwa *T. diversifolia* memiliki aktivitas antibakteri terhadap *V. cholera*.

Kata Kunci : *Asteraceae, Tithonia diversifolia,* Antibakteri, *Scanning Electrone Microscope, Vibrio cholera*

ABSTRACT

ANTIBACTERIAL ACTIVITIES FROM THE ETHANOL EXTRACT OF FAMILI *Asteraceae* PLANT TO *Vibrio cholera* BACTERIA

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The *Asteraceae* family has bioactive compounds such as terpenoids, alkaloids, flavonoids, tanins, saponins which can be used as medicinal ingredients such as anti-infections. The *Asteraceae* family includes *Vernonia amygdalina, Ageratum conyzoides, Tithonia divesifolia, Blumea balsamifera,* and *Gynura procumbens*. This study aims to determine the fraction that effectively inhibits the growth of *Vibrio cholera* bacteria. The method used is the diffusion of paper discs. The antibacterial potential of the extract of the *Asteraceae* family plant was evaluated against the standard through the calculation of the *Activity Index* (A.I.). Ethyl acetate fraction *T. diversifolia* showed the highest inhibition of *V. cholera* in 0.75% MIC with a diameter of 8.15 mm inhibition zone. The antibacterial potential of the five plants is compared with the value of the *Proportion Index* (P.I.). *T. diversifolia* shows greater potential as an antibacterial against *V. cholera* bacteria from other plants so that it was selected in the advanced *Scanning Electrone Microscope* (SEM) test. The results of the SEM test showed a change in cell morphology, namely that there was an incomplete bacterial form and the results of shrinkage on the cell wall that had been exposed to *T. diversifolia* ethyl acetate fraction was 10% concentration The results of this study can be concluded as *T. diversifolia* has antibacterial activity against *V. cholera.*

Keywords : ***Asteraceae, Tithonia diversifolia,*** **Antibakteri,** ***Scanning Electrone Microscope, Vibrio cholera***