

**AKTIVITAS ANTIBAKTERI EKSTRAK DAN FRAKSI DAUN
BINAHONG (*Anredera cordifolia* (Ten.) Steenis) TERHADAP
BAKTERI *Escherichia coli* WDCM 00012, *Staphylococcus aureus*
WCDM 00032, DAN *Pseudomonas aeruginosa* ATCC 15442**

**Nikmatul Maula
Program Studi Farmasi**

ABSTRAK

Latar Belakang: Prevalensi infeksi nosokomial yang disebabkan oleh gram negatif lebih tinggi dibandingkan gram positif. Bakteri dari infeksi nosokomial yang sering ditemukan yaitu bakteri *E. coli*, *S. aureus*, dan *P. aeruginosa*. Daun binahong merupakan alternatif herbal yang mengandung tanin, saponin, alkaloid, flavonoid, dan terpenoid sebagai antibakteri. Ekstrak daun binahong terbukti aktif terhadap ketiga bakteri tersebut, namun aktivitas fraksi dan senyawa yang berperan belum diketahui.

Tujuan: Mengetahui aktivitas antibakteri ekstrak dan fraksi daun binahong (*Anredera cordifolia* (Ten.) Steenis) terhadap *E. coli*, *S. aureus*, dan *P. aeruginosa* serta mengidentifikasi senyawa yang berperan sebagai antibakteri.

Metode: Serbuk simplisia daun binahong diekstraksi secara maserasi dengan etanol 96% dan difraksinasi menggunakan n-heksan, etil asetat, dan air. Senyawa diidentifikasi melalui skrining fitokimia dan KLT. Aktivitas antibakteri diuji dengan metode difusi cakram ciprofloxacin sebagai kontrol positif, dianalisis menggunakan *Kruskal-Wallis* dan *Mann-Whitney*, serta KLT-bioautografi.

Hasil : Ekstrak dan fraksi mengandung flavonoid, alkaloid, saponin, dan steroid, serta menunjukkan aktivitas antibakteri terhadap ketiga bakteri tanpa perbedaan bermakna antar jenis fraksi. Senyawa yang diduga berperan sebagai antibakteri adalah flavonoid.

Kesimpulan : Ekstrak dan fraksi daun binahong memiliki aktivitas antibakteri terhadap *E. coli*, *S. aureus*, dan *P. aeruginosa* yang relatif setara antar fraksi, dengan flavonoid sebagai senyawa antibakteri utama.

Kata Kunci: *Anredera cordifolia* (Ten.) Steenis, antibakteri, *Escherichia coli*, *Staphylococcus aureus*, dan *Pseudomonas aeruginosa*.

**ANTIBACTERIAL ACTIVITY OF EXTRACT AND
FRACTION OF BINAHONG LEAVES (*Anredera cordifolia*
(Ten.) Steenis) AGAINST *Escherichia coli* WDCM 00012,
Staphylococcus aureus WDCM 00032, AND *Pseudomonas*
aeruginosa ATCC 15442**

**Nikmatul Mauula
Pharmacy Program**

ABSTRACT

Background: The prevalence of nosocomial infections caused by Gram-negative bacteria is higher than that caused by Gram-positive bacteria. The bacteria commonly found in nosocomial infections are *Escherichia coli*, *Staphylococcus aureus*, and *Pseudomonas aeruginosa*. Binahong leaves are a herbal alternative containing tannins, saponins, alkaloids, flavonoids, and terpenoids that act as antibacterial agents. The extract of binahong leaves has been proven active against these three bacteria; however, the activity of its fractions and the compounds responsible for the antibacterial effect remain unknown.

Methods: Binahong leaf simplicia powder was extracted by maceration using 96% ethanol and fractionated with n-hexane, ethyl acetate, and water. Compounds were identified through phytochemical screening and TLC. Antibacterial activity was tested using the disc diffusion method with ciprofloxacin as the positive control, analyzed using the *Kruskal-Wallis* and *Mann-Whitney* tests, and further examined by TLC-bioautography.

Results: The extract and fractions contained flavonoids, alkaloids, saponins, and steroids, and exhibited antibacterial activity against all three tested bacteria, with no significant difference among the fraction types. Flavonoids were the compounds suspected to be responsible for the antibacterial activity.

Conclusion: The extract and fractions of binahong leaves exhibited antibacterial activity against *E. coli*, *S. aureus*, and *P. aeruginosa* that was relatively comparable among fractions, with flavonoids as the main antibacterial compound.

Keywords : *Anredera cordifolia* (Ten.) Steenis), antibacterial, *Escherichia coli*, *Staphylococcus aureus*, and *Pseudomonas aeruginosa*.