

Aktivitas Antibakteri dan Antijamur Ekstrak Galam (*Melaleuca cajuputi* subsp. *Cumingiana* (Turcz.) Barlow) Terhadap Bakteri *E.coli* dan Jamur *C. albicans*

Antibacterial and Antifungal Activity of Galam (Melaleuca cajuputi subsp. Cumingiana (Turcz.) Barlow) Extract against E. coli bacteria and C. albicans fungi

Isnaini¹, Agung Biworo¹, Husnul Khatimah², Khusnan Mustofa Gufron³, Shafa Rahmani Puteri³

¹ Departemen Farmakologi dan Terapi, Prodi Pendidikan Dokter, Fakultas Kedokteran, Universitas Lambung Mangkurat Banjarmasin Kalimantan Selatan

² Departemen Biomedik Prodi Pendidikan Dokter, Fakultas Kedokteran, Universitas Lambung Mangkurat Banjarmasin, Kalimantan Selatan

³ Mahasiswa Prodi Pendidikan Dokter, Fakultas Kedokteran, Universitas Lambung Mangkurat Banjarmasin, Kalimantan Selatan

Abstrak

Galam (*Melaleuca cajuputi* subsp. *Cumingiana* (Turcz.) Barlow) adalah tanaman hutan rawa gambut. Tanaman ini dimanfaatkan untuk mengobati penyakit pernapasan, radang usus, tenggorokan nyeri, kulit gatal, penyakit diare, dan pusing. Penelitian ini bertujuan menganalisis aktivitas antibakteri dan antijamur ekstrak metanol bunga dan buah *M. cajuputi* subsp. *Cumingiana* (Turcz.) Barlow terhadap bakteri *Escherichia coli* dan *Candida albicans*. Penelitian ini merupakan penelitian dengan *pretest-posttest with control group design* dan terdiri dari 3 tahap penelitian. Tahap pertama ialah uji skrining fitokimia, tahap kedua menentukan kadar hambat minimal (KHM) dan ketiga menentukan kadar bunuh minimal (KBM). Hasil penelitian menunjukkan bahwa ekstrak metanol bunga dan buah *M. cajuputi* subsp. *Cumingiana* (Turcz.) Barlow mengandung terpenoid, flavonoid, fenol, saponin, kuinon, steroid, tanin, sedangkan senyawa alkaloid hanya terdapat pada ekstrak metanol buah *M. cajuputi* subsp. *Cumingiana* (Turcz.) Barlow. Nilai KHM dan KBM ekstrak metanol bunga *M. cajuputi* subsp. *Cumingiana* (Turcz.) Barlow terhadap *E. coli* berturut-turut adalah 1,67 dan 2,083 mg/ml, sedangkan nilai KHM dan KBM ekstrak metanol bunga *M. cajuputi* subsp. *Cumingiana* (Turcz.) Barlow terhadap *C. Albicans* adalah 3,125 dan 25 mg/ml. Nilai KHM dan KBM ekstrak metanol buah *M. cajuputi* subsp. *Cumingiana* (Turcz.) Barlow terhadap *E. coli* mempunyai nilai yang sama, yaitu sebesar 3,334 mg/ml, sedangkan nilai KHM dan KBM ekstrak metanol buah *M. cajuputi* subsp. *Cumingiana* (Turcz.) Barlow terhadap *C. albicans* berturut-turut adalah 3,125 dan 12,5 mg/ml.

Kata kunci : Galam (*Melaleuca cajuputi* subsp. *Cumingiana* (Turcz.) Barlow), bunga dan buah *M. cajuputi* subsp. *Cumingiana* (Turcz.) Barlow, Antibakteri dan antifungi, *Escherichia coli*, *Candida albicans*

Abstract

Galam (Melaleuca cajuputi subsp. Cumingiana (Turcz.) Barlow) is a peat swamp forest plant. This plant is used to treat respiratory diseases, colitis, sore throat, itchy skin, diarrhea, and dizziness. This study aimed to analyze the antibacterial and antifungal activity of the methanol extract of M. cajuputi subsp. Cumingiana (Turcz.) Barlow flowers and fruit against Escherichia coli and Candida albicans bacteria. This research is a pretest-posttest research with control group design and consists of 3 stages of research. The first stage is the phytochemical screening test, the second stage determines the minimum inhibitory concentration (MIC) and the third determines the minimum bactericidal concentration (MBC). The results showed that the methanol extract of M. cajuputi subsp. Cumingiana (Turcz.) Barlow flowers and fruit contained terpenoids, flavonoids, phenols, saponins, quinones, steroids, tannins, while alkaloid compounds only found in the methanol extract of M. cajuputi subsp. Cumingiana (Turcz.) Barlow fruit. The MIC and MBC values of M. cajuputi subsp. Cumingiana (Turcz.) Barlow flower methanol extract against E. coli were 1.67 and 2.083 mg/mL, respectively, while the MIC and MBC values of the methanol extract of M. cajuputi subsp. Cumingiana (Turcz.) Barlow flower against C. albicans were 3.125 and 25 mg/mL. The MIC and MBC values of the methanol extract of M. cajuputi subsp. Cumingiana (Turcz.) Barlow fruit against E. coli have same value were

3.334 mg/mL, while the MIC and MBC values of the methanol extract of *M. cajuputi* subsp. *Cumingiana* (Turcz.) Barlow fruit against *C. albicans* were 3.125 and 12.5 mg/mL, respectively.

Keywords : Galam (*M. cajuputi* subsp. *Cumingiana* (Turcz.) Barlow, antibacterial and antifungal, *Escherichia coli*, *Candida albicans*