"AKTIVITAS FARMAKOLOGI TANAMAN *Muntingia calabura* DAN TANAMAN *Vernonia amygdalina Del.* SEBAGAI TANAMAN OBAT "

ABSTRAK

Latar Belakang : Isolasi metabolit sekunder dari bagian akar, batang dan daun *M. calabura* yang dilaporkan merupakan golongan flavonoid. Senyawa flavonoid diketahui memberikan efek farmakologi. Penelitian terhadap tanaman *V.amygdalina* menunjukkan bahwa ia mengandung senyawa flavonoid, saponin, alkaloid, tanin, fenolik, dan beberapa jenis lakton seskuiterpen. Senyawa ini memiliki sifat farmakologis seperti antimikroba, antioksidan, antidiabetik, pencahar, hipoglikemik, antihelmintik, antiinflamasi, antifungi, antibakteri, dan lainnya.

Metode : Penelitian dilakukan dengan metode studi literatur menggunakan data sekunder yang diperoleh dari artikel hasil penelitian, selanjutnya diuraikan secara deskriptif dengan memaparkan dan membandingkan hasil penelitian terhadap aktivitas farmakologi tanaman *M.calabura* dan *V.amygdalina*.

Hasil : Sari buah *M.calabura* memiliki aktivitas sebagai antidiabetik dengan konsentrasi 60% menurunkan kadar gula darah 122% dan ekstrak daun konsentrasi 100 µg/ml, menunjukkan aktivitas hipoglikemia yang signifikan dibandingkan akarbose. Aktivitas kolesterol pada ekstrak daun konsentrasi 50 mg/kg BB menurunkan rerata kadar kolesterol sebesar 50,60. Aktivitas antioksidan dengan IC50 sebesar 36,44 ppm termasuk kategori kuat pada ekstrak etanol akar kersen. Aktivitas antibakteri pada bagian daun dan batang konsentrasi 10 mg/mL termasuk kategori kuat terhadap *P.aeruginosa* dengan zona hambat masing-masing 20 dan 15 mm dan *S.aureus* dengan zona hambat 37.7 dan 24.7 mm. Sedangkan pada bagian daun *V.amygdalina* memiliki aktivitas farmakologi sebagai antidiabetik dengan dosis efektif 150 mg/kg BB. Aktivitas antibakeri terhadap *S. aureus* dan *E. coli* konsentrasi 100, 250, 500, 750, dan 1000 ppm tetapi kategori sedang. Aktivitas analgetik dengan dosis 100, 200 dan 400 mg/kg BB dengan persen efektivitas 32,01%, 51,60% dan 82,41% masih lemah dari aspirin dosis 65 mg/kg BB. Aktivitas asam urat konsentrasi 0,9% dengan persentase penurunan 30.08%.

Kesimpulan : Tanaman *M.calabura* memiliki aktivitas farmakologi seperti antidiabetik, antikolesterol, antioksidan, dan antibakteri. Sedangkan tanaman *V.amygdalina Del* memiliki aktivitas farmakologi seperti antidiabetik, antibakteri, analgetik dan asam urat.

Kata Kunci: *Muntingia calabura, Vernonia amygdalina Del*, aktivitas Farmakologi.

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"PHARMACOLOGICAL ACTIVITIES OF MUNTINGIA CALABURA PLANTS AND VERNONIA AMYGDALINA DEL PLANTS. AS A MEDICINAL PLANT "

ABSTRACT

Background: Secondary metabolite isolation of the root, stem and leaves of M. calabura which is reported to be a flavonoid group. Flavonoid compounds are known to provide pharmacological effects. Research on the V.amygdalina plant shows that it contains flavonoid compounds, saponins, alkaloids, tannins, phenolics, and some types of lactone seskuiterpen. This compound has pharmacological properties such as antimicrobial, antioxidant, antidiabetic, laxative, hypoglycemic, antihelmintic, antiinflammatory, antifungi, antibacterial, and others.

Method: This research is done by literary study method using secondary data obtained from the article of the results of the study, further description is explained by presenting and comparing the results of the study to the pharmacological activities of M.calabura and V.amygdalina plants.

Result: M.calabura fruit juice has antidiabetic activity with a concentration of 60% lowering blood sugar levels 122% and leaf extract concentration of 100 μg/ml, indicating significant hypoglycemia activity compared to akarbose. Cholesterol activity in leaf extract concentrations of 50 mg/kg BB lowers the average cholesterol level by 50.60. Antioxidant activity with IC50 of 36.44 ppm belongs to the strong category of kersen root ethanol extract. Antibacterial activity on the leaves and stem concentrations of 10 mg/mL belongs to a strong category against P.aeruginosa with inhibition zone of 20 and 15 mm respectively and S.aureus with inhibition zone of 37.7 and 24.7 mm respectively. While on the leaf part V.amygdalina has pharmacological activity as an antidiabetic with an effective dose of 150 mg/kg BB. Antibacterial activity against S.aureus and E.coli concentrations of 100, 250, 500, 750, and 1000 ppm but moderate category. Analgetic activity with doses of 100, 200 and 400 mg/kg BB with a percent effectiveness of 32.01%, 51.60% and 82.41% is still weak from aspirin doses of 65 mg/kg BB. Uric acid activity concentrates 0.9% with a percentage decrease of 30.08%.

Conclusion: M.calabura plants have pharmacological activities such as antidiabetics, anticholesterol, antioxidants, and antibacterial. While the plant V.amygdalina Del has pharmacological activities such as antidiabetics, antibacterial, analgesic and uric acid.