Analisis fitokimia, total fenol, total flavonoid, dan uji in-vitro ekstrak etilasetat daging dan kulit buah kunto dewo (kigelia pinnata) terhadap sel HeLa = Phytochemical analysis, total phenol, total flavonoids, and in-vitro test of kunto dewo (kigelia pinnata) flesh and skin fruit ethylacetate extract on HeLa cells

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Abstrak

Latar belakang: Kanker serviks menempati posisi keempat sebagai kanker yang paling sering terjadi dan menyebabkan kematian pada wanita di seluruh dunia. Oleh karena itu, tata laksana yang adekuat diperlukan untuk menurunkan prevalensi dan mortalitas pasien. Tanaman herbal dapat dijadikan sebagai alternatif dan komplementer dalam tata laksana yang diberikan. Salah satu tanaman yang berpotensi adalah tanaman kunto dewo (Kigelia pinnata) yang sering digunakan sebagai obat tradisional. Kigelia pinnata memiliki beberapa efek seperti antiinflamasi, antibakterial, antidiabetik, antioksidan, dan antikanker.
Tujuan: Mengetahui kandungan senyawa fitokimia, total fenol, total flavonoid, dan aktivitas sitotoksik in-vitro ekstrak etilasetat Kigelia pinnata terhadap sel HeLa.
Metode: Daging dan kulit buah Kigelia pinnata dipisahkan lalu masing-masing dimaserasi dan diekstraksi dengan pelarut etilasetat menghasilkan ekstrak etilasetat daging dan kulit buah Kigelia pinnata. Kedua ekstrak dilakukan analisis fitokimia dengan uji fitokimia, kromatografi lapis tipis (KLT), uji total fenol, dan uji total flavonoid. Aktivitas sitotoksik in vitro kedua ekstrak terhadap sel HeLa diuji dengan metode MTT assay.
Hasil: Ekstrak etilasetat daging buah Kigelia pinnata mengandung flavonoid, tannin, dan triterpenoid, dengan kadar total fenol sebesar 18,81 mg ekuivalen asam galat (GAE)/mL dan kadar total flavonoid sebesar 2,37 mg ekuivalen kuersetin (QE)/mL. Ekstrak etilasetat kulit buah Kigelia pinnata mengandung flavonoid, tannin, glikosida, dan steroid, dengan kadar total fenol sebesar 14,42 mg GAE/mL dan kadar total flavonoid sebesar 19,06 mg QE/mL. Analisis KLT menunjukkan adanya dua komponen fitokimia pada masing-masing ekstrak. Ekstrak etilasetat daging dan kulit buah Kigelia pinnata menunjukkan aktivitas sitotoksik terhadap sel HeLa dengan nilai IC50 masing-masing sebesar 118,76 g/mL dan 157,46 g/mL.
Simpulan: Ekstrak etilasetat daging dan kulit buah Kigelia pinnata berpotensi dikembangkan sebagai antikanker serviks.
.....Introduction: Cervical cancer is the fourth most common cancer and causes death in women around the world. Therefore, adequate management is needed to reduce the prevalence and mortality of patients. Herbal plants can be used as an alternative and complementary in the management given. One of the potential plants is kunto dewo (Kigelia pinnata) which is often used as a traditional medicine. Kigelia pinnata has several effects such as anti-inflammatory, antibacterial, antidiabetic, antioxidant, and anti-cancer.
Aims: To determine the components of phytochemical compounds, total phenols, total flavonoids, and in-vitro cytotoxic activity of Kigelia pinnata ethylacetate extract against HeLa cells.
Methods: The flesh and skin of the Kigelia pinnata fruit were separated and then macerated for each part with ethylacetate to produce Kigelia pinnata flesh and skin fruit ethylacetate extract. Both extracts were analyzed for phytochemicals compounds through phytochemical tests, thin layer chromatography (TLC),

total phenol test, and total flavonoid test. In addition, the extracts were tested for their in vitro cytotoxic activity against HeLa cells by the MTT assay method.
Result: Ethylacetate extract of Kigelia pinnata fruit flesh contains flavonoids, tannins, and triterpenoids, as well as total phenol content of 18.81 mg of Gallic Acid Equivalent (mg GAE)/mL and total flavonoids level of 2,37 mg of Quercetin Equivalent (mg QE)/mL. Ethylacetate extract of Kigelia pinnata fruit skin contains flavonoids, tannins, glycosides, and steroids, with total phenol content of 14.42 mg GAE/mL and total flavonoids content of 19.06 mg QE/mL. TLC analysis showed the presence of two phytochemical components in each extract. The cytotoxic activity of the ethyl acetate extract of the flesh and skin of Kigelia pinnata fruit on HeLa cells showed IC50 values of 118.76 g/mL and 157.46 g/mL, respectively.
Conclusion: The ethyl acetate extract of the flesh and skin of Kigelia pinnata fruit have the potential to be developed as a cervical anticancer.