

Uji efektivitas antiviral ekstrak shorea SPP terhadap dengv = Antiviral effectivity test of shorea SPP to dengv

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Abstrak

[DENV merupakan sebuah virus yang penularannya melalui vektor nyamuk, yaitu *Aedes aegypti*. Virus ini terdiri dari 4 tipe, yaitu DENV-1, DENV-2, DENV-3, dan DENV-4. Infeksi DENV banyak terjadi pada negara dengan iklim tropis, diantaranya seperti Karibia, Asia Tenggara, serta Pasifik Barat. Indonesia termasuk salah satu negara dengan endemis infeksi DENV di seluruh wilayahnya. Hingga saat ini, tatalaksana yang diberikan untuk pasien dengan infeksi DENV masih berupa tatalaksana suportif dikarenakan belum ditemukan obat yang efektif untuk mengobati keempat tipe DENV. Ekstrak daun *Shorea spp.* disinyalir memiliki kemampuan untuk menghambat DENV sehingga dapat digunakan sebagai antiviral. Pada penelitian ini, sel Huh7It-1 diinfeksi dengan DENV dan diberikan ekstrak *Shorea spp.* dengan berbagai konsentrasi. Efektivitas ekstrak diteliti dengan menggunakan konsentrasi 320 μg/ml, 160 μg/ml, 80 μg/ml, 40 μg/ml, 20 μg/ml, dan 10 μg/ml. Efek inhibisi diuji menggunakan metode Focus Assay. Sedangkan efek sitotoksik diuji menggunakan metode MTT Assay. Pada penelitian ini didapatkan nilai sitotoksik (CC50) ekstrak terhadap sel dan nilai inhibisi (IC50) ekstrak terhadap DENV, yaitu nilainya sebesar 150,85 μg/ml dan 23,22 μg/ml. Berdasarkan nilai IC50 dan CC50, didapatkan nilai Selectivity Index (SI) sebesar 6,496. Hal ini menunjukkan bahwa ekstrak daun *Shorea spp.* memiliki efek inhibisi terhadap DENV dan dapat dikembangkan sebagai antiviral terhadap DENV di masa mendatang.;DENV is a virus transmitted through mosquito vectors, named *Aedes aegypti*. This virus consists of four types, which is DENV-1, DENV-2, DENV-3 and DENV-4. DENV infection are more prevalent in countries with tropical climates, such as the Caribbean, Southeast Asia, and the Western Pacific. Indonesia is one of the country with endemic DENV infection founded in the entire region. Until now, the treatment which is given to patients with DENV infection is still in the form of supportive treatment, because effective drugs to treat the four types of DENV has not been discovered yet. Leaf extract of *Shorea spp.* allegedly has the ability to inhibit DENV which acts as an antiviral. In this study, Huh7It cell was infected with DENV and was given *Shorea spp.* extracts in various concentrations from 320 μg/ml, 160 μg/ml, 80 μg/ml, 40 μg/ml, 20 μg/ml, and 10 μg/ml. Inhibitory effect was tested by using focus assay, while cytotoxic effect was tested by using MTT assay. In this study, the extract's cytotoxic value (CC50) against cell and inhibition values (IC50) against DENV was determined, with the results 150.85 μg/ml and 23.22 μg/ml. Based on value of IC50 dan CC50, Selectivity Inde x (SI) score was 6,496. This indicates that the leaf extract of *Shorea spp.* has inhibitory effects against DENV and could be developed as an antiviral againsts DENV in the future;DENV is a virus transmitted through mosquito vectors, named *Aedes aegypti*. This virus consists of four types, which is DENV-1, DENV-2, DENV-3 and DENV-4. DENV infection are more prevalent in countries with tropical climates, such as the Caribbean, Southeast Asia, and the Western Pacific. Indonesia is one of the country with endemic DENV infection founded in the entire region. Until now, the treatment which is given to patients with DENV infection is still in the form of supportive treatment, because effective drugs to treat the

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