

**POTENSI EKSTRAK DAUN JATI BELANDA (*Guazuma ulmifolia*)
TERHADAP PERBAIKAN HISTOPATOLOGI GINJAL DAN
KADAR KREATININ TIKUS WISTAR DENGAN PAKAN TINGGI
LEMAK**

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Abstrak

Obesitas telah terbukti menjadi salah satu penyebab penting penyakit ginjal karena hubungannya yang erat dengan diabetes dan hipertensi. Obesitas mempengaruhi progresivitas dari *Chronic Kidney Disease* (CKD) karena merupakan salah satu faktor predisposisi kondisi nefropati diabetik dengan gambaran histopatologis *Interstitial Inflammation* dan *Interstitial Fibrosis and Tubular Atrophy* (IFTA), selain itu dapat berupa arteriosklerosis dan *Arteriolar hyalinosis*. Flavonoid dan Tanin merupakan metabolit sekunder yang ada di dalam daun jati belanda (*Guazuma ulmifolia*) yang memiliki efek terapi menurunkan kreatinin serum dan menghambat progresivitas lesi IFTA dan *Interstitial Inflammation*. Melalui penelitian eksperimental dengan parameter histopatologi ginjal berupa indikator progresivitas lesi IFTA dan *Interstitial Inflammation*, 25 tikus galur wistar diadakan dan diinduksi pakan tinggi lemak, kemudian dibagi menjadi 5 kelompok sampel yang terdiri atas 2 kelompok kontrol dan 3 kelompok perlakuan ekstrak daun jati belanda dengan dosis 0,2 gr/KgBB, 0,4 gr/KgBB, 0,8 gr/KgBB. Dengan menggunakan uji *Kruskal-Wallis* dan Uji *Post-Hoc Mann Whitney*, hasil yang didapatkan adalah signifikan (P Value $< 0,05$). Dapat disimpulkan bahwa ekstrak daun jati belanda menghambat progresivitas lesi IFTA dan *Interstitial Inflammation* dan memiliki efek terapi setara dengan orlistat jika dosis yang diberikan adekuat.

Kata kunci: Daun Jat Belanda, Histopatologi, IFTA, *Interstitial Inflammation*, Orlistat

***POTENTIAL OF WEST INDIAN ELM LEAVES (Guazuma ulmifolia)
EXTRACT ON HISTOPATHOLOGICAL IMPROVEMENT OF
KIDNEY AND CREATININ RATES IN WISTAR RAT WITH HIGH-
FAT DIET***

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Abstract

Obesity has been shown to be one of the important causes of kidney disease due to its close association with diabetes and hypertension. Obesity affects the progression of Chronic Kidney Disease (CKD) because it is one of the predisposing factors for diabetic nephropathy with histopathological features of Interstitial Inflammation and Interstitial Fibrosis and Tubular Atrophy (IFTA), in addition to arteriosclerosis and Arteriolar hyalinosis. Flavonoids and tannins are secondary metabolites present in West Indian Elm leaves (Guazuma ulmifolia) that have therapeutic effects on lowering serum creatinine and inhibiting the progressivity of IFTA and Interstitial Inflammation lesions. Through experimental research with renal histopathology parameters in the form of indicators of IFTA lesion progressivity and Interstitial Inflammation, 25 wistar rats were held and induced with high-fat diet, then divided into 5 groups consisting of 2 control groups and 3 treatment groups of West Indian Elm leaves extract at a dose of 0.2 gr/KgBB, 0.4 gr/KgBB, 0.8 gr/KgBB. By using the Kruskal-Wallis test and Mann Whitney Post-Hoc Test, the results obtained were significant (P Value <0.05). It can be concluded that West Indian Elm Leaves extract inhibits the progressivity of IFTA and Interstitial Inflammation lesions and has a therapeutic effect equivalent to orlistat if the dose given is adequate.

Keywords: Histopathology, IFTA, Interstitial Inflammation, Orlistat, West Indian Elm Leaves