

ABSTRAK

Nama : Ainuzzahra
Program Studi : Kedokteran Umum
Judul Skripsi : Pengaruh Ekstrak Kayu Bajakah Merah (*Spatholobus littoralis Hassk.*) Terhadap Aktivitas Kolagenase Tikus Terglikasi Protein dan Tinjauannya Menurut Pandangan Islam

Latar Belakang : Penuaan kulit ditandai oleh peningkatan aktivitas kolagenase yang mempercepat degradasi kolagen, terutama setelah kondisi stres oksidatif dan glikasi protein. Kayu Bajakah Merah (*Spatholobus littoralis Hassk.*) mengandung senyawa bioaktif seperti flavonoid yang bersifat antioksidan dan berpotensi menghambat aktivitas kolagenase.

Metode : Penelitian ini merupakan studi eksperimental in vivo menggunakan tikus Sprague-Dawley jantan yang diinduksi D-galaktosa. Hewan uji dibagi menjadi kelompok kontrol dan kelompok perlakuan ekstrak kayu bajakah dengan dosis 25, 50, dan 100 mg/kgBB. Aktivitas kolagenase dianalisis menggunakan metode ELISA dan diuji secara statistik dengan One-Way ANOVA dan uji lanjut Post Hoc.

Hasil : Hasil analisis menunjukkan adanya perbedaan bermakna pada beberapa perbandingan antar kelompok ($p < 0,05$). Pemberian ekstrak kayu bajakah pada dosis 25 mg/kgBB, menunjukkan kecenderungan penurunan aktivitas kolagenase dibandingkan kelompok kontrol, yang menandakan potensi efek anti-aging.

Kesimpulan : Ekstrak kayu bajakah berpotensi menurunkan aktivitas kolagenase pada model tikus setelah mengalami glikasi protein, sehingga berpotensi dikembangkan sebagai agen anti-aging alami. Namun, diperlukan penelitian lanjutan untuk memastikan mekanisme kerja, keamanan, dan efektivitas klinisnya

Kata Kunci : Ekstrak Kayu Bajakah, Kolagenase, Glikasi

ABSTRACT

Name : Ainuzzahra
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Thesis Title : The Effect of Red Bajakah Wood (Spatholobus littoralis Hassk.) Extract on Collagenase Activity in Protein-Glycated Rats and Its Review According to Islamic Perspective

Background: *Skin aging is characterized by increased collagenase activity, which accelerates collagen degradation, especially after conditions of oxidative stress and protein glycation. Red Bajakah wood (Spatholobus littoralis Hassk.) contains bioactive compounds such as flavonoids that are antioxidants and have the potential to inhibit collagenase activity.*

Methods: *This study was an in vivo experimental study using male Sprague-Dawley rats induced with D-galactose. The test animals were divided into a control group and a treatment group given bajakah wood extract at doses of 25, 50, and 100 mg/kgBW. Collagenase activity was analyzed using the ELISA method and tested statistically with One-Way ANOVA and Post Hoc follow-up tests.*

Results: *The analysis results showed significant differences in several comparisons between groups ($p < 0.05$). Administration of bajakah wood extract at a dose of 25 mg/kgBW showed a tendency toward decrease collagenase activity compared to the control group, indicating a potential anti-aging effect.*

Conclusion: *Bajakah wood extract has the potential to reduce collagenase activity in a mouse model after protein glycation, making it a promising candidate for development as a natural anti-aging agent. However, further research is needed to confirm its mechanism of action, safety, and clinical efficacy.*

Keywords: *Bajakah Wood Extract, Glycated, Collagenase*