

EKSTRAK ETANOL *Bauhinia purpurea* DAN TAURINE DALAM PEMULIHAN FERTILITAS HIPERGLIKEMIK MENCIT JANTAN

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Abstrak

Kondisi hiperglikemia (diabetik) mampu menurunkan fertilitas pada hewan. Untuk itu diperlukan upaya eksplorasi berbagai tanaman yang dapat mengatasi hiperglikemia serta dapat memperbaiki fertilitas pada hewan jantan. Tujuan penelitian ini adalah mengeksplorasi peran ekstrak daun kupu-kupu (*Bauhinia purpurea*) serta senyawa taurine terhadap pemulihan fertilitas mencit (*Mus musculus*) jantan yang mengalami hiperglikemik/diabetik hasil induksi aloksan. Penelitian ini menggunakan rancangan acak lengkap dengan 5 perlakuan (Kontrol; aloksan; aloksan + *Bauhinia*; aloksan + *Bauhinia* + taurine; aloksan + taurine) dengan jumlah sampel sebanyak 30 ekor. Penelitian dilakukan di Laboratorium Biomolekuler (FMIPA) dan Laboratorium Fisiologi (FK) Universitas Lampung pada Bulan Juni 2017 – Januari 2018. Induksi aloksan monohidrat (Sigma-Aldrich) diberikan sebanyak 0,7mg/100 gBB secara intravena, hingga mencapai kondisi hiperglikemia. Selanjutnya masing masing diberi perlakuan dengan pemberian ekstrak *Bauhiniasp*(40 mg/100g bb), taurine (15,6 mg/100g bb), dan kombinasi ekstrak *Bauhinia* dengan taurine. Parameter yang diamati adalah berat badan, kadar gula darah, berat testis, dan jumlah spermatozoa. Data dianalisis dengan anova dan uji lanjut dengan Fisher's pada taraf nyata (α) 5%. Hasil menunjukkan bahwa pemberian ekstrak etanol *Bauhinia* belum mampu menurunkan gula darah namun mampu memulihkan kembali jumlah spermatozoa mencit jantan ($\alpha=0,05$), sedangkan pemberian taurine mampu menurunkan gula darah sebesar 33% serta menaikkan jumlah spermatozoa pada mencit jantan.

Kata kunci: Taurine, *Bauhinia purpurea*, hiperglikemia, fertilitas

Abstract

Hyperglycemic (diabetic) condition is able to reduce animal fertility, therefore, it is necessary to explore any possible herb which able to overcome with hyperglycemic and return normal male animal fertility. The aims of the study is to explore the effect of butterfly leaf (*Bauhinia purpurea*) extract and taurine for recovering male mice (*Mus musculus*) fertility which undergone hyperglycemic/diabetic induced by alloxan. This study used complete randomized design with 5 treatment groups, such as control, alloxan, alloxan + *Bauhinia*, alloxan + *Bauhinia* + taurine and alloxan + taurine groups with total of sample animals of 30 male mice. The study was conducted in Biomolecular Lab of Math and Sciences Faculty and Physiology Lab of Medical School of University of Lampung from June 2017-January 2018. Alloxan monohydrate (Sigma-Aldrich) was intravenously injected as much as 0.7 mg/100 g BW until the animals reached to hyperglycemic condition. After glycemic condition was reached they were treated with *Bauhinia purpurea* extract (40 mg/100 g BW), taurine (15.6 mg/100 g BW) and the combination of both. Observing parameters were body weight, blood glucose, the weight of testis and the number of spermatozoa. All the collected data were analyzed by using ANOVA and followed by Fisher's at 5% level of significant. The results indicated that *Bauhinia* extract was not able to reduce the blood glucose but it was able to return the spermatozoa back to normal, while taurine was able to reduce the blood glucose, as much as 33%, as well as to return back the normal spermatozoa numbers of male mice induced by alloxan monohydrate.