Pengaruh pemberian ekstrak bekatul varietas IPB3S terhadap kadar glutation GSH organ testis tikus sprague-dawley yang diinduksi karbon tetraklorida = Effect of IPB3S rice bran extract on glutathione (GSH) level in testes against carbon tetrachloride 9(CCL4) intoxication in rats

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Abstrak

Radikal bebas merupakan molekul yang mengandung oksigen dan bersifat sangat reaktif. Peningkatan radikal bebas di dalam tubuh menyebabkan kerusakan oksidatif. Salah satu organ yang rentan terhadap kerusakan oksidatif adalah testis karena laju pembelahan sel yang cepat pada proses spermatogenesis. Tujuan penelitian ini adalah untuk mengetahui pengaruh pemberian ekstrak bekatul varietas IPB3S terhadap organ testis tikus yang diinduksi karbon tetraklorida CCl4 menggunakan parameter glutation GSH . Duapuluh empat ekor tikus Sprague-Dawley jantan berusia 6-8 minggu dibagi kedalam 6 kelompok perlakuan yaitu kontrol, CCl4 0,55 mg/KgBB, bekatul 150 mg/KgBB, bekatul 150 mg/KgBB CCl4 0,55 mg/KgBB, bekatul 300 mg/KgBB, bekatul 300 mg/KgBB CCl4 0,55 mg/KgBB. Setelah perlakuan dilakukan pengambilan organ testis tikus untuk dihitungan kadar GSH dengan menggunakan metode Ellman kemudian dianalisis menggunakan software SPSS. Hasil penelitian didapatkan peningkatan kadar GSH pada kelompok pemberian bekatul dan penurunan GSH pada kelompok yang diinduksi CCl4 bila dibandingkan dengan kelompok kontrol. Peningkatan tertinggi dimiliki kelompok dengan perlakuan bekatul dosis 300 mg/KgBB. Peningkatan kadar GSH pada kelompok perlakuan bekatul mengindikasikan potensi ekstrak bekatul sebagai antioksidan.

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Free radical is a molecule containing oxygene which is very reactive. Increase in free radical in the body cause oxidative damage. One of the organs which at risk to have oxidative damage is testes due to high cell division rate in spermatogenesis process. The present study was aimed at evaluating the protective effects of IPB3S rice bran extract against carbon tetrachloride CCl4 induced oxidative stress and testes injury in male adult Sprague Dawley. The parameter used was glutathion GSH levels. Twenty four male Sprague Dawley were devided equally into 6 groups for the assesment. Rats of group I received no treatments. Rats of group II were treated with CCl4 0,55 mg KgBB. Rats of group III were treated with rice bran extract 150 mg KgBB. Rats of group IV were treated with rice bran extract 150 mg KgBB CCl4 0,55 mg KgBB. Rats of group V were treated with rice bran 300 mg KgBB, and rats of group VI were treated with rice bran 300 mg KgBB CCl4 0,55 mg KgBB. GSH levels in testes organ were measured using Ellman rsquo s method after the intervention. The results showed elevation of GSH levels in bekatul treated group and decrease of GSH levels in CCl4 treated group with respect to control group. Group of rice bran extract 300 mg KgBB showed the highest elevation of GSH levels. Those results indicates a potential rice bran extracts as antioxidants.