

# Uji potensi nefroprotektif senyawa dimer dari isoeugenol terhadap histologi ginjal mencit (*mus musculus*) jantan galur DDY = Nephroprotective potential test of isoeugenol dimer on kidney histology of DDY strain male mice (*mus musculus*)

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## Abstrak

Penelitian dilakukan untuk mengetahui potensi nefroprotektif dimer isoeugenol terhadap histologi ginjal mencit jantan galur DDY. Tiga puluh ekor mencit jantan dibagi secara acak dalam enam kelompok, yang terdiri atas kelompok kontrol normal, kelompok kontrol kerusakan, dan kelompok perlakuan. Kelompok kontrol dicekok dengan minyak zaitun selama 7 hari berturut-turut. Kelompok perlakuan dicekok dengan larutan dimer isoeugenol dosis 2, 4, 6, dan 8 mg/kg bb selama 7 hari berturut-turut. Kelompok kontrol kerusakan dan kelompok perlakuan diinjeksi intraperitoneal dengan karbon tetraklorida dua jam setelah pemberian dosis hari ke-7. Ginjal diamati secara makroskopik dan mikroskopik.

Uji statistik menunjukkan terdapat pengaruh nefroprotektif dimer isoeugenol terhadap rata-rata diameter kapsula Bowman, diameter glomerulus, dan jumlah tubulus proksimal yang menutup, namun tidak terdapat pengaruh terhadap rata-rata diameter ruang Bowman dan berat basah ginjal. Hasil penelitian menunjukkan setiap dosis perlakuan dimer isoeugenol memiliki pengaruh nefroprotektif. Dimer isoeugenol dosis 4 mg/kg bb menunjukkan pengaruh paling baik.

.....This research was designed to investigate the nephroprotective potential of isoeugenol dimer on DDY strain male mice kidney histology. The animals were divided randomly into six groups, consisted of normal control group, injury control group, and treatment groups. Control groups were administered olive oil orally for 7 consecutive days. Treatment groups were administered doses of isoeugenol dimer solution 2, 4, 6, and 8 mg/kg w/v orally for 7 consecutive days. Injury control group and treatment groups was induced by intraperitoneal administration of carbon tetrachloride 2 hours after the 7th dose. Kidneys were observed in macroscopic and microscopic.

Statistic study showed that there was a nephroprotective effect of isoeugenol dimer against the average diameter of Bowman's capsule, diameter of glomerulus, and total complete obliteration proximal tubule lumen, but no effect was found on the average diameter Bowman's space and kidney weight. The result showed that each dose of isoeugenol dimer has a nephroprotective effect. Isoeugenol dimer dose 4 mg/kg w/v has the best effect.