

# Efek pemberian susu kacang kedelai (*Glycine max* (L.) Merr.) terhadap kadar glukosa darah mencit putih jantan galur ddY yang dibebani glukosa = The effect of soybean milk (*Glycine max* (L.) Merr.) administration towards blood glucose level in glucose loaded male ddY mice

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## Abstrak

Kacang kedelai merupakan sumber isoflavon terbanyak dan salah satu produk olahannya ialah susu kacang kedelai. Penelitian ini bertujuan untuk mengetahui efek pemberian susu kacang kedelai terhadap kadar glukosa darah mencit putih jantan galur ddY yang dibebani glukosa. Penelitian ini menggunakan rancangan acak lengkap dengan 25 ekor mencit putih jantan galur ddY yang terbagi dalam 5 kelompok, yaitu kontrol normal (CMC 0,5% 0,5 ml/20 g BB), kontrol pembanding (Metformin HCl 13 mg/20 g BB), dan 3 variasi dosis uji (0,325 g kedelai/20 g BB; 0,65 g kedelai/20 g BB; 1,3 g kedelai/20 g BB) yang diberikan dalam bentuk susu kacang kedelai. Mencit terlebih dahulu diukur kadar glukosa darah puasa, kemudian diberikan larutan uji. Tiga puluh menit setelah perlakuan, kadar glukosa darah diukur kembali, kemudian diberikan glukosa 2 g/kg BB per oral. Pengukuran kadar glukosa darah dilakukan pada menit ke-30, 60, 90, 120 setelah pembebanan glukosa. Kadar glukosa darah diukur dengan menggunakan glukometer ACCU-CHEK® Active. Pemberian susu kacang kedelai dapat menurunkan kadar glukosa darah mencit putih jantan galur ddY yang dibebani glukosa pada semua dosis (0,325; 0,65; 1,3 g kacang kedelai/20 g BB mencit), namun penurunan kadar glukosa darah yang terbaik terlihat pada dosis 1 (0,325 g kacang kedelai/20 g BB mencit).

*Soybean is most abundant source of isoflavones and one of soy products is soybean milk. This study was made to investigate the effect of soybean milk administration towards blood glucose level in glucose loaded male ddY mice. A completely randomized design was conducted using 25 male ddY mice that were divided into 5 groups; normal control (CMC 0,5% 0,5 ml/20 g b.w.), drug control (Metformin HCl 13 mg/20 g b.w.), and 3 different treatment doses (0,325 g soybean/20 g b.w.; 0,65 g soybean/20 g b.w.; 1,3 g soybean/20 g b.w.) which were given in soybean milk. Fasting blood glucose was measured and mice were treated based on their groups. Thirty minutes after treatment, blood glucose level was measured again and then mice were loaded glucose 2 g/kg b.w. orally. Blood glucose level was measured at 30, 60, 90, and 120 minutes postload glucose. Blood glucose level was measured by using ACCU-CHEK® Active meter. Administration of soybean milk lowered blood glucose level in glucose loaded male ddY mice treated with 0,325; 0,65; 1,3 g soybean/20 g b.w., but treatment with 0,325 g soybean/20 g b.w. showed the best reduction of blood glucose level.*