ABSTRAK

EFEK EKSTRAK MAWAR MERAH (*ROSA DAMASCENA MILL.*) TERHADAP KADAR GLUKOSA DARAH, RASIO TG/HDL-C DAN RASIO MONOSIT LIMFOSIT *RATTUS NORVEGICUS* MODEL DIABETES

Latar belakang: Komplikasi vaskuler pada penderita diabetes terjadi akibat kondisi hiperglikemia, dyslipidemia dan inflamasi kronik. Salah satu tanaman tradisional yang dipercaya memiliki efek antihiperglikemi dan antiinflamasi adalah *Rosa damascena* atau yang dikenal dengan mawar merah.

Tujuan: Membuktikan pengaruh ekstrak etanol mawar (Rosa *Damascena Mill*) terhadap penurunan kadar glukosa darah puasa, *post prandial,* rasio TG/ HDL-C, dan rasio monosit limfosit (RML) *Rattus Norvegicus* model diabetes mellitus.

Metode: Penelitian ini merupakan *true eksperimental* dengan *Post Test Only Control Group Design.* Terdapat 6 kelompok yang terbagi menjadi kelompok normal, kelompok diabetes, kelompok metformin dan kelompok ekstrak mawar 250mg/Kg BB, 500mg/Kg BB, 1000mg/Kg BB. Metformin dan ekstrak diberikan sekali sehari selama 14 hari. Penelitian ini menggunakan Streptozotocin 50mg/Kg BB untuk menginduksi diabetes. Glukosa darah diukur menggunakan glukometer sementara pemeriksaan hematologi lengkap dan profil lipid dengan *automatic analyzer.*

Hasil: Terdapat penurunan kadar glukosa darah puasa dan glukosa darah *post prandial* meski tidak signifikan sedangkan pada parameter rasio TG/HDL-C terjadi penurunan signifikan pada kelompok ekstrak. Sebaliknya pada parameter rasio monosit limfosit tidak ditemukan penurunan.

Kesimpulan: Ekstrak *Rosa damascena* menurunkan glukosa darah puasa, postprandial, rasio TG/HDL-C namun tidak menurunkan rasio monosit limfosit *rattus norvegicus* model diabetes mellitus. Dosis ekstrak mawar 500mg/Kg BB memberikan hasil yang paling baik diantara kelompok lainnya.

Kata kunci: Hyperglycemia, Red rose, Streptozotocin

ABSTRACT

EFFECT OF RED ROSE (ROSA DAMASCENA MILL.) EXTRACT ON BLOOD GLUCOSE LEVELS, TG/HDL-C RATIO AND LYMPHOCYTE-MONOCYTE RATIO IN DIABETIC MODEL OF RATTUS NORVEGICUS

Background*: Vascular complication in diabetes caused by hyperglycemia, dyslipidemia and chronic inflammation . One of traditional plant which believed has antihyperglycemia and antiinflammation effect was Rosa damascena or known as red roses.*

Purpose*: This research aims to prove the effect of ethanol extract of rose (Rosa damascena mill.) in lowering fasting glucose level, post prandial glucose level, TG/ HDL-C ratio and moncoyte lymphocyte ratio in diabetic model rats.*

Methods*: This study was true experimental laboratory research with post test only control group design. Samples were divided into 6 groups that is normal group, diabetic group, metformin group and 250mg/Kg BW, 500mg/Kg BW, dan 1000mg/Kg rose extract groups. Metformin and rose extract were given once daily for 14 days. Streptozotocin 50mg/Kg BW were used to induced diabetes in this study. Blood glucose levels were measured using glucometer while complete hematology and lipid profile was analyzed by automatic analyzer.*

Results*: Fasting blood glucose and postprandial glucose in extract group were decreased although it was not statistically significant while TG/ HDL-C ratio was significantly decreased in extract groups. On the other hand, monocyte lymphocyte ratio was not decrease at all.*

Conclusion*: Rosa damascena extract decreasing fasting blood glucose and postprandial glucose, lowering triglyseride/HDL-C ratio but not monocyte lymphocyte ratio.The best result was in 500mg/Kg BW among other groups.*

Keywords*: Hyperglycemia, Red rose, Streptozotocin*