

INTISARI

ROSALINA V., 2017, AKTIVITAS ANTI HIPERGLIKEMIK, PENGHAMBATAN STRESS OKSIDATIF DAN REGENERASI PANKREAS, KOMBINASI EKSTRAK JAHE MERAH (*Zingiber officinale*) DAN DAUN SALAM (*Syzygium polyanthum (Wight)Walp*) PADA TIKUS YANG DIINDUKSI STREPTOZOTOSIN NIKOTINAMID, TESIS, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Kombinasi ekstrak jahe merah (*Zingiber officinale*) dan daun salam (*Syzygium polyanthum (Wight)Walp*) bermanfaat untuk pengobatan DM. Penelitian ini bertujuan mengetahui efek antihiperqlikemi dan peningkatan aktivitas enzim antioksidan SOD, GPx dan histopatologi pankreas pada tikus induksi STZ-NA.

Penelitian ini dibagi 6 kelompok, @ 5 ekor tikus. Kelompok 1 kontrol normal (tanpa perlakuan), 2 kontrol negatif (induksi STZ-NA), 3 kelompok jahe merah 250 mg/kg, 4 kelompok 300 mg/kg, 5 kelompok jahe merah 187,5 mg/kg+salam 75 mg/kg, 6 kelompok jahe merah 125 mg/kg+salam 150 mg/kg. Perlakuan diberikan secara oral selama 28 hari. Parameter yang dilakukan kadar glukosa, SOD, GPx dan histopatologi pankreas. Data kadar glukosa dianalisis dengan uji statistik Anova 1 jalan, signifikansi $p < 0,05$ dilanjutkan dengan LSD.

Hasil penelitian menunjukkan kelompok 3, 4, 5, 6 dapat menurunkan kadar glukosa tikus yang diinduksi STZ-NA. Kelompok 5 dan 6 mempunyai aktivitas yang baik sebagai antihiperqlikemik, meningkatkan aktivitas enzim SOD, GPx dan meningkatkan regenerasi pulau Langerhans.

Kata kunci : jahe merah (*Zingiber officinale*) dan daun salam (*Syzygium polyanthum (Wight)Walp*) aktivitas antihiperqlikemik, perbaikan stres oksidatif, regenerasi sel pankreas.

ABSTRACT

ROSALINA V., 2017, ANTIHYPERGLICEMIC ACTIVITY, RETARDATION OF OXIDATIVE STRESS AND PANCREAS REGENERATION, COMBINATION OF RED GINGER (*Zingiber officinale*) AND BAY LEAF (*Syzygium polyanthum* (Wight)Walp) IN STREPTOZOSIN NICOTINAMIDE INDUCED RATS, THESIS, PHARMACY FACULTY, SETIA BUDI UNIVERSITY, SURAKARTA.

The Combination of red ginger (*Zingiber officinale*) and bay leaf (*Syzygium polyanthum* (Wight)Walp) extract is beneficial for the treatment of DM. This research is aimed to find out the effect of antihyperglycemic and increasing the SOD antioxidants enzyme activity, GPx and pancreatic histopathology in STZ-NA induced rat.

This research was divided into 6 group (each group consisted 5 rats). Group 1 is normal control (without treatment), 2nd negative control (induction STZ-NA), 3rd red ginger group 250mg/kg, 4th group with 300mg/kg, 5th group with red ginger 187,5mg/kg + bay leaf 75 mg/kg, 6th group with red ginger 125 mg/kg+bay leaf 150 mg/kg. The treatment had been given for 28 days. The measured parameter were glucose level, SOD, GPx and pancreatic histopathology. The glucose level was analyzed by statistic test one way Anova, significancy at $p < 0,05$ continued by LSD.

This research result showed group 3, 4, 5, 6 could decrease the glucose level in STZ-NA induced rat. Group 5 and 6 had good activity as antihyperglycemic, increasing the activity of SOD enzym, GPx and increasing the regeneration of Langerhans land.

Keywords : Red Ginger (*Zingiber officinale*) and Bay Leaf (*Syzygium polyanthum* (Wight)Walp) Hyperglycemic activity, Improvement of Oxidative Stress, Regeneration of Pancreatic cells.