

ABSTRAK

Rahmaditta, Allyssa. 2016. **Efek Ekstrak Antosianin Ubi Jalar Ungu (*Ipomoea Batatas L*) Kultivar Gunung Kawi terhadap Kadar Serum Kreatinin pada Tikus Model Diabetes Melitus Sebagai Preventif Komplikasi Nefropati**. Tugas Akhir, Program Studi Kedokteran, Fakultas Kedokteran Universitas Brawijaya. Pembimbing: (1) Dr.dr. Retty Ratnawati, M.Sc. (2) Dr.rer nat. Tri Yudani M.R, M.App.Sc.

Diabetes menjadi urutan kedua penyumbang kerusakan mikrovaskuler ginjal terbesar. Serum kreatinin menjadi salah satu indikator adanya komplikasi tersebut. Antosianin merupakan senyawa bioaktif berfungsi sebagai antioksidan yang mampu menurunkan stres oksidatif akibat diabetes melitus. Penelitian ini bertujuan untuk mengetahui efek antosianin terhadap kadar serum kreatinin tikus diabetes. Penelitian ini menggunakan desain eksperimen murni in vivo pada *Rattus novergicus* galur wistar yang diinjeksi STZ(30mg/kgBB) dua kali pada hari ke 41 dan 42 serta diberi diet tinggi lemak selama 45 hari. Tikus dibagi menjadi kelompok kontrol negatif, kontrol positif, dan tiga kelompok perlakuan DM yang diberi ekstrak antosianin dengan dosis 10mg/kgBB, 20mg/kgBB, dan 80mg/kgBB secara P.O pada hari ke 10-45. Pada hasil penelitian, didapatkan kadar serum kreatinin pada semua sampel dalam batas normal. Hasil statistik menunjukkan antosianin tidak signifikan terhadap kadar serum kreatinin($p>0,05$). Namun kadar kreatinin yang normal tidak berarti tidak terjadi kerusakan ginjal. Diduga, nilai kreatinin yang normal dapat diakibatkan oleh proses hiperfiltrasi ginjal. Dari penelitian disimpulkan bahwa antosianin tidak menurunkan kadar serum kreatinin tikus diabetes. Maka diperlukan parameter lain untuk mendukung kerusakan dini ginjal, seperti: KIM, NGAL, *cystatin-C*, dan klirens kreatinin.

Kata Kunci: Diabetes Melitus, Antosianin, Kadar Serum Kreatinin

ABSTRACT

Rahmaditta, Allyssa. 2016. ***Effect of Purple Ipomea Batatas L. Anthocyanin Extract Cultivar Kawi Mountain in Creatinine Serum Levels in Diabetic Rats as Preventive of Nephropathy Complication.*** Final Assignment, Medical Program, Faculty of Medicine, Brawijaya University. Supervisors: (1) Dr.dr. Retty Ratnawati, M.Sc.(2) Dr.rer.nat. Tri Yudani M.R, M.App.Sc

Diabetes becomes the second largest contributor to renal microvascular damage. Creatinine serum is the indicator of the existence of such complications. Anthocyanin is a bioactive compound acting as antioxidants that may reduce oxidative stress which associated with diabetes mellitus. This research aims to observe the effect of anthocyanin on serum level of creatinine in diabetic rats. This research was an in vivo true experimental design in wistar strain *Rattus norvegicus* injected by STZ (30mg/kgBW) two times on day 41 and 42, then given high fat diet for 45 days. Rats were divided into negative control, positive control, and three groups in Diabetic condition with anthocyanin extract which are 10 mg/kgWB, 20 mg/kgWB and 80 mg/kgWB via P.O on days 10-45. The result showed that levels of creatinine serum in all samples was normal. The result of statistic showed that anthocyanin was not significant in creatinine serum levels($p>0,05$). However, it expected that normal creatinine levels does not imply that kidney damage doesn't occur. The normal creatinine serum is caused by kidney hyperfiltration process. From the studies concluded that the anthocyanin does not reduce levels of serum creatinine in diabetic rats. It is suggested for further researches must be conducted for other parameters to support the process of early damage on kidneys, such as KIM, NGAL, cystatin-C, and creatinine clearance

Keywords: Diabetes Mellitus, Anthocyanins, Creatinine Serum Levels