ABSTRAK

Latar Belakang: Penyakit sistemik seperti diabetes melitus mempunyai pengaru h yang besar terhadap sistem reproduksi pada pria. Penderita diabetes melitus m engalami hiperglikemi sehingga terjadi peningkatan *Reactive Oxygen Spesies* (R OS), menyebabkan stress oksidatif yang akan mengakibatkan penurunan kualitas spermatozoa. Daun dari tanaman sukun mempunyai zat yang dapat menjadi sumber antioksidan pada tubuh dalam bentuk flavonoid dipercaya mampu memberikan proteksi terhadap proses spermatogenesis.

Tujuan: Mengetahui pengaruh pemberian ekstrak daun sukun (*Artocapus atliti s)* terhadap motilitas spermatozoa tikus wistar jantan (*Rattus novergicus* L.) dengan diabetes melitus.

Metode: Penelitian ini menggunakan penelitian *true experimental* dengan rancangan desain *post test only control group design*. Sebanyak 24 ekor tikus wistar jantan diambil secara *simple random sampling* yang terbagi menjadi kontrol negatif (hanya diberikan pakan minum standar), kontrol positif (injeksi aloksan 120 mg/kgBB), perlakuan I (injeksi aloksan 120 mg/kgBB dan pemberian ekstrak daun sukun 100 mg/kgBB) dan perlakuan II (injeksi aloksan 120 mg/kgBB dan ekstrak daun sukun 400 mg/kgBB). Pemberian aloksan diberikan secara injeksi peritoneal, sedangkan daun sukun diberikan selama 30 hari per oral. Hari ke – 31, dilakukan terminasi pada tikus wistar jantan yang kemudian di Analisa presentasi motilitas spermatozoanya. Uji normalitas variable menggunakan uji *Saphiro-Wilk* dan uji hipotesa menggunakan *One Way ANOVA* yang dilanjutkan dengan uji *Post Hoc.*

Hasil: Rerata analisis terendah pada kelompok kontrol positif diakibatkan pemberian aloksan tanpa pemberian ekstrak daun sukun sehingga didapatkan motilitas spermatozoa yang lebih rendah dibanding dengan kontrol negatif

Simpulan: Motilitas spermatozoa lebih tinggi setelah diberikan aloksan pada tikus wistar dengan DM

Kata kunci: Diabetes Melitus, Ekstrak Daun Sukun, Motilitas Spermatozoa.

ABSTRACT

Background: *Systemic diseases such as diabetes mellitus have a major influenc e on the male reproductive system. Patients with diabetes mellitus experience hy perglycemia resulting in an increase in Reactive Oxygen Species (ROS), causing oxidative stress which will result in a decrease in the quality of spermatozoa. Leaves from Artocapus atlitis have substances that can be a source of antioxida nts in the body in the form of flavonoids that are believed to provide protection a gainst the process of spermatogenesis.*

Objective: *To determine the effect of Artocapus atlitis leaf extract on spermatoz oa motility of male Wistar rats (Rattus novergicus L.) with diabetes mellitus.*

Methods: *This study used true experimental research with a post test only contr ol group design design. A total of 24 male Wistar rats were taken by simple rand om sampling which was divided into negative control (only given standard drink ing feed), positive control (120 mg/kg BW alloxan injection), first treatment (120 mg/kg BW alloxan injection and 100 g breadfruit leaf extract). mg/kgBW) and tr eatment II (injection of alloxan 120 mg/kgBW and breadfruit leaf extract 400 mg /kgBW). Alloxan is given by peritoneal injection, while breadfruit leaves are giv en orally for 30 days. On the 31st day, termination was carried out on male Wist ar rats which were then analyzed for the motility presentation of their spermatoz oa. The variable normality test uses the Shapiro-Wilk test and the hypothesis test uses One Way ANOVA followed by the Post Hoc test.*

Results: *The lowest analysis mean in the positive control group was due to the a dministration of alloxan without giving breadfruit leaf extract so that it reduced spermatozoa motility and the treatment group II had a low average thought to o ccur because the effective dose of breadfruit leaves had been exceeded so that it did not have a positive effect on sperm motility.*

Conclusion: *There is an improvement in spermatozoa motility in male Wistar ra ts with diabetes mellitus after administration of breadfruit leaf extract.*

Keywords: *Diabetes Mellitus, Artocapus atlitis, Spermatozoa Motility.*