

## ABSTRACT

**Martci Lado Nalla Saputra. 24020122120050.** Microanatomy of White Rat (*Rattus norvegicus*) Testes after Cisplatin Induction and Administration of Meniran (*Phyllanthus niruri* L.) Leaf Extract. Under the guidance of Kasiyati and Muhammad Anwar Djaelani.

Cisplatin is a platinum-based chemotherapy agent that can cause side effects on male reproductive organs, including testicular damage due to increased oxidative stress and impaired spermatogenesis. Meniran is known to contain antioxidant compounds that have the potential to provide a protective effect against tissue damage. This study aims to analyze the protective effect of meniran leaf extract on the testes of white rats (*Rattus norvegicus*) induced by cisplatin. This study used a completely randomized design using 24 white rats (*Rattus norvegicus*) with 4 treatments, control and cisplatin induction, as well as cisplatin-induced rats, and given meniran leaf extract with varying doses. The doses of meniran leaf extract used were 200 mg/kg BW and 400 mg/kg BW, while the dose of cisplatin used was 7.5 mg/kg. Parameters observed included testicular weight, gonadosomatic index (GSI), seminiferous tubule diameter, tunica albuginea thickness, and spermatogenesis quality based on Johnson's criteria. Data were analyzed using an ANOVA test. The results showed that administration of meniran leaf extract did not significantly affect testicular weight, GSI, seminiferous tubule diameter, and tunica albuginea thickness ( $p > 0.05$ ). However, based on Johnson's criteria analysis, there was a difference in spermatogenesis quality between treatments at a dose of 200 mg/kg BW. This study concludes that Meniran leaf extract has the potential to maintain histological spermatogenesis quality in cisplatin-induced white rats.

*Keywords: protective effect, gonadosomatic index, spermatogenesis, Johnson criteria.*