

ABSTRACT

Dwi Puspitasari. 24020120130119. **Uterine Microanatomy Structure of White Rats (*Rattus Norvegicus* L.) After Exposure to Neem Leaves (*Azadirachta Indica*) Ethanol Extract Nanochitosan Preparations.** Under the guidance of Sri Isdadiyanto and Agung Janika Sitasawi.

Neem leaves contain compounds that are useful for antifertility in female animals by disrupting the growth of the endometrium which is ready to accept zygotes. Oral administration of neem compounds has disadvantages, including low drug bioavailability and low distribution of neem compounds to the body. Solutions to overcome the problem of administering drugs orally include preparing preparations in the form of nanochitosan to facilitate the absorption and distribution of drugs into the body and increase the bioavailability of neem plants. This study aimed to analyze the effect of neem leaf ethanol extract nanochitosan preparation toward uterine weight, uterine diameter, endometrial thickness, and the number of endometrial glands. This study used a Completely Randomized Design consisting of four treatment groups with three replications, namely P0 (Aquades), P1 (nanochitosan), P2 (Neem extract), and P3 (neem leaf ethanol extract nanochitosan preparation with a dosage of 2.8 mg/head in 2 ml chitosan/tail/day). The treatment was administered orally with 2 ml every morning for 4 weeks. The uterine were isolated, weighed, and prepared using the paraffin method and Hematoxylin Eosin (HE) staining. The research variables observed were uterine weight, endometrial thickness, uterine diameter, and the number of endometrial glands. The data was analyzed using Analysis of Variance (ANOVA) at 95% confidence level and continued by the DMRT test. The results were that the administration of neem ethanol extract in the form of nanochitosan had a significant effect ($P < 0.05$) on endometrial thickness but did not have a significant effect on uterine weight, uterine diameter, or the number of endometrial glands, so it could be concluded that the administration of SNEEDM had an effect on reducing the thickness of the endometrial.

Key words: *Antifertility, Nanochitosan, Neem, Uterine*