ABSTRAK

Sri Wahyuni Hutagaol, NIM 4193520013 (2024). Analisis Histopatologi Ovarium Tikus Putih (*Rattus norvegicus*) Galur Wistar Pasca Pendedahan dengan Xenoestrogen Bisphenol A (BPA) Secara Kronis

Penelitian ini bertujuan untuk mengetahui pasca induksi Bisphenol A **(**BPA) secara kronis terhadap gambaran histopatologi ovarium tikus putih (*Rattus norvegicus*) galur Wistar. Adapun metode yang digunakan ialah rancangan acak lengkap (RAL) dengan jumlah perlakuan 6 dan ulangan sebanyak 7 kali dan dilaksanakan pada bulan Juli 2022 sampai dengan Januari 2024 di Laboratorium Biologi dan Rumah Hewan Fakultas Matematika dan Ilmu Pengetahua Alam, Universitas Negeri Medan serta di Balai Veteriner. Tikus diberi dosis bertingkat BPA (0.5, 5, 50, 500 mg/kg BB) dan 0.5 ml minyak jagung, 0,5 ml air sebagai kontrol negatif secara oral selama 72 hari secara berturut-turut. Selama 72 hari di periksa siklus estrusnya dan 1 hari setelah pemberian dosis dilakukan pembedahan dan dilakukan penimbangan organ selanjutnya di proses histologinya. Data amatan dianalisis dengan ANOVA dan uji lanjut DMRT. Hasil penelitian menunjukkan bahwa induksi secara kronis BPA memiliki pengaruh yang signifikan ($P < 0.05$) terhadap berat ovarium, panjang siklus estrus (fase estrus, matestrus dan diestrus), jumlah folikel primer, jumlah folikel sekunder, jumlah nekrosis sel. Tetapi tidak memiliki pengaruh yang signifikan ($P > 0.05$) terhadap berat badan, panjang siklus estrus (fase proestrus).

Kata Kunci: Bisphenol A (BPA), histopatologi ovarium, estrus, folikel primer, folikel sekunder, nekrosis**.**

ABSTRACT

Sri Wahyuni Hutagaol, NIM 4193520013 (2024). Histopathological Analysis of Wistar Strain White Rat *(Rattus norvegicus*) Ovaries After Chronic Exposure to the Xenoestrogen Bisphenol A (BPA).

This study aims to determine post-chronic Bisphenol A (BPA) induction and the histopathological appearance of the ovaries of the Wistar strain of white rats (*Rattus norvegicus*). The method used was a completely randomized design (CRD) with a total of 6 treatments and 7 replications and was carried out in July 2022 to January 2024 at the Biology Laboratory and Animal House, Faculty of Mathematics and Natural Sciences, Medan State University, and at the Veterinary Center. Mice were given graded doses of BPA (0,5, 5, 50, 500 mg/kg BW) and 0,5 ml corn oil, 0,5 ml water as a negative control orally for 72 consecutive days. During the 72nd day, the estrous cycle was checked and 1 day after administration of the dose, surgery was performed and the organs were weighed, followed by a histology process. Observed data were analyzed using ANOVA and DMRT follow-up tests. The results showed that chronic BPA induction had a significant effect ($P < 0.05$) on ovary weight, length of the estrus cycle (estrus, metestrus, and diestrus phases), number of primary follicles, number of secondary follicles, and amount of cell necrosis. But it does not have a significant effect ($P > 0.05$) on body weight, length of the estrus cycle (proestrus phase).

Keywords: Bisphenol A (BPA), ovarian histopathology, estrus, primary follicles, secondary follicles, necrosis.