

Fazareyna Hyuwan Argi Ryanto, 2019, **Pengaruh pemberian ekstrak jamur *Ganoderma sp.* terhadap histopatologi hepar dan testis mencit (*Mus musculus*) yang diinduksi timbal**, Skripsi ini dibawah bimbingan Prof. Win Darmanto, M.Si., Ph.D., dan Dr. Hj. Alfiah Hayati, M.Kes. Departemen Biologi, Fakultas Sains dan Teknologi, Universitas Airlangga, Surabaya.

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh waktu pemberian ekstrak jamur *Ganoderma sp.* terhadap histopatologi testis dan hepar mencit (*Mus musculus*) yang telah diinduksi timbal. Hewan coba yang digunakan sebanyak 24 ekor mencit jantan galur DDW. Hewan coba dibagi menjadi 6 kelompok perlakuan yaitu K0 (kontrol normal diinduksi akuades selama 7 hari), kontrol *Ganoderma sp.* selama 7 hari (K+), kontrol Pb selama 7 hari (K-), dan kelompok perlakuan yang terdiri dari P1 (induksi Pb selama 7 hari, kemudian induksi *Ganoderma sp.* selama 7 hari), P2 (induksi *Ganoderma sp.* selama 7 hari, kemudian induksi Pb selama 7 hari), dan P3 (induksi *Ganoderma sp.* selama 7 hari, induksi Pb selama 7 hari, kemudian induksi *Ganoderma sp.* selama 7 hari) yang masing-masing terdiri dari 4 ekor mencit dalam tiap kelompok. Induksi Pb dan induksi *Ganoderma sp.* dilakukan dengan injeksi peritoneal dengan dosis tunggal 100 mg/kgbb. Organ hepar dan testis dibuat preparat histologi. Pengamatan kerusakan jaringan hepar dan testis dilakukan dibawah mikroskop cahaya perbesaran 40X10, setiap individu dilakukan 5 kali pengulangan. Dilakukan penghitungan jumlah sel normal, sel yang mengalami degenerasi hidropis, dan sel nekrosis pada hepar. Dilakukan penghitungan jumlah sel spermatogonium, sel spermatosit, sel spermatid, diameter tubulus seminiferus, dan tebal epitel tubulus seminiferus. Data dianalisis dengan uji ANOVA dan uji Tukey. Hasil penelitian menunjukkan perlakuan P2 dan P3 dapat meningkatkan rerata presentase sel normal hepar, menurunkan rerata presentase sel degenerasi hidropis, dan menurunkan rerata sel nekrosis pada hepar. Pada organ testis tidak menunjukkan perbedaan signifikan terhadap jumlah sel spermatogonium, sel spermatosit, sel spermatid, diameter tubulus seminiferus, dan tebal epitel tubulus seminiferus. Dapat disimpulkan ekstrak *Ganoderma sp.* dapat berperan sebagai hepatoprotektor dengan memperbaiki kerusakan gambaran histologi hepar jika diberikan sebelum induksi Pb, namun tidak mempengaruhi gambaran histologi testis secara signifikan.

Kata Kunci: *Ganoderma sp.*, timbal, hepar, testis

Fazareyna Hyuwan Argi Ryanto, 2019, **The Effect of *Ganoderma sp.* Extract on Liver and Testicles Histopathology of Lead-induces Mice (*Mus musculus*)**. This undergraduate thesis was under supervisor of Prof. Win Darmanto, M.Si., Ph.D., dan Dr. Hj. Alfiah Hayati, M.Kes., Department of Biology, Faculty of Science Technology, Airlangga University, Surabaya.

ABSTRACT

The purpose of this study was to evaluate the effect of time administration *Ganoderma sp.* extract on liver and testis histopathology of lead-induces mice (*Mus musculus*). Twenty four DDW strain male mice divided into 6 groups : K0 (normal controlled for 7 days), *Ganoderma sp.* controlled group for 7 days (K +), Pb controlled group for 7 days (K-), treatment groups P1(treated with Pb for 7 days, then treated with *Ganoderma sp.* for 7 days), P2 (treated with *Ganoderma sp.* for 7 days, then treated Pb for 7 days), and P3 (treated with *Ganoderma sp.* for 7 days, treated with Pb for 7 days, treated with *Ganoderma sp.* for 7 days), each consisting of 4 mice in each group. Plumbum and *Ganoderma sp.* was given by peritoneal injection with a single dose of 100 mg / kg BW. Liver and testicle organs was taken for histological preparations. Observation of liver and testicle tissue damage was carried out under microscope with 40X10 magnification, and consist of 5 repetitions for each samples. Total of normal cells, cells with hydropic degeneration, and necrotic in the liver were counted. Total of spermatogonium cells, spermatocyte cells, spermatid cells were counted, and diameter of seminiferous tubules, and seminiferous tubular epithelium were measured. Result were analyzed by ANOVA test and Tukey test. The results show that P2 and P3 treatment was able to recover the number of normal liver cells, decreased the number of hydropic degeneration, and decreased the number of necrotic cells in the liver. The testicle showed no significant differences in the number of spermatogonia cells, spermatocyte cells, spermatid cells, seminiferous tubule diameter, and seminiferous tubular epithelium. It can be concluded that *Ganoderma sp.* extract act as a hepatoprotector by repairing damage to liver histology if given before Pb induction, but does not significantly affect the testicular histology.

Keywords : *Ganoderma sp.*, lead, liver, testicle