

P-110**Histopathological Study of The Effect Of *Eurycoma Longifolia Jack (Tongkat Ali) Extract* On The Prostate of Rats**

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Objective: to study the effect of *Eurycoma longifolia Jack* extract on the prostate tissue of male rats and to find out if there are any pathological changes occurring in the prostate due to its use.

Methodology: 45 male rats were used in this study, they were divided into three groups, group 1 contain 5 rats that represent the control group, group 2 has 20 rats and group 3 with 20 rats. The rats in group 1 received no treatment, group 2 received 5mg/Kg body weight twice daily of 100:1 water extract of *Eurycoma longifolia Jack* roots, group 3 received 10mg/kg body weight twice daily of the same extract. The duration of treatment for both groups was 4 weeks. At the end of the experiment the rats were terminated and prostatic tissue was obtained and processed into haematoxyline and eosin stained slides which were observed under light microscope.

Results: histopathological examination of the specimens revealed that there were no significant observable changes in group 2 in comparison with the control group while group 3 showed a marked cell proliferation of the prostatic gland lining epithelium that appeared as infolding and multi-layering of the usual single layer columnar epithelium and also we observed areas of mild dysplastic changes in the lining epithelium characterized by nuclear enlargement and irregularities in the nuclear membrane.

Conclusion: From the findings we can conclude that increasing the dose of extract may lead to abnormal proliferation in the prostatic epithelium and the presence of dysplastic changes may progress to more severe dysplasia and even malignant changes may occur with high doses or prolonged treatment.
