

# Effect of Mushroom Extract on 7,12-Dimethylbenz[a]anthracene Induced Salivary Gland Pathosis in Albino Rats

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## Abstract

Salivary glands are essential structures for the wellbeing of an individual. Salivary gland tumors represent a diagnostic challenge. Following the treatment protocol for malignant salivary gland tumors, the majority of patients experience decreased salivation. Regeneration after the damage resulting from the treatment protocol, is believed to be through the transient activation of the Wnt/  $\beta$ -catenin pathway which preserve the stem/progenitor pool and allow for regeneration. Medicinal mushrooms have been tried in medicine for centuries. They have been reported to have anti-inflammatory, cardio-protective, hepatoprotective, and anticancer properties. Aim of the study: to evaluate the effect of mushrooms on the salivary glands of albino rats following DMBA induced pathological changes. Materials and methods: the study comprised three groups each of 12 albino rats. Group I was the control group, group II was given DMBA and group III was treated with mushrooms, following DMBA administration. All groups were assessed histopathologically (H&E) and immunohistopathologically (PCNA). Results: group II exhibited variable histopathological signs from apoptosis to inflammation, allergy and dysplasia. Group III showed absence of some of the previous signs and a significantly higher PCNA expression. Conclusion: mushrooms may help in the regeneration of acinar cells through the activation of the progenitor cells. It also may have a cancer-protective role.

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