EFFECT OF AFLATOXIN ADMINISTRATION ON SOME PHYSIOLOGICAL ASPECTS OF THE RABBIT MAMMARY GLAND

BY

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APPROVAL SHEET

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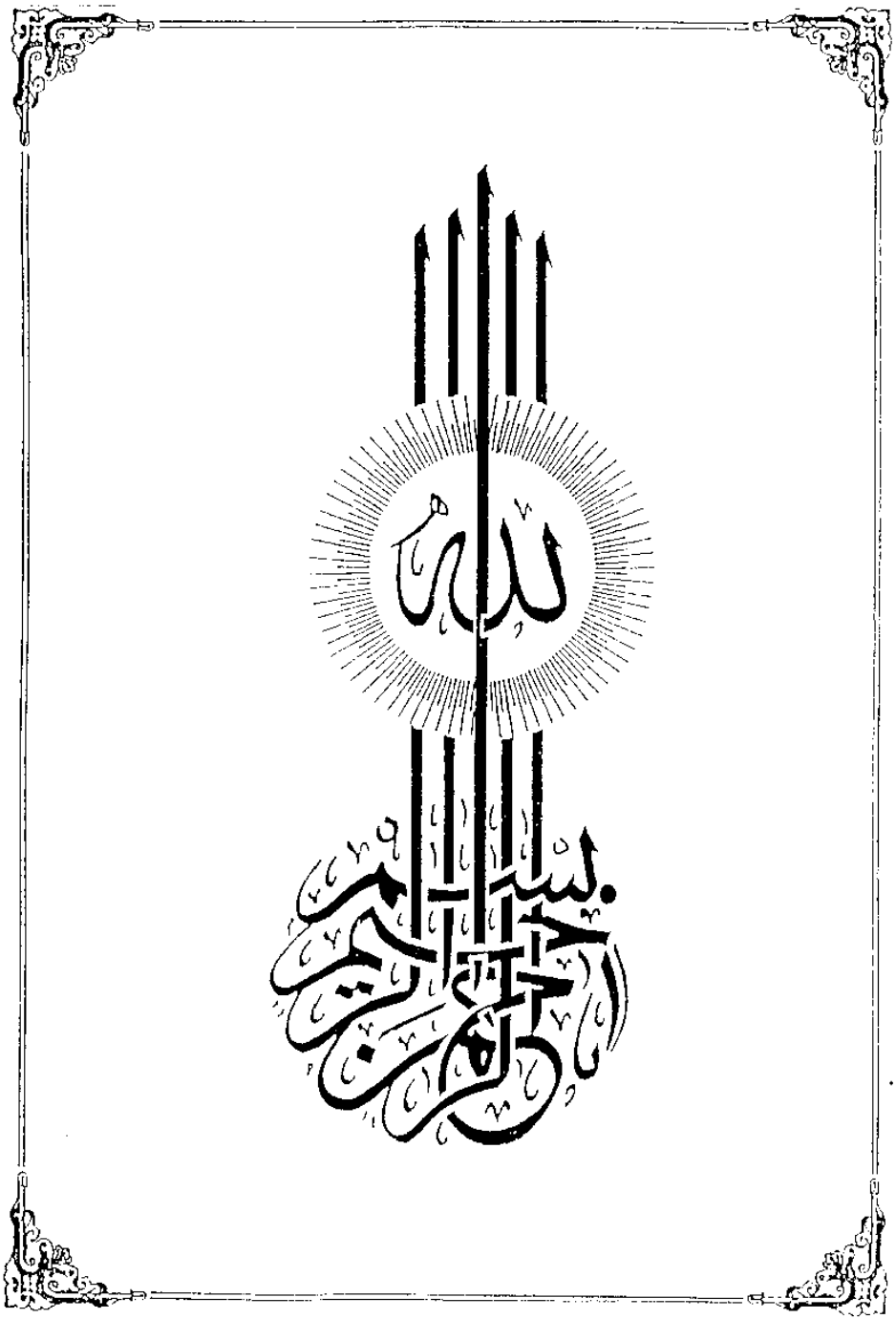

EFFECT OF AFLATOXIN ADMINISTRATION ON SOME PHYSIOLOGICAL ASPECTS OF THE RABBIT MAMMARY GLAND

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ABSTRACT

A total of 76 female bouscat rabbits was used in this study. Animals received aflatoxin B1 (50 µg/kg B.W.) daily during the first (group 1), the second (group 2), and the third (group 3) trimester of the gestation period, while group 4 was untreated control group.

Each group was classified into two subgroups : A sacrificed immediately after the end of treatment, and B sacrificed one month after the end of treatment. In subgroup A within all treated groups, erythrocytes and haemoglobin concentrations were decreased while total leukocytes,

basophils, eosinophils and monocytes percentage haematocrit value, erythrocytes sedmination rate, and coagulation time were increased.

In subgroups A and B all treated animals showed an increase in liver weight, hepatic cell nuclear index and hepatic cell size. In the two subgroups aflatoxin treatment reduced mammary gland reative and absoulte weights.

Histopathological studies showed focal necrosis in the hepatic tissue in subgroup A of the treated groups, haemorrhage and deposition of haemosidrin granules. Moreover, aflatoxin treatment resulted in proliferation and hypertrophy of bile ducts and mild positive reactions with PAS stain. In subgroup B, livr tissue in most cases appeared undegenerated with increased number of binucleated cells. These subgroup showed strong reaction to PAS stain.

Histopathological studies on the mammary glands showed that aflatoxin treatment during pregnancy inouced mild proliferation in acinar cells and increased amount of fibrous tissue in the stroma. Treatment during lactation period decressed alveolar cells height and the secretory activity of the alveoli. Treatment during mammary gland invoulation period resulted in an increase in the fibrous tissue and thick walled blood vessels in spaces intrelabular.

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