



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكرو فيلم

بسم الله الرحمن الرحيم



HANAA ALY



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس

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قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
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Histological and some histochemical studies on the epididymes of ram

A thesis submitted

By

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(BVSc, Cairo University, 2012; MVSc, Cairo University, 2016)

For the Degree of the (Ph.D)

(Cytology & Histology)

Under supervision of

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2020



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APPROVAL SHEET

This is to approve that the dissertation presented By **Yasmine Asaad Mansour Helal** to Cairo University entitled " **Histological and some histochemical studies on the epididymes of ram**" for Ph.D. Degree in Veterinary Medical Sciences (**Cytology & Histology**) has been approved by the examining committee (21/11/2020):-

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ABSTRACT

Sheep is the most abundant animal raised for food in Egypt. So, studying reproductive characteristics is important to improve management of this population. Therefore, this investigation focused on studying the histomorphology, histochemistry, electron microscopy, immunohistochemistry and immunofluorescence of the epididymis of ram. This study was conducted on 60 sexually mature ram (Rahmani breed) with average age ranged from (2-4) years and average weight ranged from (50-65) kg. After slaughtering of rams, small pieces from efferent ductules, initial duct, central caput, distal caput, corpus epididymis, proximal cauda epididymis and distal cauda epididymis were collected and examined. The epididymis of mature ram was composed of efferent ductules and epididymal duct. The efferent ductules were lined with a pseudostratified columnar epithelium with few intraepithelial lymphocytes were scattered frequently. The ciliated cells possessed kinocilia. The non ciliated cells were classified into three subtypes; type I cells (possessed numerous vacuoles), type II cells (contained both granules and vacuoles), and type III cells (had abundant granules). The epididymal duct was subdivided into six histological segments. Three of them were located in the caput, one in the corpus and two in the cauda epididymis. The epididymal duct was lined with a pseudostratified columnar epithelium which composed of two major cell types (principal cell and basal cell). Moreover, migrating cells (intraepithelial lymphocytes and macrophages) were frequently scattered throughout the epididymal duct. Other minor cell types had been observed in certain segments as apical cells and narrow cells. The principal cell was the only cell type which showed marked cytological differences among the different segments. Estrogen receptor alpha was strongly immuno-expressed in the nuclei of the non ciliated cells of the efferent ductules. In addition, the principal cells of segment I showed intense cytoplasmic immunoreaction, but those of the corpus epididymis stained moderately to estrogen receptor alpha. Both androgen and vitamin D receptors were localized in the cytoplasm of all epithelial cells; ciliated and non ciliated cells of the efferent ductules as well as principal cells of all epididymal regions, but with a variable degree of immunoreactivity.

Key words: Epididymis, Ram, Androgen receptors, Vitamin D, Estrogen receptor alpha, Ultrastructure.

Dedication

I dedicate this thesis to:

To my Mother

To my father

To my husband

Acknowledgement

In fact the prayerful thanks, at first, to our merciful GOD who gives me everything I have.

*I would like to express my sincere thanks, deepest gratitude and appreciation to **Prof.Dr. Gehad EL-Bargessy** Professor of Cytology and Histology, Faculty of Veterinary Medicine - Cairo University for his kind supervision, wisdom, commitment and endless help.*

*Sincere thanks to **Prof. Dr. El-Sayed M.M.Mosallam** Professor of Cytology and Histology, Faculty of Veterinary Medicine - Cairo University and **Dr. Shaymaa Hussein**, Assistant Professor of Cytology and Histology, Faculty of Veterinary Medicine - Cairo University For their kind supervision, valuable advice, help and guidance.*

*I'm grateful to **Dr. Ebtihal Elleithy** Lecturer of Cytology and Histology, Faculty of Veterinary Medicine - Cairo University for his continuous support, endless help and guidance .*

*Thanks to all my **professors** especially in Cytology and Histology department, my **colleagues** and every one helped me in the Department of Cytology and Histology and other departments, Faculty of Veterinary Medicine - Cairo University.*

*Great full thanks are extended to the all members of my **Family** for their patience, help and encouragement, especially to my **parents** who supported me too much during this work.*

