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شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

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التوثيق الالكتروني والميكروفيلم



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بالرسالة صفحات

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Detailed Histological and Histochemical Studies on the Interphotoreceptor Tissue Components of the Retina in Certain Animals

Thesis

Submitted in Partial Fulfillment of the
Degree of M.Sc. in **(Histology)**

By

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محضر

اجتماع لجنة الحكم على الرسالة المقدمة من

الطبيب / عزت صالح محمود إيليا

توطئة للحصول على درجة الماجستير / الذكورة

في الهرمونولوجيا

ت عنوان : باللغة الانجليزية : Detailed histological and histochemical studies on the inter photo receptor tissue Components of the retina in certain animals.

: باللغة العربية : دراسة هسولوجية وهسكيمية على مكونات النسيج بين مستقبلات الضوء في بعض الحيوانات

بناء على موافقة الجامعة بتاريخ / / ١٩ تم تشكيل لجنة الفحص والمناقشة للرسالة المذكورة أعلاه على النحو التالي :-

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بعد فحص الرسالة بواسطة كل عضو منفردا وكتابة تقارير منفردة لكل منهم لانعقدت اللجنة مجتمعة في

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اليها وكذلك الاسس العلمية التي قام عليها البحث .

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المشرف الممتحن

نكرى عبد الحميد ادريس

(عصام)



Abstract

The retina is very thin, delicate, transparent tissue which lines the inner coat of eye. The internal aspect of the retina is in contact with the vitreous body and its external aspect is adjacent to the retinal pigment epithelium separated by a potential space, the intraretinal space, interphotoreceptor matrix surrounds the ellipsoid portion of inner and outer segments of photoreceptor cells IPM is a major route by which nutrients and metabolites pass between photoreceptor cells and their major vascular supply.

The aim of this work was to clarify the nature and distribution of the interphotoreceptor tissue elements present between the different layers of the retina in certain animals.

Fourty adult, apparent healthy animals were used in this study. They were as follows: Group I was formed of ten albino rats, group II was formed of ten cats, group III was formed of ten rabbits and group IV was formed of ten Guinea pigs. They were left for ten days feeding on ordinary diet, alived in open air and inspected daily to exclude any pathological conditions in their eyes. They were sacrificed and the eye balls of each animal were dissected out and was fixed in Bouin's for 24 hours. Sections were then cut at 5 μ m thickness. Sections were stained by Hx and E, Alcian blue, periodic acid schiff (PAS) reaction, Mallory trichome stain and silver impregnation stains for reticular fibres.

Image analyzer computer system was used to measure the total and partial thickness of the retinae of the four groups of animals. The image analyzer was also used to measure the degrees of reactivity of both alcian blue and PAS reaction in the stained slides.

The Hx, E stained sections of the retinae of all groups of animals showed that Muller cells in rats and cats were small and long but in rabbits and guinea pigs were short, large and follow tortuous course. In rats and cats, the matrix of the outer nuclear layer was large in thickness. But in rabbits and guinea pigs, the matrix of the outer nuclear layer was small in thickness.

Key Word

- ★ Embryology of the Retina
- ★ Morphology of the Retina
- ★ Histological Structure of Retina
- ★ The Blood Supply of the Retina
- ★ The Interphotoreceptor Matrix



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