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بالرسالة صفحات

لم ترد بالأصل

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A STUDY ON THE EFFECTS OF RETINOIC ACID ON THE DEVELOPMENT OF THE ALBINO RAT CEREBELLAR CORTEX

Thesis

Submitted for partial fulfillment of
Master Degree in Anatomy

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Amany Refaat

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The active substance in liver oil and the chemical formula for vitamin -A- were determined in 1931. However not until 1947 that vitamin A became available in its synthetic form (Ensminger et al., 1995).

Researchers are interested in vitamin A and its derivatives, because vitamin A appears to have diverse actions in cellular regulation and differentiation, and not only its classically defined function in vision. That's why, analogs of vitamin A are being found to be important in therapeutic applications in the treatment of a variety of dermatological conditions that are concerned with epithelial differentiation. Not only that, but also it is currently being evaluated in cancer chemoprophylaxis and treatment (Goodman and Gilman's, 1996).

Retinoic acid is the oxidative metabolite of vitamin A. It is involved in the control of many biological processes including embryonic development. This effect is mediated by 2 receptors RAR and RXR (retinoic acid receptor A and retinoic acid receptor X) on which retinoic acid acts by exhibiting temporal and spatial expression during development. The cerebellum expresses receptors for retinoic acid predominantly of the RXR group. It includes a stereotypic spectrum of stage specific malformations in vertebrate conceptuses (Yamamoto et al., 1999).

Aim of the work:

Very little is known about postnatal effect of retinoic acid on the cerebellum. This study aims at determining the histological effects of retinoic acid on the cerebellar cortex of the albino rat.

REVIEW

OF

LITERATURE