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HISTOLOGICAL AND HISTOCHEMICAL STUDIES ON THE EFFECT OF CISPLATIN ON THE KIDNEY OF ALBINO RAT

Thesis Submitted for the Partial Fulfillment of the Master Degree in Basic Sciences
Histology

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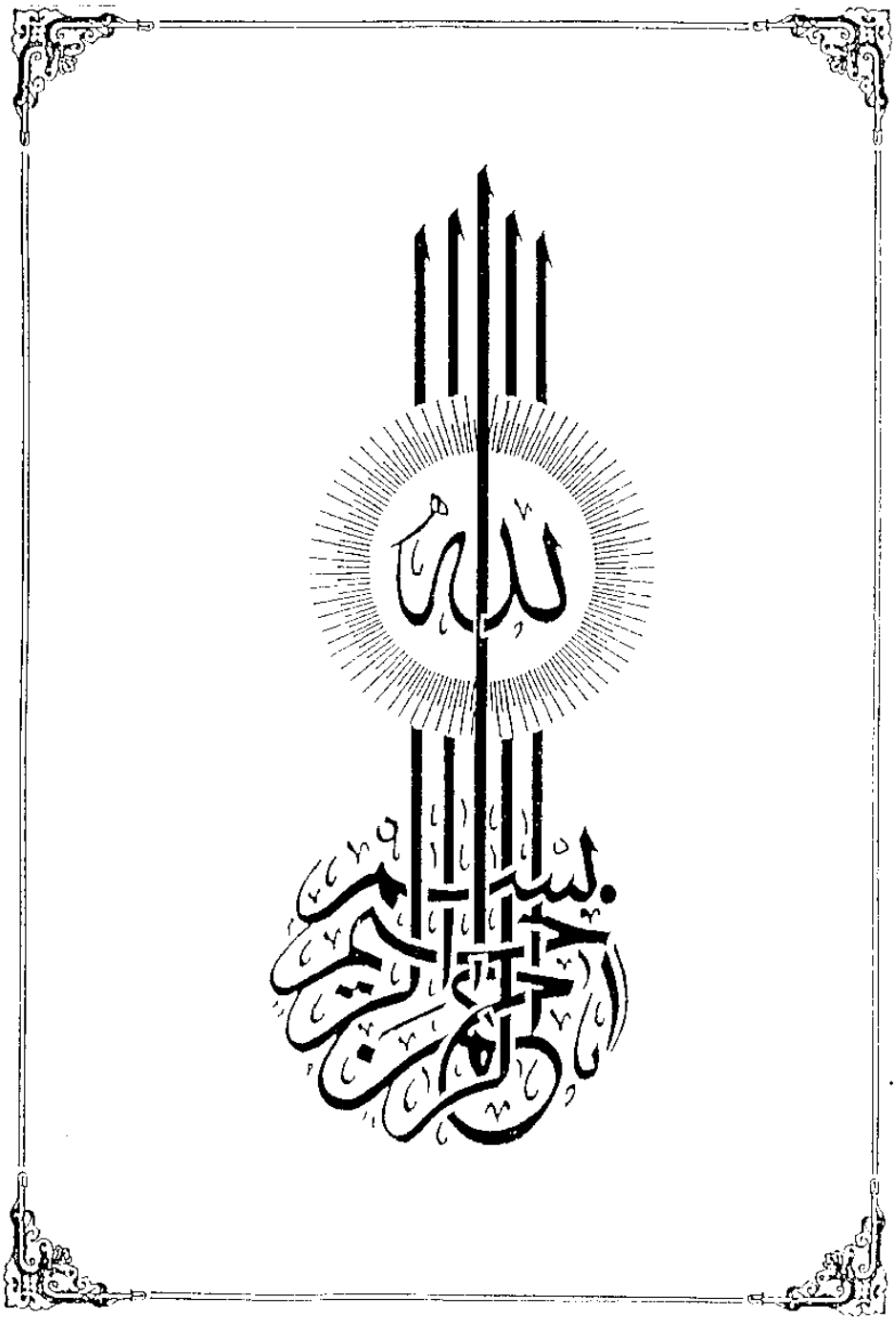

بسم الله الرحمن الرحيم

قالوا سبحانك لا علم لنا إلا ما علمتنا
إنك أنت العليم الحكيم

صدق الله العظيم

سورة البقرة الآية ٣٢

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Introduction and Aim of the Work

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Various platinum coordination complexes have recently been introduced in cancer chemotherapy with considerable success. Of these complexes, Cisplatin (Cis-Diaminodichloro platinum II) is one of the main drugs available for clinical use ***(Dewinko and Gottieb, 1975).*** In this respect cisplatin was found to be effective in treatment of cancers of the different body systems such as cancer of the testis, ovary, head and neck, bladder and prostate ***(Einhorn and Donohue, 1977, Katzung, 1992).***

Cisplatin has also been proven to be increasingly used in pediatric oncology as well as adult oncologic chemotherapy ***(Vietti, Nistschke, Starling and Van Eys, 1979).***

In experimental and clinical studies, cisplatin was found to have adverse effects on the renal function. This nephrotoxicity was the most significant dose-limiting factor in its clinical use ***(Kissane, 1977).***

Changes in the renal function tests such as elevation of serum creatinine and blood urea nitrogen ***(Hardaker, Stone and McCoy, 1974)*** and alteration of urinary composition such as increase in ß2 microglobulin, albumin and immunoglobulin G (IgG) ***(Fleming, Collis and Peckham, 1979)*** have been greatly studied.

Much of the work regarding the effect of cisplatin on the kidney was based on clinical and laboratory investigations. So the aim of the present study was to establish a model of cisplatin-induced nephrotoxicity to detect the histological and enzyme histochemical changes.

Review of Literature