



The Effect of Cyclosporine Drug on the Function and Histological Structure of the Kidney in Albino mice *Mus musculus*

Israa Salim Abdulhameed*

**Department of Biology, College of Education for Pure Science (Ibn Al-Haitham),
University of Baghdad**

Abstract : The current study aimed to determine the effect of cyclosporine drug on the function and histological structure of the kidney in the albino mice *Mus musculus*. The results revealed that there is no significant difference ($P < 0.05$) was seen in the level of urea in the plasma of the treated group with cyclosporine at concentration of (1.2 mg/kg) in comparison to the control group. However, this dose of cyclosporine in the treatment caused a significant increase ($P < 0.05$) in the levels of creatinine and uric acid compared to the control group.

Histologically, the kidney consists of two regions, cortex and medulla; each kidney consists of a several of the renal corpuscles (Nephrons), which is the functional unit of the kidney. Each corpuscle is composed of glomerulus that surrounded by two layers of Bowman's capsule, while the second part of glomerulus is composed of the renal tubules that divided into proximal, distal and collecting, and the endothelium of tubules is simple cuboidal to columnar epithelium.

Several histological changes have been shown in the treated mice with cyclosporine including a decrease in the size of glomeruli, increasing in the width of capsular space, enlargement and necrosis of the epithelial cells of the renal tubules. Moreover, congestion in the blood vessels of the kidney has been shown and infiltration of inflammatory cells and hemorrhage in the connective tissue.

Keywords : Kidney, Cyclosporine, Mice, Urea.