جامعة الإسكندرية
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Assessment of the Chemical Composition of Spirulina Platensis and its Effect on Blood Glucose Homeostasis in Rats with Type 2 Diabetes Mellitus.

A Thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy

In

Public Health Sciences (Food Analysis)

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2019

ABSTRACT

Diabetes Mellitus is the most common metabolic disorder considered among four leading causes of death. It is the eleventh most important cause of premature mortality in Egypt. T2DM is the world's largest endocrine disorder which is characterized by decrease in insulin secretion, defect in glucose uptake in skeletal muscle and fat and increased glucose production in the liver. To avoid the harmful side effects of chemical drugs, searching for natural antidiabetic agents is recommended. Therefore the objective of this study was to assess the nutritional composition of *Spirulina Platensis* and its effects on rats with type 2 diabetes mellitus by determining the chemical composition of *Spirulina Platensis* and studying the effects of treatment with 10,20 and 30 mg/kg.bw/day *Spirulina Platensis* for 4 weeks on rats with type 2 diabetes mellitus, a total of sixty healthy adult male albino rats of Wistar strain. The chemical analysis of *Spirulina Platensis* planted in Egypt showed high nutritional value with high concentration of functional ingredients, Tested doses of *Spirulina Platensis* significantly decreased blood glucose levels compared to diabetic control. The administration of *Spirulina Platensis* improved the lipid profile, kidney function and liver function of diabetic rats when compared to diabetic control.