In vivo and in vitro Antidiabetic and Antioxidant Activity of Spirulina

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INTRODUCTION

Spirulina is a microscopic, filamentous, dried biomass of Arthrospira plantesis, an oxygenic photosynthetic cyanobacterium found in fresh and marine waters worldwide. It can be consumed by humans and animals as a food supplement or as a whole food. Spirulina has been labeled as a superfood because of its richness in proteins, carbohydrates, polyunsaturated fatty acids, sterols and minerals such as calcium, strong in vitro and in vivo antioxidant property which plays an active role in type 2 diabetes treatment. Antioxidant effect of spirulina maybe because of the presence of significant amounts of phytoconstituents such as chromium, iron phycocyanins, carotenoid, Vitamin E, chlorophyll, flavonoids, saponins, and phenolic compounds which have previously shown antioxidant activity. Based on this finding, spirulina can be a very good potential natural alternative for the treatment and management of diabetes-associated liver and kidney complications.