

**CHEMICAL AND BIOTECHNOLOGICAL STUDIES
ON BIOLOGICALLY ACTIVE CONSTITUENTS
FROM SOME SPECIES OF GREEN AND
BLUE GREEN ALGAE**

By

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ABSTRACT

Hadear Hanie Amin: Chemical and Biotechnological Studies on Biologically Active Constituents from some Species of Green and Blue Green Algae. Unpublished Ph.D. Thesis, Department of Agric. Biochemistry, Faculty of Agriculture, Ain Shams University , 2015.

In these centuries we face many challenges of many diseases such as diseases of hepatic , kidney and other organs and cancer, so we hope to present some chemical compounds that extracted from algae (*chlorella vulgaris* as green algae and *Spirulina platensis* as blue green algae) and which may be present a cure against hepatic diseases or cancer. We identified these extracted compounds by HPLC - MS. The extracted compounds were carotenoids and showed a positive results as anti – hepatic damage and as anti – cancer. We examined the biological activity as anti - hepatic diseases by a biological experiment using rats and we examined them as anti - cancer by cell line technique. Also, we examined these compounds as anti – DNA damage and the compounds were safe on DNA. Because these compounds were a good tool against those diseases, we make some treatments on algae to increase the content of used algae of these compounds by biotechnological methods.

Key words: Algae - Anti-cancer – anti–hepatic - carotenoids – Chlorella - DNA - HPLC-MS - Spirulina.

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