

International Conference on

Complementary & Alternative Medicine

October 17-18, 2018 | Las Vegas, USA

Amino acids content of the Sudanese carob pods (*Ceratonia siliqua* L) and antimicrobial patterns of pods extracts

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This is the first study that conducted in Sudan, in the present investigation, phytochemical analysis, and amino acids content of (Carob) *Ceratonia siliqua* L (Cs) pods were studied and evaluate the effect of the antimicrobial activity of extraction. Cs is used as a traditional medicinal plant by herb users in western Kordufan, Sudan. The results of preliminary phytochemical assessed showed that terpenoids, flavonoids, saponins, steroids, and tannins are classes of chemical groups present in the pods of *Ceratonia siliqua* L. In addition, the results indicate that the Cs is rich in amino acids content especially essential amino acids, which contribute a large amount of total amino acids content (17), the most abundant amino acid was Proline followed by Aspartic acid. In contrast, Serine was the lowest amino acids, followed by phenylalanine. The pod's extracts were used in different serial dilutions (100, 80, 60, and 40%) using ethanol. The ethanol extracts were found to be active against microorganisms, *Bacillus subtilis*, *Staphylococcus aureus*, *Pseudomonas*, *Klebsiella pneumonia*, *Streptococcus*, and *Escherichia coli* at concentration 100%, where they recorded zone of growth inhibition ≥ 10 mm which is considered active. In conclusion, the chemical content and the biological activities of the *Ceratonia siliqua* L pods extracts were found to be significantly affected. This study suggests that the locally grown carob cultivar are highly nutritious and can thus be considered as an alternative food source and alternative medicinal plant. Further, the medicinal properties of the phytochemical compounds of Cs need to be further investigated.

Biography

Nabaa has completed her PhD at the age of 40 years from Banha university, Egypt. She is staff member at university of Bahri, department of Biochemistry. She published more than ten papers in reputed journals.

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