

9<sup>th</sup> World Congress on

# PHARMACOLOGY

September 04-06, 2017 | Paris, France

## Characterization and evaluation of antioxidant activity of *Ocimum canum* leaves and its efficiency on *Schistosoma mansoni* larval stage

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Schistosomiasis is the most endemic disease caused by trematode worm of the genus *Schistosoma*. Its control is dependent on kill the worm itself or one of its larval stages. The objective of this study is determination of the total phenolic and flavonoid contents, evaluating the scavenging inhibitory effect of *Ocimum canum* leaf methanol extract on DPPH (2,2-diphenyl-1-picrylhydrazyl) and ABTS as well as investigating the efficiency of plant extract against larval stages of *Schistosoma mansoni*. Also, chemical composition of plant extract was identified by GC-MS analysis. Antioxidant activity of the plant extract was evaluated by DPPH and ABTS scavenging assays while, cercaricidal and miracidicidal activity of it were tested at different concentrations directly on the larval stages for 2 hours, dead larvae were recorded each 30 minutes. The results revealed that *Ocimum canum* leaf methanol extract showed high total phenolic ( $321.78 \pm 0.69$  mg GAE/g extract) and flavonoid contents ( $71.64 \pm 10.66$  mg RE/g extract). Furthermore, there is a significant correlation between the concentration of the extract and the inhibition percentage of the free radicals. The higher inhibition percentage of plant extract was recorded by DPPH than ABTS at 500 µg/ml (84% and 62%) respectively; also, IC<sub>50</sub> of DPPH and ABTS ( $26.41 \pm 1.39$  and  $194.45 \pm 2.03$ ) respectively. Regarding to cercaricidal and miracidicidal activity, the plant extract showed larvicidal activity as it killed 82% of cercariae while, it was completely lethal to miracidia at 500 ppm within 2 hours. On the other hand, 36 chemical compounds were identified from plant extract. The main components are phytol (23%), hexadecanoic acid, methyl ester (15.48%), 9,12,15-Octadecatrienoic acid methyl ester (14.99%), n-Hexadecanoic acid (7.62%), 9,12,15-Octadecatrienoic acid (5.04%), ethyl linoleate (3.58%) and 2-propenoic acid, 3-phenyl-, methyl ester (3.17%). This study suggested that *Ocimum canum* can be used as cercaricidal and miracidicidal promising plant to control schistosomiasis disease as well as its potential use as antioxidant plant.

### Biography

Heba Abdel Hady is a Researcher of Medicinal Chemistry at Theodor Bilharz Research Institute (TBRI). She completed her BSc at Al-Azhar University; MSc and PhD in Biological Application of Natural Products. She carried out her research work on "Isolation and purification of the different classes of natural products which isolated from medicinal plants". She has served as Editorial Board Member and Reviewer in some journals.

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