Evaluation of the Effect of Chronic Administration of *Nigella Sativa* Oil on Spatial Memory Performances of Rats Using Behavioral Model

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*Nigella sativa* is traditionally used to promote good health and treatments of many ailments, with some practices being based on religious teachings. This dicotyledonous herb of the Ranunculaceae family has also been reported in recent works to be a natural source of antioxidant with favorable neuroprotective properties. There have been behavioral researches conducted using animal models which examined its effects on the central nervous system. The present study was designed to investigate the beneficial effect of *Nigella sativa* oil (NSO) on the spatial memory performances (SMP) of male adult rats using radial arm maze (RAM). Eleven Sprague Dawley rats (7-9 weeks old) were force-fed daily with 0.1 ml/100g body weight *Nigella sativa* oil (NSO, n= 6) and corn oil (control) (CO, n=5) for a period of 20 consecutive weeks. Throughout weekly evaluation of SMP, one day food-deprived rats were tested by allowing each of them 3 minutes to explore the eight-arm maze for food as rewards. SMP results were analyzed based on ten consecutive phases of the experiment, with each phase for a continuous duration of two weeks. Entries and re-entries data into baited and/or non-baited arms established in the RAM test were recorded. Number of entries into non-baited arms was scored as total number of errors (TE). The first entry into any never-baited arms was scored as reference memory error (RME), whereas re-entry into an arm where the reward had already been obtained was scored as working memory error (WME). SMP of treated group was not hindered; indicated by the establishment of reference and working memory components of the spatial memory. Results are discussed in correlation with the effects of each treatment on the different components of the memory involved in the RAM test. Further related study into the potential effects of NSO is imperative to substantiate the findings.