ABSTRACT

Major depressive disorder (MDD) is a debilitating illness that affects a person's ability to perform daily tasks. Research about its pathophysiology led to the creation of antidepressants in order to help the patients. However, its negative effects such as withdrawal remains undesired. Oxidative stress and the role of reactive oxygen species (ROS) in depression progression has sparked an interest in the use of antioxidants. Therefore, natural antioxidant sources are studied over the years for its antidepressant-like activity. In past studies, lentils *(Lens culinaris)* have been proven to have a relatively high antioxidant activity compared to other legumes owing to its antioxidant-rich nature (phenolic and flavonoid). In this study, lentil was extracted, phytochemically evaluated, and investigated for its antioxidant activity using DPPH assay. Further, this study delves into stress paradigm validation of chronic restraint stress (CRS) to induce depression in mice model. Mice were grouped into three stress introduction periods of 3 hours, 6 hours, and no CRS treatment (control group). After undergoing CRS for 21 days, mice were then subjected to two behavioral analyses of forced swimming test (FST) and sucrose preference test (SPT) on the 22nd and 23rd day respectively. There is no statistically significant difference of immobility time in FST and no statistically significant difference of sucrose preference in SPT of both CRS groups compared to control groups. The stress paradigm used in this study failed to create depression in mice, albeit other studies suggest otherwise.