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Phytochemical analysis of *Portulaca oleracea* L. leaves extract and study the role in protecting genomic human DNA from UV damage

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Abstract: *Purslane which is the common name for Portulaca oleracea* L. *is a weed plant distributed all over the world and it has significant medicinal uses due to its present high percentage of phytochemical compounds. However, previous studies by researchers confirmed possession of Purslane leaves extracts anti-oxidant efficacy. Therefore, our study aims to determine the phytochemical composition of the ethanolic leaves extract of purslane and radiation stimulated DNA damage protecting. Gas chromatography-mass spectrometry (GC-MS) analyses in the present research explore active constituents for P. oleracea, which are 15 active compounds most they are terpenoids and alkaloids. The extract showed considerable antioxidant activity and the highest inhibition percentage (44.45 %) belongs to (20mg/ml) of an extract with an* IC_{50} *value of 4.6 mg/ml in* H_2O_2 *scavenging test and prevented DNA oxidative damage stimulated by hydrogen peroxide and ultraviolet light (UV/H2O2) at concentrations of (2-20 mg/mL). These findings suggest that the ethanolic leaves extract of P. oleracea, could be used as skin care products to prevent UV-induced damage to the skin.*

KEYWORDS: DNA Protective effects, *Portulaca oleracea* L., Oxidative DNA damage, scavenging effect.