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CERTIFICATE

of PARTICIPATION



Saliha LAOUICHA

We would like to thank you for your contributions as a participant with poster presentation entitled

«Antioxidant Activity of Ethyl Acetate Extract of Arbutus unedo L.»

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Antioxidant Activity of Ethyl Acetate Extract of *Arbutus Unedo* L.Saliha LAOUICHA^{1,**} A. SENATOR¹ S. KADA¹ A. KHERBACHE^{1,2} H. BOURICHE¹¹Laboratory of Applied Biochemistry, University Ferhat Abbas Sétif 1, Algeria.² Department of Microbiology and Biochemistry, Faculty of Sciences, University Mohamed Boudiaf, M'sila, Algeria.

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ABSTRACT: For the medicinal use, standardization of plant extracts is a necessity. This study aims to evaluate the *in-vitro* antioxidant effect of ethyl acetate extract prepared from leaves of an Algerian *Arbutus unedo*, and to estimate its phenolic and flavonoid content. Total phenolic and flavonoid content were estimated by Folin-Ciocalteu's reagent and Aluminium chloride colorimetric method, respectively. The antioxidant activity was evaluated by using ABTS, peroxidation of linoleic acid and phosphomolybdate (PPM) assays. The total polyphenol and flavonoid content of this extract was found to be 1054, 81 ± 95,02 µg/mg gallic acid equivalent and 53,99 ± 5,33 µg/mg quercetin equivalent, respectively. Results showed that the ethyl acetate extract exhibited a strong free radical scavenging activity against the free radical ABTS with IC₅₀ = 1.59 µg/ml which is better than that obtained with BHT (IC₅₀ = 6.10 µg/ml) used as standard antioxidant. Moreover, the extract inhibited strongly the oxidation of linoleic acid with percentage of 89%. In addition, the extract showed a good reducing activity in phosphomolybdate test with a total antioxidant capacity (TAC) of 986.66 ± 35.87 µg equivalent ascorbic acid/mg extract. These findings showed that the ethyl acetate extract of *Arbutus unedo* leaves possesses strong antioxidant potential, which may be attributed to the presence of high amount of polyphenolic phyto-constituents. So, this plant might be exploited for pharmaceutical and food applications as a potential source of effective antioxidant compounds to prevent the oxidative stress related diseases.

Keywords: Oxidative stress, Antioxidant effect, *Arbutus unedo* L., Phenolic content