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Protective role of Gum Arabic(*Acacia Senegal*) on oxidative stress in diabetic and adenine–induced chronic renal failure in rats

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Abstract : Oxidative stress is a global health concern associated with severe morbidity and mortality; which in turn affects diabetes and kidney failure disease. Administration of gum arabic (GA) as a natural product acts a key role in the therapeutic strategy. Results indicate that GA contain high levels of phenolic compounds (which are considered antioxidant compounds), high antioxidant activity. Fractionation of sugars in GA resulted in constitution of D-galactose as a predominant sugar followed by L-arabinose. HPLC fractionation of phenolic compounds in GA reveals a high content of catechin and epicatechin. The administration of GA at 15% was the best treatment in diabetic and chronic kidney disease rats that enhanced the activities of Glutathione peroxidase (GPx) recording 17.820 and 15.952 (IU/mg protein), respectively; Superoxide dismutase (SOD) recording 3.600 and 3.500(IU/mg protein), respectively and catalase (Cat) recording 50.260 and 42.102 (IU/mg protein), respectively in comparison to other treatments and positive control.

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