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POLYPHENOL EXTRACTS OF THE PLANT ORIGIN WITH ANTIOXIDANT AND RADICAL SCAVENGING ACTIVITIES

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Many pathological conditions and the process of ageing are known to be accompanied by oxidative stress. Antioxidants can prevent activation of induced free radical reactions, slow down their rates and partially eliminate the damage, caused by excess of free radicals. At present, biologically active substances of plant origin attract the attention of pharmaceutical industry as potential medicines because of their low toxicity as compared to the compounds obtained by chemical synthesis.

Here we report data about quantitative and qualitative composition of extracts isolated from plants, belonging to *Annacardeaceae*, *Punicaceae*, *Geraneaceae*, *Euphorbeaceae* and others families. Their main compounds are tannins. We found that these compounds at the doses of 1.25–6.25 μg ml^{-1} possess antiradical activity, as determined in experiments with the DPPH stable free radical. We also shown that these compounds can prevent oxidation of lipids and protein in biological membranes. These compounds are water soluble and do not induce hemolysis of erythrocytes. Our data provide evidence that these plants can be considered as a source of highly active antioxidants which can be widely applied.