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***In vitro* Antioxidant, Cytotoxic and Antidiabetic Activity of Water Extracts of Sea Buckthorn (*Hippophae Rhamnoides L*)**

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Sea buckthorn (*Hippophae rhamnoides L.*, Elaeagnaceae) is a winter hardy, deciduous shrub with yellow or orange-red berries. This plant generally reaches 2 to 4 m in height in natural habitats including China, Mongolia, Russia, and most parts of Northern Europe. Recently, it has gained considerable attention from many researchers mainly for its nutritional and medicinal value. In this study, the leaves, berries, stem and root of the 4-years-old Sea Buckthorn were extracted by water and 70% ethanol and their antioxidant, cytotoxic and antidiabetic activity were evaluated in order to detect biologically active substances and develop functional resources.

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Antioxidant Activities from Ethanolic Extracts of Medicinal Plants in Nepal

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All over the world, the traditional medicine is nowadays revalued by an extensive activity of research on different plant species and their therapeutic principles. Experimental evidence suggests that free radicals and reactive oxygen species(ROS) can be involved in a high number of diseases. As plants produce a lot of antioxidants to control the oxidative stress caused by sunbeams and oxygen, they can represent a source of new compounds with antioxidant activity. A great number of traditional medicinal plants from Nepal have been used in folk medicine to treat a wide range of physical ailments such as asthma, bronchitis, rheumatism, and inflammatory skin diseases. However, their basic antioxidant activities have not researched yet in biological activities, and thus this study conducted to analyze the antioxidant activity of 84 medicinal plants from Nepal. DPPH radical scavenging activity(IC₅₀) showed distribution of 6.61~1477.75 $\mu\text{g} \cdot \text{ml}^{-1}$. IC₅₀ values of 42 plants showed less than 100 $\mu\text{g} \cdot \text{ml}^{-1}$, and among them the wood of *Cupressus torulosa* and bark of *Berberis aristata DC.* and the leaves of *Azadirachta indica A. juss* showed higher activities of 5.18, 6.61, 7.04 $\mu\text{g} \cdot \text{ml}^{-1}$ than ascorbic acid(12.70 $\mu\text{g} \cdot \text{ml}^{-1}$), respectively.

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