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Toxicological evaluation of anticancer α - Eleostearic acid rich fat extracted from seeds of Bitter Melon (*Momordica Charantia*) using a Mouse Model

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Colorectal cancer is the third most common cancer worldwide. In Sri Lanka burden of colorectal cancer is on the rise. Despite the availability of conventional treatments, a great deal of attention has been attracted by alternative treatment protocols using plant derivatives. *Momordica Charantia* (Bitter melon/bitter gourd: Family cucurbitaceae) a slender, climbing annual vine is a popular vegetable with medicinal properties found in tropical countries. A conjugated trienoic fatty acid, namely α -Eleostearic Acid (α -ESA) is the richest fatty acid in *Momordica Charantia* seed fat accounting for almost 60% of its total fatty acids. Recent studies have revealed potent anti-cancer properties of α -ESA using *in vitro* and *in vivo* studies. Cytotoxic effects of α -ESA on fibrosarcoma cells (HT 1080) was evaluated in our laboratory and revealed a potent cytotoxic action. Furthermore, in a Toxicological evaluation using a mouse model, continuous intake of α -ESA rich seed fat did not exhibit any significant adverse effect as determined by presence of normal serum levels of enzymes namely SGOT, SGPT and level of serum creatinine. In addition, assessment of haematological parameters and histology of vital organs namely liver, kidney, heart and lung also did not reveal any adverse effect by ingestion of α -ESA. These studies on safety assessment of α -ESA pave the way for conducting further clinical trials in human subjects using α -ESA rich seed fat of *Momordica Charantia* in future.

Biography

K N K Ranasinghe has completed her BSc (sp) degree in Molecular Biology and Biotechnology at the age of 26 years from University of Peradeniya and postgraduate studies are currently conducting from the same university. She has published her undergraduate research and one manuscript was submitted for Journal of Ethnopharmacology.

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