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BOOK OF ABSTRACTS

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Assessment of liver acute toxicity in mice of the God's crown extract

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Abstract

God's crown (GC) is a traditional herbal plant that grows all year long. It is widely available throughout the Southeast Asian region, with the highest concentrations in Malaysia, Indonesia, and Oceania. In traditional and complementary medicine various parts of GC have been used effectively in preventing and controlling symptoms of different diseases such as kidney, diabetes, stroke, haemorrhoids, cancer, migraine, impotence, allergies, heart disease, acne, and other skin problems. The use of herbal products in a safe manner is extremely important for human beings. But there are still insufficient data on GC acute toxicity and safety. As a result, toxicological testing of GC extracts in experimental animals is a requirement for clinical trials and future therapeutic applications. The aim of this research was to analyze the acute toxicity in the mice model of GC extract. The subcritical extract of GC was designed and administrated in mice for the evaluation of acute toxicity and hepatoprotective activity according to the OECD guidelines 425. The liver function parameters such as alkaline phosphatase (ALP), aspartate aminotransferase (AST), total protein (TP), alanine aminotransferase (ALT), and morphological observation of liver tissue were analyzed consequently. The subcritical extract did not show any mortality and no changes in general behavior up to a dose of 3000 mg/kg body weight (3000mg/kg>LD₅₀). The histopathological profile of the extract-treated liver tissue demonstrated similar morphology as that of normal controls at doses 500 mg/kg body weight. On the other hand, acute toxicity is reflected by the various investigated parameters apart from mild liver histopathological inflammatory changes which reflect mild liver injury induced by the 1000mg/kg body weight. As a result, when developing GC-based phytomedicine, it is important to consider the selection of an appropriate dose that will provide better activity while minimizing adverse side effects.

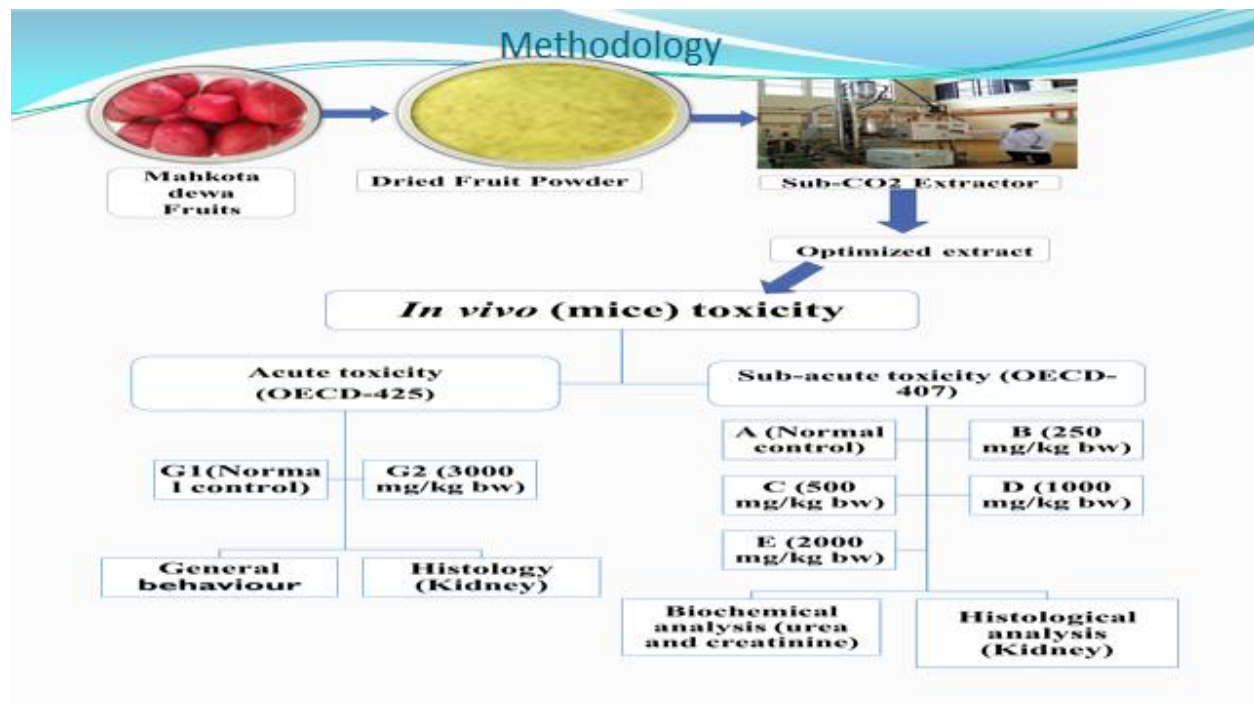
Keywords: God's crown extract, acute toxicity, *in vivo*, liver serum profile, liver tissue

Assessment of liver acute toxicity in mice of the God's crown extract

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Background

God's crown (GC) is a traditional herbal plant that grows all year long. It is widely available throughout the Southeast Asian region, with the highest concentrations in Malaysia, Indonesia, and Oceania. In traditional and complementary medicine various parts of GC have been used effectively in preventing and controlling symptoms of different diseases such as kidney, diabetes, stroke, haemorrhoids, cancer, migraine, impotence, allergies, heart disease, acne, and other skin problems.



Results

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Conclusion

In summary, when developing GC-based phytomedicine, it is important to consider the selection of an appropriate dose that will provide better activity while minimizing adverse side effects.