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Platelet count enhancing and hepatoprotective activity of acetogenin isolated from the stem bark of *Miliusa velutina* (DC.) Hook.f. & Thomson

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Miliusa velutina (DC.) Hook.f. & Thomson, commonly called velvety miliusa, is deciduous tree belonging to the family Annonaceae (sugar apple or custard apple family). The stem bark of *Miliusa velutina* is rich in a distinctive phytochemical acetogenin (also present in *Carica papaya*) known to enhance the platelet count. In this study, we analysed the ethanolic extract of the stem bark of *Miliusa velutina* (MVSBE) , isolated the secondary metabolite acetogenin and investigated its Hepatoprotective activity as well as platelet count enhancing ability. The experiment was conducted using cyclophosphamide induced thrombocytopenia model, acetaminophen induced hepatotoxicity and chloroform induced hepatotoxicity model. Cyclophosphamide (25 mg/kg i.p.) used to reduce the platelet count in albino Wistar rat whereas acetaminophen (150 mg/kg i.p.) and chloroform (0.5 mL/kg i.p.) were used to develop hepatotoxicity in treated animals. The levels of haematological parameters viz. ALP, LDH, AST, ALT, and bilirubin levels in blood serum were estimated with improved efficiency. In all the treated animals' acetaminophen induced a rise in blood sugar levels. There was a decrease in liver enzymes in blood serum levels of ALT, AST, LDH and ALP. Bilirubin level was also significantly decreased in chloroform induced hepatotoxicity. The increased total platelet count and also marked hepatoprotective activity demonstrated the ability of MVSBE which could be attributed to the presence of acetogenin in abundance.

Keywords: Hepatoprotective, Immune thrombocytopenia (ITP), Platelet count enhancer, Velvety miliusa