عنوان مقاله:

Exploring and Toxicological Profiles of Methanolic Extract of Linn

محل انتشار:

مجله علوم دارویی و شیمی, دوره 7, شماره 8 (سال: 1403)

تعداد صفحات اصل مقاله: 18

نویسندگان:

Sindhu Gillella – Department of Pharmacology, SRM College of Pharmacy, SRMIST, Kattankulathur, ۶۰۳۲۰۳, Chennai, Tamilnadu, India

Dr. Sumithra Mohan – Department of Pharmacology, SRM College of Pharmacy, SRMIST, Kattankulathur, ۶۰۳۲۰۳, Chennai, Tamilnadu, India

خلاصه مقاله:

The methanolic leaf extract of the plant Evolvulus nummularius Linn, belonging to the Convolvulaceae family was evaluated for its in vitro in HepG۲ cells against Non-Alcoholic Fatty Liver Disease (NAFLD) and in vivo toxicity potential. The present study aimed to explore in vitro cell line screening using HepG۲ cells induced with ۰.۵ mM FFA (۰.۱۷ mM palmitic acid + ۰.۳۳ mM oleic acid) for fatty liver. The fatty liver in this study was tested by MTT assay, Oil Red O staining, and Nile Red Staining techniques. The in vivo toxicological study was carried out using acute and subacute toxicity experiments following OECD principles ۴۲۵ and ۴۰۷, respectively, on rats. Cell line screening performed on HepG۲ cells, and cytotoxicity examination revealed no toxicity up to ۱۰۰۰ µg/mL, with no evidence of cell death found. A concentration up to ۳۰۰ µg/mL and ۱۰۰ µg/mL of MEEN using ORO Staining and Nile Red Staining, respectively, on HepG۲ cells does not pose any threat to the liver cells. Compared to the control group, there were no differences in behaviour, body weight, hematological, biochemical parameters, or histological changes up to ۲۰۰۰ mg/kg. The methanolic leaf extract of Evolvulus nummularius showed no obvious cytotoxicity or toxicity, proving its safety for hepatoprotection and can be beneficial in the treatment of NAFLD.

کلمات کلیدی:

, HepG۲, NAFLD, Toxicity, MTT