EFFECT OF *CRASSULA OVATA* PLANT EXTRACT ON CCL_4 - INDUCED LIVER TOXICITY AND PENTOBARBITAL SLEEPING TIME IN RATS

Santosh B. Dighe[a*], Sanjay B. Bhawar[a], Shubham S. Yadav[a], Someshwar D. Mankar[b], Suhas S. Siddheshwar[b] and Rahul B. Vikhe[a]

(Received 17 January 2025) (Accepted 14 October 2025)

ABSTRACT

This study assesses the hepatoprotective activity of hydro-alccholic extract of *Crassula ovata* (HACOE) in CCl_4 - induced hepatotoxicity in rat model. Given the high global burden of liver diseases, natural hepatoprotective agents are being investigated intensely. The antioxidant activity of HACOE was evaluated by DPPH free radical scavenging assay, which found multiple antioxidants with hepatoprotective properties, including isovitexin 2''-O-glucoside, apigenin 7-[galactosyl-(1->4)], isorhamnetin 3-O-a-L-rhamnoside, biorobin, graveobioside B, orientin 7-rhamnoside, astragalin 7-rhamnoside, quercetin 3-methyl ether, capillarisin, azaleatin, isorhamnetin, pedalitin, pinoquercetin, rhamnetin, sexangularetin and tamarixetin. The study evaluated liver function, oxidative stress, time of sleep, liver and stomach tissues and food and water consumption for the general health assessment. HACOE with antioxidant action markedly ameliorated hepatic function in rats by reducing the MDA levels, and enhancing the GSH, SOD, CAT levels in the liver and stimulating hepatic microsomal enzymes.