Hepatocellular carcinoma (HCC) is the second leading cause of cancer – related death worldwide .In this study we investigated the possible chemoprotective, effect of troponin against induced hepatcellular carcinoma. Adult male Wistar rats were divided into control. DENA, and DENA+ troponin. Determination of liver enzymes, bilirubin AFP in sera samples. Oxidative stress biomarkers in liver tissue homogenate. Determination of phosphorylated apoptosis signal- regulating kinase 1 (phopho- ASK1, P 38 and P -53 proteins by Western blotting. Our results showed that troponin prevented DENA- induced elevation of the liver enzymes and AFP . Moreover preserved the activities of antioxidant enzymes. Interestingly, troponin decreased significantly the expression level of phopho- ASK1, P 38 and P -53 and caspase 3 in liver tissues. These novel findings suggested that troponin is an antioxidant drug . chemoprotective effect against diethynitrosamine (DENA) – induced hepatocellular carcinoma in rats through maintaining normal activity of ASK1, P 38 and P -53signalling pathway.

Key words: Chemoprovention, diethynitrosamine, DENA, hepatocellular carcinoma, oxidative stress troponin