Survey of the Apoptotic Effect of Ginnalin A on Hep3b Human Hepatocellular Carcinoma Cell Line †

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Abstract: Hepatocellular carcinoma is the third most common cause of cancer-related deaths worldwide. Ginnalin A (GA) is one of the most important phenolic compounds of maple syrup and its anticancer effect has been shown that in several cancer cell lines. In this study, objective was to investigate the apoptotic effect of GA in Hep3B human hepatocellular carcinoma cell line. Cell viability was determined by using XTT method after the treatment with GA. Total RNA was isolated with TRIzol Reagent in control and dose group. Expressions of important genes in apoptosis including CASP3, CASP8, CASP9, CYCS, FAS and P53 were evaluated by qPCR. IC50 dose of GA was found as 155 μM for 72h in Hep3B cells. According to the qPCR results, a significant increase in the expression of CASP3, CASP8, CASP9, CYCS and P53 genes was observed as 12.09, 10.14, 3.37, 16.15 and 4.15 folds, respectively. In conclusion, it is thought that GA demonstrates the apoptotic effect on Hep3B human hepatocellular carcinoma cell line. GA can be evaluated as an effective anticancer agent in hepatocellular carcinoma after further molecular and functional analysis.

Keywords: Apoptosis; Ginnalin A; Hep3B cell line

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