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RESEARCH PAPER

In vitro anticancer and hepatoprotective activities of *Artocarpus gomezianus*

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ABSTRACT : The study aimed at assessing the potency of hydroalcoholic extracts of various parts of *Artocarpus gomezianus* against cancer using *in vitro* cell lines. MCF-7, HepG2, HeLa, PC3, A549 and Vero cell lines were employed for the assessment. The ability of extracts to exert toxic insult on cancer cells has been the basis of anticancer activity. Among the extracts from different parts of *Artocarpus,*AGR was found to be toxic with average CTC50 values of 110 µg/ml. With regard to A549 cell lines, AGR was found to be highly toxic with value of CTC50 273 µg/ml, respectively. The results clearly demonstrate that the extracts of selected plants exert potential anticancer activity. *In vitro* hepatoprotective activity of the plant extracts was studied by employing primary rat hepatocytes. Our results indicate that the drug Silymarin was found to exhibit 96% protection againstParacetamol induced toxicity in Hep G2 cells at the tested concentration of 250 mg/ml. Among the different extracts of *Artocarpus gomezianus*, AGF, AGR and AGA were found to have comparatively lower protective power than Silymarin. In paracetamol induced toxicity of primary rat hepatocytes, the drug Silymarin was found to exhibit 85.28% protection againstParacetamol induced toxicity in Primary rat hepatocytes at the tested concentration of 250 mg/ml. It was found that extracts of *Artocarpus gomezianus,*considerably lesser activity when compared to the standard silymarin. The extract of *Artocarpus gomezianus* may be considered for further studies as they appear to be very promising antiproliferative agents.

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