



ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology
ESPS manuscript NO: 19147
Title: Guggulsterone induces apoptosis in human hepatocellular carcinoma cells through activation of the intrinsic mitochondrial pathway
Reviewer's code: 00037680
Reviewer's country: United States
Science editor: Yue-Li Tian
Date sent for review: 2015-05-08 07:47
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Table with 4 columns: CLASSIFICATION, LANGUAGE EVALUATION, SCIENTIFIC MISCONDUCT, CONCLUSION. It contains checkboxes for various review criteria like 'Grade A: Excellent', 'Priority publishing', 'Google Search', etc.

COMMENTS TO AUTHORS

This manuscript by Shi J. et al deals with the effects of the phytosterol guggulsterone (GS) on the apoptosis of human HepG2 cells and normal liver cells L-02. The study has relevance towards the development of anticancer therapy for hepatocellular carcinoma. Other reports have shown that GS is pro-apoptotic and modulates various genes. These authors show that GS arrested HepG2 cycle at G0/G1 phase. Bax mRNA was increased together with other changes that has led authors to implicate intrinsic mitochondrial pathways in GS effects. Technically, the data appears good and convincing. However, the following issues should be addressed: 1. Except in Fig. 1, there is no data presented to compare the effect of GS on HepG2 cells versus normal L-02 cells, particularly the effects on Bax and Bcl2 mRNA. Since GS inhibited viability of normal cells to about 60 % (Fig. 1), this data would be useful to contrast it with HepG2 cells and on the effectiveness of GS. 2. Authors should comment on the selectivity of action of GS on HCC versus normal cells? 3. There are several reports on GS effects on a variety of cells and systems. It will be useful to critically evaluate the novelty of the present study and how it offers new mechanisms for GS actions. 4. Manuscript requires editorial



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attention for its English language. For example 3rd para of the Introduction is cumbersome to read. There are several typographical errors etc.