

Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: The authors used a cell model of HT-29 to represent colon tumor and investigate the therapeutic role of PA and PAO in the progress of colon cancer. After reasonable grouping the HT-29 cells and performing various experiments, the authors showcased that PA and PAO can effectively increase the apoptosis of HT-29 cells and arrest these cells at G0/G1 stage by inducing autophagy signaling. This result also draws a conclusion that PA is a potential drug for colon tumor treatment. In short, the topic of this manuscript is timely and interesting. The authors have organized the manuscript rationally, with good methodology and well-written English. However, some important editing needs to be done before publication:

Response: Thanks for your comments.

1) What are the common drugs in clinical for the treatment of colon tumor? Compared with these drugs, what is the key advantage of PA?

Response: Combination therapy with fluorouracil, oxaliplatin, and calcium folinate are common therapeutic method for colon tumor in clinical. However, severe side effects including gastrointestinal reaction, bone marrow suppression, liver damage, and individual drug sensitivity difference limit its application. PA is a type of natural extract from *Achyrocline satureioides*, and the biggest advantage of PA is that the side effects are minimal. We have discussed it in the part discussion.

2) The authors have provided abundant data to verify the therapeutic role of PA and PAO on colon cancer. However, the high-resolution images of Figures 1, 2 and 4 are needed for publication.

Response: We have provided high-resolution images of Figures 1, 2 and 4 in the revised manuscript.

Reviewer #2:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: Colon cancer remains as a high death leading cause in the world, which cannot be effectively cured by surgical treatment at the advanced stage. To address this challenge, in this study, the authors aimed at exploring the lethal effect of Pomolic acid and its glucopyranose ester on colon cancer cells. The authors used proliferation assay, cell apoptosis analysis, cell cycle analysis assay, real-time PCR and Western Blotting to verify their hypothesis. The results showed that PA and PAO can promotes apoptosis through autophagy in HT-29 conlon tumor cells. So, in my opinion, this paper is well-written. The experimental design is reasonable, and the results reflects the conclusion as well. I recommend its acceptance after the minor revision. The detailed comments are:

Response: Thanks for your comments.

1. In the section of cell culture and proliferation assay, what is the criterion of the authors to select certain concentrations of PA and PAO in the experiments?

Response: The concentrations of PA and PAO were determined based on previous publication and our preliminary experiment. We have cited related references in the revised manuscript.

2. In my opinion, HT-29 cells are usually cultured using 10% FBS. Why did the authors use 5% FBS in this study?

Response: We carefully checked our original experiment record, and 10% FBS were used in the HT-29 cells culture. We have corrected it in the revised manuscript.

3. The full name of PA appeared many times in the article, which is not necessary.

Response: We have revised the format of PA.