Reviewer's report

Title: Increase in intracellular PGE2 induces apoptosis in Bax-expressing colon cancer cells.

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Reviewer: Young Jung

Reviewer's report:

Comments to the Author

Lalier and colleagues examined the mechanism through which the PEG2 pathway stimulated colon cancer cell apoptosis. Their results suggest that intracellular PEG2 mediates the Bax-dependent cell apoptosis.

The main concern for this manuscript is that all results were shown in two established cell line, raising the question of how representative the results might be for colon cancer. These cells are thus may not be sufficient to appropriately model colon cancer. As the data suggest that increase of PEG2 (or Cox2) leads to increased apoptosis of colon cancer, it would be of great interest if the authors can show that high levels PEG2 (or Cox2) correlates with increased of apoptosis in colon cancer specimens, preferably by IHC staining. Alternatively, showing concurrent upregulation of Cox2 (or increased PGE2 level) in a panel of colon cell lines would help to address this issue.

Some minor problems are listed below:
1. Clarify the cell death after PGE2 treatment are result from apoptosis but not necrosis.
2. The data showing that PEG2 regulates the Bax level or activity give help to understand this manuscript.
3. In figure 4D, how about the Cay alone effect on the cell death.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests