Reviewer's report

Title: Up-regulated Expression of l-Caldesmon associated with Malignancy of Colorectal Cancer

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Reviewer: Hsing-Chin Kuo

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Comments to Authors:

The manuscript by Kim, et al investigated the molecular mechanism of malignancy properties were involved in human colorectal cancer between normal mucosa and tumor from colon cancer patients using 2D difference gel electrophoresis (2D SDS-PAGE) experimental method. This is an interesting study that provides information regarding dysregulated expression of h-CaD may induce metastasis and change 5-FU susceptibility in colorectal cancer cells. This paper will contribute some knowledge in these areas. Although there are some suspicious results of provide better explanation of the potential mechanism in CaD regulation of investigated molecules, showed the otential therapeutic one. However, the manuscript is poorly written and presented in figures. Before the paper could be found acceptable, there are some statements which have been misquoted and need to be corrected and revised:

1. In its current state, the level of English throughout this manuscript does not meet the journal's required standard. Authors have the responsibility to present papers in good English which can be understood by the journal's readership. If reviewers cannot understand your work as easily as possible, the acceptance possibility of your article will be lowered greatly.

2. The information to support the PMF data is still insufficient in this manuscript. Please follow the author guidelines as to the requirements for PMF data. The database search criteria should be explicitly stated in the methods rather than reference to previous work. The quality of the data presented in Supplementaty A is sub-standard, the spectra are hardly readable and there is no evidence of which peptides were used for protein assignment. Supplementary data should be provided for h-CaD and l-CaD differentially expressed proteins.

3. The authors should show the real-time PCR data demonstrating the effectiveness of the silencing h-CaD and l-CaD by specific siRNAs.

4. All figures need to be carefully analyzed and improved in quality of western blot. I am not sure that how to identify h-CaD and l-CaD by what kinds of antibodies in method or anywhere manuscript.

5. Figure 4A need to be carefully analyzed h-CaD and l-CaD expression quantification in western blot.

6. The finding should be addressed whether many cell lines, relative poor response to 5-FU and radiation was demonstrated in l-CaD positive cell lines but
no human colonic epithelial cells in figure 4B/ 4C.

7. In general the experiments were conducted reasonably. However, novelty of this paper is limited as it has been shown that h-CaD and l-CaD exert oncogene activity in this study. Author claimed that mechanism has not been clear, but this manuscript also did not reveal the mechanism either. Works are phenomenological and do not address the mechanisms.

8. Accumulating evidence has shown that l-CaD is the principal active components of tumor invasive. The question of which targets in CRC progression will be clinically relevant to allow the eventual immunohistochemical evaluation and h-CaD or l-CaD expression quantification in the different lesions.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:

No conflict.