Author's response to reviews

Title: Essential microRNAs for self-renewal of breast cancer stem cells initiating from the counterparts of mammary epithelium

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To the *BMC CANCER* Editorial Team:

We would like to submit our manuscript entitled “Essential microRNAs for self-renewal of breast cancer stem cells initiating from the counterparts of mammary epithelium” for possible publication as a research article in *BMC CANCER*.

Our work builds on prior experiments in which we profiled miRNA expression of breast cancer stem cells (BCSCs). By using fluorescence-activated cell sorting (FACS), MUC1-ESA+ cells were isolated from normal mammary epithelial cell line MCF-10A and validated as mammary epithelial stem cells (MaSCs). Since analyzing molecular differences between BCSCs and MaSCs may reveal the mechanism of breast carcinogenesis and targeted gene therapy, here we compared the miRNA profiles in BCSCs and MaSCs and discussed the key miRNAs, their essential function and possible mechanism in regulating BCSC stemness. One representative miRNA (miR-200c) was chosen to verify its function in regulating stemness of BCSCs and MaSCs by miR-200c agomir transfection. And the role of miR-200c could mediated by target gene PDCD10. Our identification of BCSC-related miRNAs could provide new insights into the complex picture of BCSCs and assist cancer biologists and clinical oncologists in designing and testing novel therapeutic strategies. This is the first time that miR-200c and its target gene PDCD10 has been tested in BCSCs and MaSCs from mammary cell lines. For these reasons, we believe that our findings will be of interest and significance to a broad range of basic and clinical cancer stem cell researchers.

This manuscript is new and not being considered elsewhere. All the authors have read the final version of this manuscript and approved to submit it to the journal. The authors declare that there are no conflicts of interest.

We would be glad if our manuscript would give you complete satisfaction.

Sincerely,

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