Reviewer's report

Title: Upregulation of Wnt5a promotes epithelial-to-mesenchymal transition and metastasis of pancreatic cancer cells

Version: 1 Date: 9 April 2013

Reviewer: Amir Avan

Reviewer's report:

General comments:
The present manuscript describes the important role of Wnt5a in pancreatic cancer. In the present study the Authors investigated Wnt5a expression in 134 surgically resected pancreatic adenocarcinoma and adjacent normal pancreatic tissues. Moreover, they evaluated the clinical significance, and biological functions of Wnt5a in pancreatic cancer. Indeed they found that Wnt5a was up-regulated in pancreatic cancer, especially in well-differentiated carcinomas and Wnt protein was involved in regulating pancreatic cancer invasion and metastasis. Furthermore, Wnt5a expression was associated with induction of EMT, through the activation of #-catenin-dependent canonical Wnt signaling. Several interesting papers have been retrieved and reviewed on this topic, and most data and information have been condensed and formatted in figures and tables, which appears to be complete and easily accessible.

Overall idea: Accepted after minor essential revisions

The manuscript deals with an issue of interest, which has not yet been the focus of many studies, however there are several aspects that should be considered and further clarified:

Discretionary Revisions:
I would suggest the Authors evaluate the significant prognostic variable of Wnt5a in multivariate analyses, using Cox’s proportional hazards model to estimate the magnitude and the direction of the effect.

Other revisions in the text include:

Material and methods:
- Remove one of the “according to” from “according to according to the World Health - Organization classification”
- Change “.” with “,” in the following sentence “PANC-1 and BXPC-3 were obtained from Institute of Cellular Research, Chinese Academy of Science, Shanghai, China. And cultured”
- please provide the name of company, city and county of the following material RPMI-1640, FBS, penicillin/ streptomycin, Lysis-buffer in Western blot, CIAP, polyvinylidene difluoride membranes. …and also explain the incubation
conditions of your cell lines.

Discussion:
- please provide at least one reference for the following sentence: “Induction of EMT has been associated with increased cancer metastasis and aggressive clinical behaviors”

Figures:
Figure 3: please quantify the wound healing area in all the conditions in order to assess the percentages of cellular migration of the PANC-1 and PXPC-3 into the wound area.
Moreover, I would also suggest the Authors to change the color of the wound healing area.

Figure 4: bar graphs in the bottom panel are missing from figures 4!, please provide this information as a quantification of the invaded cells into the lower surface of the filter.

Figure 5: I would suggest the Authors to show the representative images of H&E and immune staining of the mice injected with empty vector-transfected cells as control.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.