Reviewer’s report

Title: Downregulation of TFPI in breast cancer cells induces cell signaling and increases metastatic growth by stimulating cell motility

Version: 2 Date: 16 June 2011

Reviewer: Ling Cen

Reviewer’s report:

In this article, the authors used shRNA approach to knockdown TFPI and TFPI#, and evaluated their effects on cell growth, cell adhesion, migration and invasion. They showed that breast cancer cell line with TFPI or TFPI# alone knockdown had increased cell growth, cell migration and invasion. These results are of interest to the related field and the data of protein phosphorylation status may potentially contribute to the understanding of the molecular mechanisms. The authors have to address the following specific comments to enhance the quality of this manuscript.

1. The description of the title “…induces cell signaling” is too broad and general and does not convey much information to the readers. Revision is recommended to be more specific, such as “…induces tyrosine phosphorylation signaling”.

2. In Figure 2D, 2E, and 2F, there is no label of each lane in the Western blots. They need to be labeled.

3. In figure 6B, based on the figure presented, MMP-9 signal is very difficult to see.

4. Figure legends are needed on the graph for Figure4A, 6C, 6D, and 6E.

5. In Figure 3D, the data would be much more appreciated by readers if the actin stress fibers described in the result section could be indicated using arrows in each image presented.

6. Although it is possible to figure out what cell line each figure is generated from, the readers will find it more convenient if the cell line used is labeled on the figure.

7. Typo (highlighted by underline) at the figure legend of Fig 7 “Phosphorylation status of signaling molecules in the total lysate of transduced cells after 7 FBS stimulation”.

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