Reviewer’s report

Title: Latexin is downregulated in human carcinomas of gastric body and cardia and exhibits tumor suppressor potential

Version: 2 Date: 7 September 2010

Reviewer: Martine Duterque-Coquillaud

Reviewer’s report:

This manuscript by Yong Li et al. describes the LXN gene in human gastric body and cardia carcinomas. They show cellular and molecular evidence of the inhibitory function of this gene in human gastric cancer cell line growth and tumorigenicity. They conclude a potential involvement of the LXN gene in a tumor suppression role.

The data presented here are thoroughly described and appear sound and coherent. In addition the paper provides new insights into the function of the poorly described LXN gene in cancer.

Major Compulsory Revisions

However, my main concern is the choice of the MGC803 cell line to overexpress LXN protein. This cell line is poorly described and discussed in the paper (in Results or in Discussion), except for the fact that it does not express the LXN gene. Would the same results be obtained with other cell lines, where LXN expression was negative, or is this result specific to the MGC803? Moreover, there is only one stable clone (C39-8), which was described in the paper while at least 40 clones were obtained as mentioned in “Methods”. The authors need to confirm the results with at least a second clone. The same remarks concern the BGC823 knockdown clone.

Likewise, using clones with different level of LXN expression (and a knockdown clone with better efficiency), the authors could compare and correlate the tumor suppression effect observed in their experiments.

My second criticism concerns the gene expression profile studies. The authors identify several genes with modified expression in the stable cell line (C39-8) and conclude that they participate to the molecular mechanisms involved in the cell line phenotype. However there is no proof that these genes are not restricted to the MGC803 cell line. The authors have to study the expression of the identified gene series in the other cell lines, which expressed or not the endogenous LXN gene, and also in the BGC823 knockdown clone. Moreover, the expression study of these genes in human gastric carcinoma and normal tissues, described in figure 2, would seriously strengthen the conclusion and the general interest of the paper.

More globally, authors should pay special attention to redundancy of the Abstract, the Beginning of the Discussion and the Conclusions.
Minor Essential Revisions
Concerning the gene and protein writing, the authors have to be careful about the writing nomenclature (LXN for human gene, Lxn for mouse gene).

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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