Reviewer's report

Title: Differential expression of follistatin and follistatin-related gene in human breast proliferative disorders

Version: 1 Date: 9 March 2009

Reviewer: Kunihiro Tsuchida

Reviewer's report:

Minor Essential Revisions

The manuscript entitled [Differential expression of follistatin and follistatin-related gene in human breast proliferative disorders] by Bloise et al., reports the mRNA and protein expression in several types of breast cancers and normal breast. The paper contains interesting findings in breast cancer researches.

Major concerns

1 TGF-beta has a dual role for cancer progression. TGF-beta inhibits growth of cancer cells in early phase. In later phase, TGF-beta works to promote cancer progression and metastasis by several mechanisms including evasion from immunological recognition (Cell 134, 215-231, 2008; Cancer Cell 3, 537-49, 1003). Although whether activins work similarly is not currently known, follistatin seems to act as an inhibitor of cancer metastasis (ref 19). It is worth while to note and include in the discussion.

2 Expression of FLRG in IDC is already reported in ref 17. Furthermore, functional study was performed in ref 17 by silencing. Compared with that study, I must say that current study is rather descriptive.

3 In the IDC and DCIS analysis, three grades 1-3 are combined. Is there any difference of expression of follistatin and FLRG among different grades?

4 In Figure 2 and 3, add either arrows or arrowhead or both. Also add scale bars.

Minor comments

1 Is the page numbering fine? Abstract is on page 8.
2 Unify G(0)/G(1) or G0/G1
3 Page 8, line 10, N should be n.
4 Page 9, line 12, in ref 4, activin is downregulated. However, ref 2 & 3, activin is upregulated in breast cancer. What is the difference between ref 2, 3 and 4?
5 Page 11, line 16, is [methanol 3%/H2O2] O.K.?
6 Page 11, line 21, Wyllie should be Wylie.
7 Page 11, line 23, correct [biotinylated linked]. It should be either [biotinylated] or [biotin-linked].
8 Page 12, line 7, it should be FST and FLRG in situ hybridization probes.
9 Page 13, line 3, describe % of Tween 20.
10 Page 13, line 15, tree should be three.
11 Page 14, line 7, [are show] should be corrected.
12 Page 15, lines 9-11, the sentence is hard to understand. Describe concisely.

**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:**

I declare that I have no competing interests.