Reviewer's report

Title: Influence of IFN-gamma and its receptors in human breast cancer

Version: Date: 19 April 2007

Reviewer: David Chang

Reviewer's report:

General

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

While not a scientific issue, the article needs to be re-written to give better format, clarity, and to minimize typographical errors to increase readability to readers. Here are some examples: the "MATERIALS AND METHODS" section need to have headings for each experiment, e.g., "Western Blot Analysis" "Immunohistochemistry staining", etc. In the "RESULTS" section, the headings should a summary of the finding, rather than the method used. There are also too many typographical errors: e.g. "Four" instead of "For" on page 7, 1st paragraph; "star" rather than "start" on page 8, the 10th line from bottom; "have been reported" rather than "have reported" on page 9, line 4; "together the nuclear ..." rather than "together WITH the nuclear ..." in abstract and on page 10, last paragraph. Some statements are not clear, e.g., "... could be critical in the tumor response" - response to what? PCNA needs to be defined. This kind of editorial changes could make the article more understandable.

In Figure 1. I cannot appreciate much difference between the bands for benign lesions vs in situ carcinoma for IFNr, yet, in table 1, the density showed a two-fold difference. Please recheck the numbers.

In table 1, IFNr-Ra for in situ-carcinoma is 21.1+/-3.6 (17.5-24.7), for IC it is 13.51 +/- 4.2 (9.31-17.7). The confidence interval overlap. Please re-check statistical calculation to see if P value is indeed < 0.05.

In situ carcinoma have "higher intensity" but "lower percentage of positive cases" for IFNr. What is the implication of this discrepancy? How was the conclusion "These data suggest a loss of IFN-r antitumoral activity in these tumors" drawn?

The study showed IFNr has higher intensity in in situ tumors than in benign lesions, and has same intensity in infiltrative tumors have similar to benign breast lesions. How do these observation suggest important roles of IFNr? It was also speculated that "IFN-r could be non-functional". With these two points, how was the conclusion "present study suggest that IFN-r could be a potential therapeutic tool in breast cancer" obtained?

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

In the tables 1 and 2. the denote of "a" and "b" should be defined.

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
'I declare that I have no competing interests'