Author’s response to reviews

Title: Estrogen Receptor, Progesterone Receptor, Interleukin-6 and Interleukin-8 are Variable in Breast Cancer and Benign Stem/Progenitor Cell populations

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Author’s response to reviews:

Thank you for your review of our research article entitled “Estrogen Receptor, Progesterone Receptor, Interleukin-6 and Interleukin-8 are Variable in Breast Cancer and Benign Stem/Progenitor Cell populations”.

I have made every attempt to address the concerns of the reviewers. The following changes were made in response to the editorial points and queries:

1. Both reviewers asked why we did not determine mRNA and protein expression in the same patient samples.

I admit that this is a limitation to the study. Our breast cancer specimens that we received from surgical pathology were small (average for this study 0.2mg). After the samples were dissociated the stem/progenitor cells (BCSC) were collected by flow-sorting. We collected four different populations based on cell surface markers CD49f and CD24. The numbers of cells that make up two of the four BCSC populations were quite low (average 35,000). Because the specimens were small and stem/progenitor cells rare, there were only enough cells to complete protein analysis or gene expression in these two populations.

Please see page 11, paragraph 3 in the Discussion section for a detailed explanation of this query.

2. The manuscript is compact … though complicated to follow at times due to the multitude of variants and repetitive reference to different cell populations/phenotypes.

Throughout the manuscript I have deleted extraneous references to populations/phenotypes. I have trimmed the repetitive use of variant cell surface markers in each paragraph whenever possible with losing clarity. These changes
can be found in the Abstract and the Results sections.

Also, to improve the readability of this manuscript, in the Results section I removed references to small-impact results that are easily viewed in the figures.

3. The statement that BSCS testing in breast cancer diagnosis seems somewhat premature.

That is a valid criticism. This paper does not show a direct clinical link between BCSC gene and protein expression and clinical outcome.

I would like to sincerely thank the reviewers for their comments. A paper always can be improved and I have done my best to integrate their suggestions. I have made every attempt to fix the typographical errors and in rereading the manuscript have made some improvements with respect to syntax.