Reviewer's report

Title: Dichotomous roles for the orphan nuclear receptor NURR1 in breast cancer

Version: 4 Date: 10 January 2013

Reviewer: Hsin-Hsiung Tai

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1. Discretionary revisions

The authors of this report studied the role of NURR1 expression in breast cancer. Their findings indicate that NURR1 plays a dual role, a tumor promoter as well as a tumor suppressor, in tumor progression based on some data in clinical samples and in xenograft animal model. Although these data seem to lead to the conclusion they have drawn, the studies lack mechanistic approach and experimental data to support their claim. Several statements that were made need more data to confirm. For examples, There seems to have a strong link between NURR1 silencing and cancer cell invasiveness. It would be nice to have some cellular data supporting the change in invasive behavior of breast cancer cells following NURR1 silencing. Their findings suggest that nuclear or cytosolic localization of NURR1 may determine differentiation or tumorigenesis. The authors indicate that the transcriptional activity of NURR1 may be the key to elucidating its role in the inhibition or promotion of breast cancer. These are interesting and important suggestions. It would be nice to have some experimental data to support the hypothesis.

2. Minor Essential Revisions

Check for typo errors (e.g. these finding(s) suggest that nuclear localization---) and other errors (e.g. mice were euthanized by exposure to CO2 (exposure) at slow rates ---).

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.