Reviewer's report

Title: Xenohormone Transactivities in Serum across Inuit Populations

Version: 2 **Date:** 3 March 2008

Reviewer: Duk-Hee Lee

Reviewer's report:

This study examined xenohormone transactivities among Inuit Population. The current

way of presenting results are very confusing and unclear.

Major comments

1. I am not sure about the validity of their statistical results. For example, table 4A showed that XERcomp was not associated with age in any population (beta coefficients -0.09~+0.04), but combined men and combined data came out as very significant. How can it be possible? Is it really meaningful?

2. They did lots of statistical tests with same dataset among different subsets of data; three different populations, combined men, combined women, and combined data. This kind of approach seems to be very strange. For example, age showed a positive association with XARcomp among Nuuk, but age showed no or even inverse associations with XARcomp among Sisimiut and Qannaaq. Then, how could all of them combined, reanalyzed, and provide some meaning? It is almost impossible for me to mention all these kinds of cases because there were too many cases throughout the paper.

3. I guess that many of significant findings were just chance findings.

4. Results of statistical analyses should be added to tables 1-3.

5. I noticed that some articles on bisphenol A were cited as references on POPs. I wonder if bisphenol A can be classified into persistent pollutants.

6. When the authors compared POPs correlations among different population, they have to consider different age distribution; old subjects tend to have higher correlations because POPs show bioaccumulation by aging process.

7. Table 2 needs unit.

What next?: Reject because scientifically unsound

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, and I have assessed the statistics in my report.