Reviewer's report

Title: An in vivo animal study assessing long-term changes in hypothalamic cytokines following perinatal exposure to a chemical mixture based on Arctic maternal body burden.

Version: 2 Date: 31 May 2011

Reviewer: Larissa Takser

Reviewer's report:

The manuscript was carefully revised. New data, on LPS group, which were not shown in the first version, make me ask few new questions.

Figure 1: It is clear that PCB+LPS and MIx+LPS groups are higher than Veh+LPS and corresponding groups from 1A part of the Figure. Moreover, few significance marks ("-" or "*") are present. In the Results section the comment is: "Although IL-1b levels were (not surprisingly) appreciably greater overall in the second study that involved adult LPS administration (compared to non-LPS treated rats of study 1), no significant differences were apparent with regards to the Arctic chemical treatments (see Fig. 1b)."

There is a clear misinterpretation of data. This point (2 fold increase in IL1b in PCB+LPS group) is very interesting and should be addressed in Discussion.

In other Figures, it is not clear what means ".-".

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:

'I declare that I have no competing interests'