Reviewer's report

Title: Prenatal arsenic exposure alters the placental expression of multiple epigenetic regulators in a sex-dependent manner

Version: 0 Date: 17 Oct 2018

Reviewer: Maria Argos

Reviewer's report:

Abstract, Results: it would be helpful to provide additional details of the results such as the number of sites evaluated and the number of sites observed to be nominally associated.

Background, line 66: "arsenic contamination of hundreds to thousands of micrograms per liter" should be restated as >100 or >150 ug/L since health effects have been observed consistently at these cutoff points.

Urine sample collection and arsenic measurement: total arsenic concentration from a spot urine sample is analyzed. Urinary creatinine was not included as a model covariate; are the results appreciably different if creatinine adjustment is considered?

Results, line 181: There are 312 mother-infant dyads included in this analysis. How was this sample selected from the 1500 dyads enrolled in the NHBCS?

Discussion: the analyses did not account for multiple comparisons, which should be mentioned as a limitation of the study. If a Bonferroni significance threshold or FDR were employed, would associations persist?

Table 1: can be consolidated into a single column with a footnote indicating whether the mean, %, or median is reported, to avoid blank cells. Rows for number of pregnant women and infants can be removed from the table.
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Acceptable

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