Reviewer's report

Title: Exhaled nitric oxide is related to atopy, but not asthma in adolescents with bronchiolitis in infancy

Version: 1 Date: 4 February 2013

Reviewer: George Konstantinou

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In this article the investigators tried to assess the effect of early lower respiratory infections (bronchiolitis) on FeNO, asthma and atopy #11 years after this episode was recorded.

Major Compulsory Revisions:

1. The authors should clearly provide the working hypothesis of their work and the primary and secondary outcomes of interest. The structure of the results should be based on these outcomes.

2. Atopy is one of the most important parameters examined in this study and was assessed with SPTs. On which basis were the allergens used to assess sensitization selected? Are they representative enough to appropriately assess sensitization in Norway? Please quote appropriately.

3. In the paragraph “follow-up” please explain what does “As previously described … were slightly younger at the 11-year follow-up” mean?

4. The unselected age-matched control group plays an important role in all comparisons and regression analyses. This control group was recruited from 190 children that were primary invited. Which were the criteria to invite those 190 children? How sure could the investigators be that there is no selection bias among those that finally consent to be tested? Are there any data to show how representative the finally recruited control sample is?

5. Although it is stated in the discussion that the study is underpowered to perform multiple comparisons and adjust for so many parameters, this doesn’t change the fact that the inferences are indeed very weak and possibly incorrect. A post hoc power analysis could clarify this issue provided that there is a working hypothesis and a primary outcome of interest. For instance, there could be a completely different interpretation of the results presented in Table 2. Namely, bronchiolitis seems to prevent an increase in FeNO in the atotics or those with current atopic asthma (see both significant p-values in Table 2).

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published
Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests