Reviewer’s report

Title: A functional polymorphism in the SPINK5 gene is associated with asthma in a Chinese Han Population

Version: 1 Date: 24 November 2008

Reviewer: Catherine Laprise

Reviewer’s report:

Minor Essential Revisions

This is a well-written paper. The objectives and methods are clearly described, however, their conclusions remain speculative.

Major comment:

A) Genetics
- The association needs to be replicate in an independent cohort.
- According to the number of SNPs, the standard is to apply a correction factor (ex. Bonferroni correction).

B) Functional
- The potential implication of the GATA binding factor in the regulation of the SPINK5 gene expression should be confirmed by further experiment and literature review. A super shift assay with an antibody directed against GATA binding factor would clearly demonstrate it’s implication and allow the author to further extrapolate on this regulation pathways. Also, current knowledge on the potential role(s) of GATA binding factor and other transcription factors in asthma known molecular symptoms (Th2 activation, elevated serum IgE, recruitment of mast cell, etc…) should be addressed.

Minor:

It would have been interesting to directly observe the different expression levels of the SPINK5 by real-time PCR experiment on control vs. asthmatic tissues or cell lines.

- The first sentence of the second paragraph of the discussion beginning with: « Relative to the most obvious effects… » should be reformulated as it is not possible to include all mutations in coding sequence as having obvious effects in common diseases especially in complex traits as asthma an as it is way too inclusive and not exactly to say that « …common diseases are more likely to be caused by subtle mechanisms affecting gene function, ».

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.