Reviewer's report

Title: Association of genetic variants in chromosome 17q21 with adult onset asthma in a Chinese Han population

Version: 1 Date: 25 July 2011

Reviewer: Manuel Ferreira

Reviewer's report:

This study reports three association analyses conducted in a Chinese Han population (710 cases, 656 controls) between variants in/near ORMDL3 and (1) the risk of adult-onset asthma; (2) ORMDL3 splicing; and (3) ORMDL3 and GSDMB expression levels. The main new finding is that variants previously reported to associate with childhood-onset asthma are significantly associated with adult-onset asthma in this study. This is an important new finding, although it is unclear what could be driving this unexpected association. Future studies that dissect the mechanisms underlying the association between 17q21 variants and asthma age-of-onset are clearly needed. I have no major concerns with the analyses or conclusions reported in this study.

Minor issues not for publication

Page 4, please rephrase “61 asthma patients who were first onset and no any medication used within one month were recruited [...]”

Page 5, add PLINK's reference instead of website.

Page 6, transcript level analysis, please add % variance in expression explained by each SNP.

Page 7, lines 6 to 10, the association between asthma and 17q21 variants reported by Ferreira et al [18] could be driven by the childhood-onset cases included in that study. As it was not possible to test for age-of-onset effects, it is a bit of a stretch to state that results from that study partly support your findings. I suggest that these two sentences should be deleted.

Page 7, paragraph 2, rephrase “it can’t address gene function [...]”.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a
statistician.

Declaration of competing interests:

I declare that I have no competing interests.