Reviewer’s report

Title: Associations of ECP (eosinophil cationic protein)-gene polymorphisms to allergy, asthma, smoke habits and lung function in two Estonian and Swedish sub cohorts of the ECRHS II study

Version: 3 Date: 10 April 2010

Reviewer: Andrew Sandford

Reviewer’s report:

There were some issues from the previous review that were not addressed:

In the paragraph ‘Relations of ECP genotypes to atopy and asthma’, there seems to be a contradiction in the last sentence when you assert that there was no SNP association with asthma but an association of ECP434 with non-allergic asthma. It would be better to specify allergic asthma in the first half of the sentence.

The linkage disequilibrium between the relevant loci in the chromosome 14 region can be determined from the HapMap (or similar) data and should be presented.

The number of subjects is given as 767 in the first section of the Methods but in the DNA extraction it is stated that there were samples from 465 and 292 subjects. The authors should address this discrepancy.

Why were two TaqMan assays used to genotype the ECP562 polymorphism?

You do not mention correction for multiple comparisons for your association results. Was it done? If yes, you should mention which method was used; if not, your significant findings will not survive correction and that should be made clear to the readers.

Level of interest: An article of limited interest

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