Reviewer's report

Title: Genetic and functional evidence for a locus controlling otitis media at chromosome 10q26.3

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Reviewer: Elisabet Einarsson

Reviewer's report:

This is a review of the manuscript entitled "Genetic and functional evidence for a locus controlling otitis media at chromosome 10q26.3" by Rye et al.

The authors identify a region on chromosome ten that shows linkage to recurrent and chronic otitis media. The linkage analysis is followed up in a case-control association dataset, and the authors evaluate the independence of the signals attained. Candidate genes were investigated and the authors investigated if the genes’ expression patterns would support their importance for OM risk or not.

This manuscript is well made, and is a nice example of a linkage peak being followed up and attempts made to explain where the signal is coming from. This signal now needs to be replicated in independent datasets.

The methods section is very long, and detailed, which I appreciate. The Illumina 660W-Quad data has been described previously, but maybe a very short summary of the QC and Imputation steps performed on that dataset would be informative.

Discretionary Revisions

Did the authors do any CNV analysis on the region? I believe there is some CNV data in the 660W-Quad chip (if I am wrong, disregard this comment), would have been interesting to see if more information could have been squeezed out about the region.

The chromosome 10 locus was not identified in a recent GWAS by the same authors. It would be interesting to see a short discussion of this.

Level of interest: An article of importance in its field

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'