Reviewer's report

Title: Reduced rhinovirus-specific antibodies are associated with acute exacerbations of chronic obstructive pulmonary disease requiring hospitalisation

Version: 1 Date: 9 April 2012

Reviewer: Jennifer Quint

Reviewer's report:

This is an interesting and well written hypothesis generating study investigating the association between rhinovirus antibodies and AECOPD requiring hospitalisation.

Revisions:

1. The numbers in the study are very small and there is no power calculation to suggest that the statistically significant results have occurred for any reason other than chance. Please provide a power calculation for the primary outcome.

2. As the study is very hypothesis generating and more studies are needed before any firm conclusions can be drawn, the findings should be discussed with this in mind.

3. The introduction of the paper talks about frequent and infrequent exacerbators and yet the results apply to those with or without a hospitalised exacerbation and not FE and IE. The introduction should be adjusted as such.

4. While the addition of disease severity did not alter the model, the numbers in the study are very small and I do not think you can be sure that the findings are not disease severity related.

5. The inter-assay and inter-sample variability is not discussed anywhere. As the numbers are small and driven by outliers on the graphs it is important to discuss quality control.

6. I do not think you can say p=0.046 is statistically significant.

7. Please reference the statement in the methods for measurement of specific antibodies that states "patients who had values below the limit of detection were assigned a value of half the lower limit of detection".

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.