Reviewer's report

Title: Viruses and chronic pulmonary disease: The role of immune modulation

Version: 2 Date: 20 December 2011

Reviewer: Ray Stokes Peebles

Reviewer's report:

BMC review

In this manuscript, the authors review studies examining the impact of respiratory viral infection on three chronic pulmonary diseases, asthma, COPD and cystic fibrosis. The authors have made a valid effort to include new papers in this area, as ~30% of the references are at least as recent as 2007. They validly state that the mechanisms by which viral infections impact asthma, COPD and cystic fibrosis are by far from being completely defined and greater work certainly needs to be done in all three areas. The manuscript has a few misspellings and syntax errors which I outline below. The pages are not numbered so the page numbers listed below start with the introduction being page 1.

Major points

Page 3 – Although the statement implying that inhaled corticosteroids are not effective in preventing exacerbations is not a primary point of this manuscript, the assertion is incorrect as should be deleted. Many studies have shown that inhaled corticosteroids significantly decrease exacerbations and have a meaningful impact on quality of life measures.

Page 4 – The subsection title “Mechanisms of virus-induced exacerbations” does not even discuss the relevant literature outlining the current knowledge of how viral infections may result in acute exacerbations. It is difficult to tell whether the subsequent sections (e.g. Biology of rhinovirus infection, Inflammatory and immune responses to virus infection in asthma, etc.) are actually subsections of “Mechanisms of virus-induced exacerbations.” If this is the case, then this can be left as it now stands. Otherwise, there is no need for the section “Mechanisms of virus-induced exacerbations.”

Page 14, paragraph 2 – Was there a control group without COPD for the study described in the first sentence of this paragraph (reference 50). This will help the reader know whether the detection rate is greater in COPD subjects compared to subjects without this disease.

Minor points

Page 1 – “careers” is misspelled as “carers.” In the next sentence starting with “Exacerbations accelerate…”, a semi-colon should be used after “progression”, not a comma.
Page 13, paragraph 2 – It would be helpful if the murine COPD model could be discussed in a little greater detail so that the reader has some idea about how this model was generated and it what way it mimics COPD. Is this a model in which the animals were exposed to cigarette smoke or was this a transgenic model?

**Quality of written English:** Needs some language corrections before being published

**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