Reviewer's report

Title: Mannan adjuvants intranasally administered inactivated influenza virus in mice rendering low doses inductive of strong serum IgG and IgA in the lung

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Reviewer: Helle R Juul-Madsen

Reviewer's report:

This is a well written manuscript that shows that mannan is able to adjuvant whole H1N1 influenza virus and that only 1#g of inactivated virus adjuvanted by 100 #g mannan and given intranasally induces higher specific serum IgG and mucosal IgA that if immunized with virus alone. There may be a great advantage in using less virus which is time-consuming to produce and a very cheap, non-toxic adjuvant when a pandemic influenza is under way. The reviewer only has minor comments/suggestions to the manuscript.

Abstract
Line 33: please write ‘pandemic’ instead ‘large scale’
Line 36: please write ‘in’ instead of ‘with it at’
Line 39: please clarify that it is an antigen specific ELISA
Line 162 – 167: This section may be merged to the section above
Line 162 – 167: please delete the ‘hypothesises’ from these two sections – it does not belong to the M&M section.
Line 197: Write the name for HI in the head line
Line 214 – 219: This section including figure 1 can be deleted
Line 223: please add H1N1 + mannan before mixes in mice
Line 356: Yes the mannose receptor may be involved but other innate receptors may also be involved as described in e.g. Kjærup et al., 2014, Immunobiology 219: 263.

All the figures can technically be improved. It is also important to be consequent in the sublines. For instance in figure 2 the authors write 10#g H1N1 + 100#g mannan. That should be used throughout all the figures so in figure 3 that would be 10#g H1N1 + 100#g mannan …. and not just H1N1 + mannan to help the reader.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the
statistics.

Declaration of competing interests:

I declare that I have no competing interests.