Reviewer's report

Title: Vaccination with Hemagglutinin or Neuraminidase DNA Protects BALB/c Mice against Influenza Virus Infection in Presence of Maternal Antibody

Version: Date: 26 February 2007

Reviewer: Noboru Yamanaka

Reviewer's report:

General
Over all this study had good impact in where influenza vaccine is available for immunization. The aim of the study is clear but there are some drawbacks of this study. Design of the study is acceptable. Authors need to clarify some major points. What are the factors that cause immunosuppression to born if immunizes mother and offsprings using same protein/DNA? Need to make clear this point in the discussion.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. In the study author explains immunization schedule and infection in result section rather than methods section. So many repetitions are in result section.
2. How many mother mice were immunized in each immunization group?
3. Are 6-8 week adult mice appropriate for pregnancy?
4. How long male and female mice were matting?
5. How many times immunization studies repeated? It is looking immunization perform once only. Immunization of mother mouse once only is not enough to conclude any data.
6. Does this study perform according to guide to the care and use of experimental animals? Does this study approve by institutional review board?
7. Is there any statistical significance after boosting the offspring using same or different protein/DNA?
8. How is the titer of antibody to new born before immunization? As the author referred to vaccinate the offspring when maternal antibody declines to a certain extent.
9. The author mentioned that when both the female mice and their offspring were immunized with HA DNA, the survival rate of offspring was 0%; when both the female mice and their offspring were immunized with NA DNA, the survival rate of offspring was 28.6%. Although both of them are DNA vaccine why one is more immunogenic than other? Need to explain.
10. The author showed dose dependent effect on inactivated influenza but not for DNA vaccine. Does this 30 ug DNA standard for immunization?
11. For maternal immunization, IgG subclass is important. There is no information for subclass of IgG. Need to include in result section.
12. In the discussion need to write precisely but need to explain more about result

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
13. There is no footnote for (-) in tables.
14. In the table one, lung virus titer for unimmunized mother and immunized offsprings shown ND (not detected) but statistics showing significant. How is it possible?

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

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

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