Gillard et al. have conducted a phase II, open label study in healthy older adults in which they evaluated the safety and immunogenicity of a single and double dose of AS03 adjuvanted and non-adjuvanted H5N1 vaccine in older adults. The primary study objectives have been reported in a paper published in 2011 (Heijmans et al. J Infect Dis 2011; 203: 1054-62). This paper reports on the long-term persistence (up to 2 years) of the humoral and cellular immune response after H5N1 vaccination. The study demonstrates that in combination with the AS03 adjuvant a single 3.8 mcg dose of H5N1 vaccine suffices to induce a strong and durable immune response. There is no need for a higher antigen dose in the older population which simplifies the vaccination schedule in the context of mass vaccination during a pandemic.

The study has been properly conducted and the paper is very well written and merits to be published. I only have few minor comments.

Major Compulsory Revisions: none

Minor Essential Revisions:

1. Results - HI antibody response: the authors mention ‘all CHMP criteria’, whereas only SCR and SPR results are reported, not the GMT ratio, which is the third CHMP criterion.

2. References: Reference 13: typo: µg (instead of mug)

3. Reference 16: author name ‘von SF’ should be ‘von Sonnenburg F’

4. Legend: Figure 6: the symbols ‘alpha’ and ‘gamma’ (of TNF-alpha and interpheron-gamma) are not correctly depicted, but represented as squares in the text.

Discretionary Revisions:

1. Objectives: A pandemic vaccine could boost the immune memory that has been generated after priming with a pre-pandemic vaccine. Do the authors have any evidence if memory B-cells have been elicited?
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:

From 2003 until 2007 I was a subinvestigator in the Center for Vaccinology (Ghent University) where we did clinical evaluations of H5N1 vaccines in collaboration with several vaccine companies, amongst others GSK Biologicals.

Since this is 7 years ago, it didn't withhold me from accepting the invitation to review the manuscript.