Reviewer’s report

Title: Humoral and cellular responses to an unadjuvanted monovalent H1N1 pandemic influenza vaccine in hospital employees.

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Reviewer: Massimiliano Fabbiani

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In this manuscript Herrera et al. investigate humoral and cellular responses to vaccination with an unadjuvanted monovalent H1N1 pandemic influenza vaccine in healthy subjects. Despite 4 years has passed from the pandemic spread of the virus, the H1N1 serotype is still circulating and it is included in the current formulations of trivalent vaccine. Many data are available on the humoral response to H1N1 influenza vaccination but few data are available on cellular immune response.

Results of the study are interesting since many details on both humoral and cellular responses to the vaccine are reported. As a consequence, the results can contribute to better define the immune response to influenza vaccines. The article is well written, data are reported clearly and well discussed.

Some minor issues should be addressed before publication:

MINOR ESSENTIAL REVISIONS

1. Section Methods, “Antibody detection”: please define in this section criteria for seroprotection and seroconversion.

2. Line 283: “After vaccination, the seroconversion (66.7%) and seroprotective (48.3%) rates increased”. The proportion shown in the text does not correspond to those the table 2, where a seroconversion rate of 48.3% and a seroprotection rate of 66.7% reported. Please clarify.

3. Lines 308-311: please show the number of subjects with and without anti-HA1 antibodies prior to vaccination.

4. Line 312-313: the authors state that post vaccination GMT did not significantly differ in the 2 groups. Please show the p value. If at least a statistical trend is not observed, no firm conclusions on the effects of anti-HA1 antibodies prior to vaccination can be drawn. In such case, this section appear purely speculative and should be removed.

5. Lines 354-357: was this decay statistically significant? Please report the p value.

6. Lines 398-401: was this increase statistically significant? Please report the p value.

DISCRETIONARY REVISIONS

7. Line 188: the reference provided [Ref. 17] refers to the use of ELISPOT during
tuberculosis. Please add a reference where this method is used to measure IGN-gamma-producing T-cells after influenza vaccination.

8. Line 258: “46 of the subjects”, please add in parenthesis the percentage on the total.

**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