frontiers in Immunology

CORRECTION
published: 02 April 2019
doi: 10.3389/fimmu.2019.00614

Corrigendum: Induction of Robust B Cell Responses After Influenza mRNA Vaccination Is Accompanied by Circulating Hemagglutinin-Specific ICOS+ PD-1+ CXCR3+ T Follicular Helper Cells

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OPEN ACCESS

Approved by:
Frontiers in Immunology
Editorial Office,
Frontiers Media SA, Switzerland

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Specialty section:
This article was submitted to Vaccines and Molecular Therapeutics, a section of the journal Frontiers in Immunology

Received: 21 February 2019
Accepted: 07 March 2019
Published: 02 April 2019

Citation:
Lindgren G, Ols S, Liang F, Thompson EA, Lin A, Hellgren F, Bahl K, John S, Yuzhakov O, Hassett KJ, Brito LA, Salter H, Ciaramella G and Loré K (2019) Corrigendum: Induction of Robust B Cell Responses After Influenza mRNA Vaccination Is Accompanied by Circulating Hemagglutinin-Specific ICOS+ PD-1+ CXCR3+ T Follicular Helper Cells. Front. Immunol. 10:614. doi: 10.3389/fimmu.2019.00614

Keywords: mRNA vaccine, adaptive immune responses, non-human primates, influenza, T follicular helper cells, germinal centers

A Corrigendum on

Induction of Robust B Cell Responses after Influenza mRNA Vaccination Is Accompanied by Circulating Hemagglutinin-Specific ICOS+ PD-1+ CXCR3+ T Follicular Helper Cells
by Lindgren, G., Ols, S., Liang, F., Thompson, E. A., Lin, A., Hellgren, F., et al. (2017). Front. Immunol. 8:1539. doi: 10.3389/fimmu.2017.01539

In the original article, Liang et al. (44) was not cited in the article. The citation has now been inserted in the **Results, mRNA vaccine encoding H10 induces protective levels of antibodies**, paragraph two and should read:

"All animals induced neutralizing antibody titers against HA above the accepted level of protection for seasonal influenza vaccination, as measured by hemagglutination inhibition assay (HAI) (Figure 1C) as we have reported earlier (25, 44). Although some of the animals in the ID group already showed titers at the protective level after the prime immunization, all groups had titers that exceeded this level following boost. The antibody levels persisted above this level for the remainder of the study. The titers were significantly higher in the ID group compared to the IM groups for up to 2 weeks following boost, but were similar thereafter. The GLA group did not show higher HAI titers compared to the other groups, thus indicating that the mRNA/LNP formulation itself was sufficiently immunogenic.

The third immunization in the GLA group resulted in a transient increase in HAI titers, which returned to similar levels as the other groups 5 weeks later."

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way.

REFERENCES

25. Trombetta CM, Perini D, Mather S, Temperton N, Montomoli E. Overview of serological techniques for influenza vaccine evaluation: past, present and future. Vaccines (Basel) (2014) 2:707–34. doi: 10.3390/vaccines20 40707

44. Liang F, Lindgren G, Lin A, Thompson EA, Ols S, et al. Efficient targeting and activation of antigen presenting cells *in vivo* after modified mRNA vaccine administration in rhesus macaques. *Mol Ther.* (2017) 25:2635–47. doi: 10.1016/j.ymthe.2017.08.006