



Importance of nasal secretions in the evaluation of mucosal immunity elicited by mRNA BNT162b2 COVID-19 Vaccine

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Dear Editor,

We read with great interest the recent publication by Azzi et al.¹ Authors analysed serum and saliva samples of subjects after mRNA COVID-19 vaccine, reporting that vaccination elicits an immune response by increasing both total and neutralising antibodies concentration in serum and in saliva. However, since antibodies levels are much higher in serum than in the salivary compartment, Authors concluded that oral mucosal immunity is poorly activated by this vaccination failing in limiting virus acquisition by mucosal routes.

Notably, results and conclusions of this study are different as compared to our recently published data and other reports, that detected significant levels of anti-SARS-CoV-2 specific IgA and IgG in saliva²⁻⁴ and, as a novelty, in nasal secretions⁵ after mRNA COVID-19 Vaccine, thus eliciting an antigen-specific mucosal immune response directly at the site of virus entry.

Probably, different procedures could have made possible the discrepancies between this paper and current literature, such as: the absence of a clear negative threshold for Anti-SARS-CoV-2 antibodies in saliva samples (since usually diagnostic kits are validated only for serum or plasma); different immunoassays methods used, and saliva collection (sputum in Azzi et al. study rather than standardized collection method such as Salivette®).

Nasal immunity plays a pivotal role in the fight against COVID-19, therefore the assessment of specific antibodies in nasal secretions is determinant in the

study of mucosal immunity elicited by Anti-SARS-CoV-2 vaccine. Further studies are needed to consolidate results and to longitudinally evaluate the persistence of both nasal and salivary antibodies.

Contributors

All authors have contributed equally to this letter.

Declaration of interests

All authors disclose no financial and personal relationships with other people or organizations that could inappropriately influence their work.

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