

## LETTER TO EDITOR

# False Negative (FN) Results Challenging the Reliability of Medical Research in Cases of COVID-19 Variant

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## ABSTRACT

Coronavirus variant turned out to be the top preference and the leading subject in medical sciences journals in the recent years. However, the rapid propagation of initial healthcare information created issues with some false negative results (FN) in cases of genetic variants of COVID-19. This letter discusses the implications of false negative results (FN) as these are included in research findings due to the rapid propagation of early healthcare information.

**Key Words:** Coronavirus variant, False negative results (FN), SARS-CoV-2

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## Dear Editor,

Since January 2021, coronavirus variant (SARS-CoV-2 VOC 202012/01: Variant of Concern, year 2020, month 12, variant 01) has turned out to be the top preference and the leading subject among medical sciences journals<sup>1</sup>. At present, 100 % reactive antiviral agent against the coronavirus (COVID-19) does not seem to be on offer. Healthcare professionals and governments are the frontline stakeholders striving for breakthroughs against corona-variant. Research journals have played a pivotal part by encouraging and promoting research on coronavirus variant to ensure all the stakeholders have instant access to adequate insight on SARS-CoV-2 VOC 202012/01. Some publishers have expedited publication processes in order to encourage papers on COVID-19 variant, while other journals have waived publication charges in order to promote the sharing of knowledge with the developing countries<sup>2</sup>. Rapid publications have been vital in informing the lay press and allowing healthcare professionals to get early insights into the epidemiology

of the COVID-19 variant. However, the rapid propagation of early healthcare information created issues with some false negative results (FN) in case of the genetic variant of COVID-19.

The potential threats to the patient of a false negative result (FN) include delayed supportive treatment and lack of regular monitoring of people in close contact for symptoms resulting in high risk situations<sup>3</sup>. This could have severe implications as it is challenging the reliability and validity of medical findings. The false negative result (FN) may transpire at any stage of the molecular testing during the exploration of COVID-19 if any alteration is visible in the part of the genome analyzed during the test. One of the outcomes of testing is to facilitate researchers in analyzing the data swiftly<sup>4</sup>. This process, however, has its limitations like rapid propagation of premature studies with hastily-acquired data due to false negative results (FN). These studies yield decisive recommendations based on inadequate conclusions resulting in distortions with adverse implications.

This is opening a new Pandora's Box in the realm of research related to the epidemiology of COVID-19 variant, as more manuscripts with similar scope would continue to be submitted. Publishers could be vigilant to decrease the distortion especially for studies related to clinical trials by using the following practices. The manuscript must narrow the scope of study related to genetic variants of SARS-CoV-2 and highlight false negative results with thorough review process.

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Manuscripts must highlight tests that practice multiple genetic targets to limit the final results, which are less likely to be affected by the occurrence of genetic variant. Also, these include the indications of false negative results in blend with clinical observations. These steps allow the journals to reduce distortion especially for studies related to clinical trials while highlighting the trend on genetic variants of SARS-CoV-2 research.

**Authors' Contribution:** ZA: The main author conceived the idea, conducted the research, and drafted the letter. SS: Assisted in the findings of facts and provided valuable insights. SS: Validated the content and ensured its accuracy.

## REFERENCES

1. Emergencies preparedness, response WHO. (2020). Available from: <https://www.who.int/csr/don/31-december-2020-sars-cov2-variants/en/> Access: 2021.
2. Sorooshian, S., & Kumar, S. Contrived publications and COVID-19 communication noise. *Ital. J. Med.*, 2020;14(4): 247-248. <https://doi.org/10.4081/itjm.2020.1357>
3. Risk of False Results with the Curative SARS-Cov-2 Test for COVID-19: FDA Safety Communication. Available from: <https://www.fda.gov/medical-devices/safety-communications/risk-false-results-curative-sars-cov-2-test-covid-19-fda-safety-communication/> Access: March 04, 2021
4. Genetic Variants of SARS-CoV-2 May Lead to False Negative Results with Molecular Tests for Detection of SARS-CoV-2 - Letter to Clinical Laboratory Staff and Health Care Providers. Available from: <https://www.fda.gov/medical-devices/letters-health-care-providers/genetic-variants-sars-cov-2-may-lead-false-negative-results-molecular-tests-detection-sars-cov-2/> Access: March 07, 2021