



Editorial

Scientific evidence on the origin of SARS-CoV-2



ARTICLE INFO

Keywords
SARS-CoV-2 origin
Pandemics
Virus
COVID-19

ABSTRACT

Even reaching the end of the year 2022, there is still a controversy on the origin of the SARS-CoV-2 virus. This Virtual Special Issue (VSI), focused on the “Scientific evidence on the origin of SARS-CoV-2”, was launched some months ago with the aim of stimulating the submission of new high quality scientific research papers on the matter, to shed light on it.

As indicated in the call for papers, the Editors involved in the VSI were aware of the difficulties of presenting concluding facts on that issue, however, bearing in mind that some teams of researchers had started investigations regarding this subject, a VSI like this (searching for stimulating the scientific controversy while requiring scientific evidence), could help to elucidate complicated aspects, going a step ahead in this way.

The Editors made a call encouraging interested teams of researchers having solid results to submit high quality manuscripts dealing with this crucial theme. We thought -and we still think-that it is of maximum interest for the scientific community, as well as for the whole society, now and probably for the future.

The VSI have received 50 submissions, which could be considered a limited number highlighting the difficulties of elaborating new high-quality manuscripts providing solid evidence on the matter. After a careful peer-review, those manuscripts considered to reach the highest scientific value were accepted for publication. The Editors think that the set of papers included in this VSI constitute interesting and high-quality contributions, providing further scientific knowledge on this issue. In this editorial piece, the Editors make some comments on the papers published, including some additional reflections.

Declaration of competing interest

None.

1. Introduction

The Editors of this VSI have edited other Special Issues dealing with SARS-Cov-2, but not specifically focusing on the origin of the virus and the COVID-19. However, taking into account the relevance of this matter, and the related scientific controversy -with not clear solution and/or consensus yet- we considered interesting to propose a Call for Papers in Environmental Research, trying to go steps ahead in the knowledge of this hot topic.

The VSI received 50 submissions, with 26% of them being accepted and published. The Editors include next some comments regarding these papers, as well as on some complementary aspects.

2. Comments on papers published in the virtual special issue

A total of 13 papers were published in this VSI. The first one (Domingo, 2021) may be considered as a starting point for the special issue, situating the problem on a broad context. Other specific papers were the one by Courtier-Orgogozo and de Ribera (2022), presenting a study on SARS-CoV-2 infection at the Huanan seafood market, and the

paper by Coccia (2022), who made a meta-analysis to explain unknown causes of the origins of SARS-CoV-2. In turn, Kaushik et al. (2022) showed a novel structure-based approach for identification of vertebrate susceptibility to SARS-CoV-2, with implications for future surveillance programs. Amendola et al. (2022) published a study on molecular evidence for SARS-CoV-2 in samples collected from patients with morbilliform eruptions since late 2019 in Lombardy (Italy), while the research made by Djordjevic et al. (2022) focused on understanding risk factors of a new variant outburst through global analysis of Omicron transmissibility. Other papers published in the VSI were the study by Zhao et al. (2022), who made a contribution on the global transmission of new coronavirus variants, and the investigation by Desingu et al. (2022), who showed details on how SARS-CoV-2 gained a novel spike protein S1-N-Terminal Domain (S1-NTD). On the other hand, Frutos et al. (2022a) published the paper “Origin of COVID-19: Dismissing the Mojiang mine theory and the laboratory accident narrative”, complemented by a second one (Frutos et al., 2022b), entitled “There is no “origin” to SARS-CoV-2”. In turn, He et al. (2022) tried to answer the question “Is the virus-laden standing water change the transmission intensity of SARS-CoV-2 after precipitation?”, while Guérin-Rechdaoui et al. (2022) assessed the fate of SARS-CoV-2 coronavirus in wastewater treatment sludge during storage and thermophilic anaerobic digestion. Finally, to close the present VSI, Domingo (2022) published an updated review of the scientific literature on the origin of SARS-CoV-2.

<https://doi.org/10.1016/j.envres.2022.114631>

We would like that these contributions could help to go steps ahead in this controversial theme, and hopefully, shed a clear light on it in the coming future. It could be key to understand and manage future epidemics and pandemics, being from zoonotic origin or others.

Acknowledgements

The Editors would like to thank all Authors, Reviewers and Staff of Environmental Research and Elsevier involved in the tasks needed to develop this VSI.

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