

SARS-CoV-2 is an appropriate name for the new coronavirus

We have read with great interest the Correspondence by Shibo Jiang and colleagues,¹ in which they propose a name change for the newly emerged coronavirus,² which was recently designated severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) by the Coronavirus Study Group of the International Committee on Taxonomy of Viruses.³ The authors argued that the use of SARS in the virus name could confuse the public about the disease that it causes; in addition, they noted that the name SARS-CoV-2 is not consistent with the disease name chosen by WHO, coronavirus disease 2019. The authors also indicated that scientifically, SARS-CoV-2 is naturally occurring and different from other SARS-like or SARS-related coronaviruses that are mainly characterised by their genome sequences. Furthermore, given the probability of future attenuation of this virus to a low-pathogenic form, the authors predict that the use of the name SARS-CoV-2 might have adverse effects, both socially and economically. On these grounds, the authors suggest that the name of the new virus is changed to human coronavirus 2019 (HCoV-19). Although these concerns and suggestions are appreciated, we feel that the adoption of SARS-CoV-2 by the Coronavirus Study Group was appropriate.

To facilitate good practice and scientific exchange, the International Committee on Taxonomy of Viruses has established standardised formats for classifying viruses. Under these rules, a newly emerged virus is normally assigned to a species based on phylogeny and taxonomy.⁴ Through DivErsity pArtitioning by hieRarchical Clustering-based analyses,⁵ the newly emerged coronavirus was deemed not sufficiently novel but is a sister virus to SARS-CoV, the primary viral isolate defining the species. The SARS-CoV

species includes viruses such as SARS-CoV, SARS-CoV_PC4-227, and SARSr-CoV-btKY72. SARS-CoV-2 is the newest member of this viral species. The use of SARS in naming SARS-CoV-2 does not derive from the name of the SARS disease but is a natural extension of the taxonomic practice for viruses in the SARS species. The use of SARS for viruses in this species mainly refers to their taxonomic relationship to the founding virus of this species, SARS-CoV. In other words, viruses in this species can be named SARS regardless of whether or not they cause SARS-like diseases.

The relationship between the name of a viral pathogen and its associated diseases is complex. Although the International Committee on Taxonomy of Viruses is responsible for naming viral species, WHO is responsible for naming the diseases caused by newly emerging viruses. For various reasons, the name of a disease and its causative viral pathogen can be different, as exemplified by acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV).

We also believe that the use of the name SARS-CoV-2 will not affect social stability and economic development in the affected countries, as the authors envision. Given that the cross-species transmission of SARS-CoV-2 is currently not well understood, and no effective approach to stop such zoonotic transmission has been established, SARS-related coronaviruses, such as SARS-CoV-2 (or even SARS-CoV-3 in the future), might continue to emerge and re-emerge. This has been exemplified in the transmission of Middle East respiratory syndrome-related coronavirus, in which multiple spillover events occurred from camels to humans, resulting in human infections.⁶ Thus, keeping SARS in the names of viruses of that species would be beneficial to keep the general public vigilant and prepared to respond quickly in the event of a new viral emergence. Should SARS-CoV-2

be significantly attenuated to the point of becoming a new low-pathogenic or non-pathogenic virus, such attenuated viral isolates could be named as low-pathogenic human coronaviruses, such as LPH-CoV.

We believe that the naming of SARS-CoV-2 by the Coronavirus Study Group is aligned with the goals of the International Committee on Taxonomy of Viruses to facilitate good practice and scientific exchange. Given that SARS-CoV-2 is already being used in the scientific literature, a name change at this stage would cause confusion in the scientific community. With all the uncertainties about this newly emerged pathogenic virus, we suggest keeping SARS-CoV-2 as its name.

We declare no competing interests. The opinions expressed in this Correspondence are the personal opinions of the authors.

**Yuntao Wu, Wenzhe Ho, Yaowei Huang, Dong-Yan Jin, Shiyue Li, Shan-Lu Liu, Xuefeng Liu, Jianming Qiu, Yongming Sang, Qihong Wang, Kwok-Yung Yuen, *Zhi-Ming Zheng ywu8@gmu.edu; zhenzt@exchange.nih.gov*

National Center for Biodefense and Infectious Diseases, School of Systems Biology, George Mason University, Manassas, VA 20110, USA (YW); Department of Pathology & Laboratory Medicine and Department of Anatomy & Cell Biology, Temple University Lewis Katz School of Medicine, Philadelphia, PA, USA (WH); Institute of Preventive Veterinary Medicine, Key Laboratory of Animal Virology of Ministry of Agriculture, College of Animal Sciences, Zhejiang University, Hangzhou, China (YH); School of Biomedical Sciences (D-YJ) and Department of Microbiology, Li Ka Shing Faculty of Medicine (K-YY), The University of Hong Kong, Pokfulam, Hong Kong Special Administrative Region, China; Department of Epidemiology, Wuhan University School of Health Sciences, Wuhan, Hubei, China (SL); Infectious Diseases Institute, Center for Retrovirus Research, Departments of Veterinary Biosciences, Microbial Infection and Immunity, and Microbiology, The Ohio State University, Columbus, OH, USA (S-LL); Food Animal Health Research Program, Department of Veterinary Preventive Medicine, The Ohio State University, Wooster, OH, USA (QW); Department of Pathology, Georgetown University Medical Center, Washington, DC, USA (XL); Department of Microbiology, Molecular Genetics and Immunology, University of Kansas Medical Center, Kansas City, KS, USA (JQ); Department of Agricultural and Environmental Sciences, College of Agriculture, Human and Natural Sciences, Tennessee State University, Nashville, TN, USA (YS); Center for Cancer Research, National Cancer Institute, Frederick, MD 21702, USA (Z-MZ)



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