

TITLE:

Utilize the past lessons from SARS and MERS against COVID-19

ABSTRACT:

This short paper shows why the COVID-19 pandemic was avoidable. Based on past lessons learnt from experiences of SARS and of MERS, WHO should have advised airborne precautions against COVID-19.

Roche B. et al. wrote an article entitled “Was the COVID-19 pandemic avoidable?”<sup>1</sup>. They emphasize a solution-oriented approach in pathogen evolutionary ecology for preventing future pandemic outbreaks. Their approach may be useful in the future, but not now. The COVID-19 pandemic was avoidable as long as we have utilized the past experiences from SARS and MERS<sup>3,4</sup>.

The global dissemination of SARS, airborne transmission of SARS-CoV was considered possible under special circumstances<sup>4</sup>. SARS is an airborne virus and can spread through small droplets of saliva in a similar way to the cold and influenza<sup>5</sup>. WHO advised strict adherence to the barrier nursing of patients with SARS, using precautions for airborne, droplet and contact transmission<sup>6</sup>. If WHO were advising airborne precautions against COVID-19, the COVID-19 pandemic could be avoidable. Based on lessons learnt from experiences of SARS and of MERS, airborne precautions were mandated for aerosol-generating procedures<sup>7</sup>. In other words, airborne precautions from WHO were needed against COVID-19.

The WHO advice against COVID-19 should not be optimistic but should be pessimistic from the common sense viewpoint of security. The pessimistic approach means that WHO should advise airborne precautions without scientific examinations of airborne transmission of COVID-19 virus. If the airborne transmissions of COVID-19 were denied, the droplet precautions should be given by WHO.

References:

1. Roche B, Garchitorena A, Guégan JF, et al. Was the COVID-19 pandemic avoidable? A call for a "solution-oriented" approach in pathogen evolutionary ecology to prevent future outbreaks [published online ahead of print, 2020 Aug 31]. *Ecol Lett*. 2020;10.1111/ele.13586. doi:10.1111/ele.13586
2. Rolf Hilgenfeld, Malik Peiris, From SARS to MERS: 10 years of research on highly pathogenic human coronaviruses, *Antiviral Research*, Vol 100, Issue 1, 2013, pp. 286-295, <https://doi.org/10.1016/j.antiviral.2013.08.015>
3. Mirae Park et al., COVID-19: Lessons from SARS and MERS, *European Journal of Immunology*, 27 February 2020, <https://doi.org/10.1002/eji.202070035>
4. Vincent C.C. Cheng, Jasper F.W. Chan, Kelvin K.W. To, K.Y. Yuen, Clinical management and infection control of SARS: Lessons learned, *Antiviral Research*, Volume 100, Issue 2, 2013, Pages 407-419, ISSN 0166-3542, <https://doi.org/10.1016/j.antiviral.2013.08.016>.
5. [https://www.who.int/health-topics/severe-acute-respiratory-syndrome#tab=tab\\_1](https://www.who.int/health-topics/severe-acute-respiratory-syndrome#tab=tab_1)
6. <https://www.who.int/ihr/lyon/surveillance/infectioncontrol/en/>
7. Middle East respiratory syndrome coronavirus Joint Kingdom of Saudi Arabia/WHO mission, Riyadh, 4-9 June 2013, [https://www.who.int/csr/disease/coronavirus\\_infections/MERSCov\\_WHO\\_KSA\\_Mission\\_Jun13\\_.pdf](https://www.who.int/csr/disease/coronavirus_infections/MERSCov_WHO_KSA_Mission_Jun13_.pdf)