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Contextualising COVID-19 in 2024

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The COVID-19 global pandemic, due to SARS-CoV-2 (severe acute respiratory syndrome-related coronavirus type 2) has infected over 750 million people globally since November 2019. The majority of the Australian population (estimates of over 65% of the total) have been infected. The first diagnosed Australian case was on 25 January 2020 in a person returning from the source of the pandemic in Wuhan, Hubei Province, PR China. The global pandemic was declared on 11 March 2020, following the WHO's declaration of a public health emergency of international concern (PHEIC) on 30 January 2020. Initial control efforts in Australia focused on suppression strategies, which, by July 2021, were moved to less-suppressive and more-outbreak control strategies. This occurred alongside significant developments in vaccination, antiviral therapies, and increased percentages of the population becoming infected. Since then, more than 22 million Australians have been vaccinated, and the number of new COVID-19 cases and associated deaths decreased considerably, although outbreaks throughout the year (rather than only in winter) have continued to occur to date.

As we continue to navigate COVID-19, the challenges are persistent and evolving. Extensive resource allocation in the early pandemic response led to significant understanding of SARS-CoV-2, as well as advances in many adjacent fields. Now, as we approach 4 years since the onset of COVID-19, the continued burden highlights the critical importance of adaptive and forward-thinking approaches across basic science and public health. This issue of *Microbiology Australia* showcases the wide-ranging expertise of internationally recognised Australian researchers who continue to innovate in this area. We are delighted to present research on epidemiology,[1] next generation surveillance of viruses,[2] and the changing virology of SARS-CoV-2.[3] Long COVID has emerged as a significant clinical burden,[4] and there are several therapeutic developments in the pipeline to tackle this issue.[5] Advances in vaccine development have been crucial in the fight against COVID-19.[6] Continued investment in this field will ensure that we are prepared to tackle future pandemic threats,[7] with a 'One Health' approach at the centre of future public health strategies.[8]

So, we feel that providing up-to-date summaries, and data from experts in the area of SARS-CoV-2 infection, acknowledging that there are now many people in Australia who could write similar reviews, will provide a basis for wider discussion and review for Australian microbiologists. The likelihood of future re-emergence of other novel viruses, including zoonotic-derived coronaviruses, means that we must avoid complacency. The practice of infection control, One Health and virology has been changed irrevocably by the COVID pandemic. The World Health Organization was quoted in 2022 as stating, 'the COVID-19 pandemic taught us that strong, high-quality health systems must reach everyone'.[9] This global interdependence of pandemics is important to remember in going forward. We hope that the expertise and scholarship provided by the authors in the current issue of *Microbiology Australia* assist in assessing where we are now, and thinking about the future in relation to COVID-19 and future pandemics. Further, the long-term effects of COVID-19 still need to be assessed and large-scale, well-constructed studies with carefully defined outcomes need to continue.[10] It will be through such well-constructed studies that more-definitive answers can be obtained to guide our understanding of short-term responses, and long-term consequences, informing our ongoing research.

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Conflicts of interest. The authors declare that they have no conflicts of interest.

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