

# Prevention of allergies in the postpandemic era

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The COVID-19 pandemic has resulted in unprecedented disruption of human activities across the world. In order to minimise the morbidity and mortality related to this infection, countries across the world implemented drastic social distancing measures and restrictions including border closure, school closure, work from home arrangement and prohibition of mass gatherings.<sup>1</sup> It seemed that the world had come to a complete stop. On a personal level, the use of mask, frequent hand washing and the widespread use of disinfecting agents result in marked reduction of circulation of a variety of microbes, especially respiratory viruses. With the development of vaccines, effective medications along and herd immunity due to vaccination or natural infection, the WHO declared on 5 May 2023 that COVID-19 was no longer a global public health emergency. In the past three decades, there has been significant advance in our understanding of the importance of health depending on the interaction of the human immune system and the environmental microbiota.<sup>2 3</sup> The pandemic measures may have changed such interactions affecting the development of allergies. In this issue, we have researchers from around the world to discuss our recent understanding in the prevention of allergy and the how the pandemic may shape our primary preventive strategies. In the article *How does the pandemic shape the future of allergies?*, Papadopoulou

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and Miligkos reviewed the impact of COVID-19 infections on individuals with allergies and how the pandemic measures might have changed the exposure which may have long lasting effects on the immune system of those born during the pandemic. West summarised in her article the current knowledge of how newborns may acquire a 'healthy' intestinal microbiome which induces a balanced immune system such that the individual will have the ability to fight pathogens but will not mount excessive response to innocuous allergens. Many factors such as mode of delivery, use of antibiotics in early life and home environment can all affect the gastrointestinal microbiome, and they all play a role in the subsequent development of allergies. Following the first wave of increase in asthma and allergic rhinitis, food allergy has become the second wave of the epidemic of allergy showing a rapid increase over the past two decades.<sup>4</sup> Venter and Heine described in their articles the current evidence regarding how factors in the maternal diet and early infant feeding practice may influence the subsequent development of food allergy. Maternal exposure to a diverse diet and early exposure to a variety of food allergens in early infancy are not associated with tolerance. The four articles in this issue provide comprehensive updates of our current understanding of how feeding practice and environmental exposure may modulate the early immune system. Such modulation is likely to be mediated by interactions between the host immune system and the environmental and gastrointestinal microbiome. The

clear understanding of such interactions will pave the way for the development of effective allergy preventive strategies.

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