

1 Dec 2023

COVID-19 Response Inquiry Panel  
Department of Prime Minister and Cabinet  
Australian Government

Dear Ms Kruk, Professor Bennett, and Dr Jackson

Thank you for the opportunity to make a submission and share my views and experiences about the Commonwealth Government's response to COVID-19. My comments are primarily focused on **Terms of Reference point 3: Preventative health measures**.

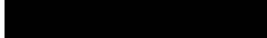
As a behaviour science researcher, I contributed to Australia's pandemic response by conducting a long-running survey of beliefs and behaviours among everyday Australians and how they coped with the impacts of COVID-19. This helped to provide evidence into public decision-making for the pandemic response. I am proud of the work I did in this survey, but I wish that it wasn't necessary.

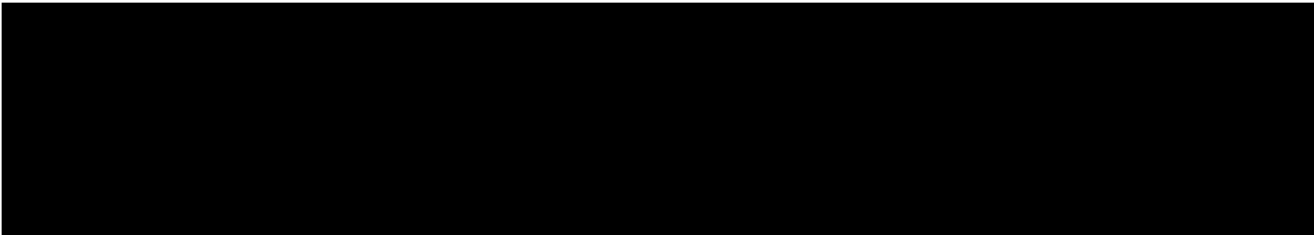

COVID-19 could have been prevented. Other pandemics can be prevented.

**My key message in this submission is the need to prioritise the prevention of future pandemics.** Compared with other global catastrophic risks such as nuclear war, space weather, natural disasters such as supervolcanoes, and misused or misaligned artificial intelligence, it is within our power to prevent novel pathogens from emerging and to quickly identify, contain and eliminate them if they do. Given the human and economic costs of pandemics – and the fact that pandemics much worse than COVID-19 are possible – prevention should be our primary goal.

The new **Australian Centre for Disease Control should have as its top priority to prevent novel pathogens from emerging and controlling them if they do.** Even on the most conservative assumptions, significant investment in pandemic prevention is overwhelmingly justified ("The costs and benefits of primary prevention of zoonotic pandemics", Bernstein et al, 2022).

Australia should take the risk of engineered pandemics much more seriously. The terms of reference for the Inquiry focus on anticipating future pandemics - and the evidence shows that doing that effectively requires thinking about the possibility of humans designing, creating, and releasing dangerous and novel pathogens - and that this becomes easier every year, with advances in biotechnology and AI.

 (MIT Media Lab) has assessed that the technologies necessary to design, create and release dangerous and novel pathogens may become widely available by 2025.

  
Subsequent to  the market for synthetic DNA, speciality reagents, and AI tools that can support the use of this technology has continued to accelerate. With or without the additional risks of AI, synthetic DNA is likely the essential input that any malicious or negligent actor would need to engineer a pandemic.

In October 2023, US President Biden made an executive order to improve screening of risky DNA sequences, best practices for access controls, technical guidances for effective screening, and robust oversight mechanisms.

Australia regulates the importation of synthetic DNA, but could significantly improve its screening processes to be consistent with the US executive order. The **Inquiry should recommend that the Commonwealth update its regulatory regime to be consistent with the US, by requiring labs importing DNA into Australia to apply these new screening procedures to all orders.**

Regulating synthetic DNA in this way will address one of the most pressing risks that Professors Esvelt and Schmidt highlight, but it's not an enduring solution. Steady advances in biotechnology and increasingly

advanced AI are likely to be able to help people circumvent these regulations, especially as the pace of interlinked advances in AI and biotechnology continues to accelerate.

For that reason, the **Inquiry should recommend that DISR and DHAC work with the new CDC to develop minimum safety standards for “frontier AI models” that are deployed in Australia.** These frontier AI models represent the state of the art, and include Large Language Models (LLMs) and Multimodal Foundation Models (MFMs) developed by companies like OpenAI and Google DeepMind. The intent of these standards on frontier AI models should be to ensure that models that pose biosafety risks are identified and restricted. Australia must clear expectations for companies that develop and deploy AI that frontier AI models with “dual-use” capabilities that could pose catastrophic risks are not welcome in Australia. Finally, we need to keep close tabs on advances in biotechnology to ensure the ability to engineer pathogens never becomes widely available.

Despite the harm and suffering of COVID-19, there is an opportunity in this Inquiry to bring new ideas and perspectives to prevent and prepare for future pandemics. While that will require uncomfortable thinking about unexpected topics and emerging technologies, these are the issues that could have the biggest impact towards securing a healthier and safer future for Australians and all people of the world.

Yours faithfully

Alexander Saeri

## References

- Esvelt, K. (2022). Delay, Detect, Defend: Preparing for a Future in which Thousands Can Release New Pandemics. Geneva Centre for Security Policy: Geneva paper 29/22  
<https://dam.gcsp.ch/files/doc/gcsp-geneva-paper-29-22>
- Biden, J. (2023) [Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence](#). The White House.
- [Engineered Pathogens and Unnatural Biological Weapons: The Future Threat of Synthetic Biology – Combating Terrorism Center at West Point](#)