

Experts call on Agriculture Minister to close AI-enabled biosecurity gap

Experts say the Minister can act "immediately, without new legislation" to require gene synthesis screening at the border.

CANBERRA, AUSTRALIA, May 3, 2026
/EINPresswire.com/ -- Today, over 120

AI experts, biosecurity experts,

parliamentarians, and members of the public [wrote to Agriculture Minister Julie Collins](#), calling on her to use existing powers to stop AI being used to build bioweapons.

The letter asks the Minister to block imports of synthetic DNA and RNA — which can be used to engineer pathogens — from providers that don't screen orders for dangerous sequences or verify the customer's identity.

The letter says, "previously, the key constraint in creating a biological weapon from synthetic nucleic acids was the knowledge required — expertise that was rare and hard to acquire. That has changed."

The [International AI Safety Report 2026](#) found that general-purpose AI systems can now give expert-level guidance on building biological and chemical weapons, including detailed laboratory instructions. One AI model outperformed 94% of experts at troubleshooting virology protocols. Specialised AI systems can now design genomes for viruses not seen in nature, and related techniques have been used to design proteins that evade the human immune system.

A survey of 375 biological AI tools found only 3% had any safeguards, and those that exist can be easily bypassed.

Major international gene synthesis providers — including Twist Bioscience, IDT, and GenScript — already voluntarily screen orders. Australian import permits do not currently require this.

The letter says imported synthetic DNA and RNA are "a physical chokepoint" — bad actors with AI guidance still need physical materials to act, and border screening catches them.



**Australians
For AI Safety**

The Biosecurity Act 2015 already lets the Director of Biosecurity impose conditions on import permits, through a system called BICON. The letter asks the Minister to use that power to require screening, to prioritise higher-risk applicants for an existing background check, and to review the regime with the new AI Safety Institute, industry, and academia.

"Screening only deters wrongdoers if they know it's happening. The Government should publicise this requirement clearly, so anyone thinking about ordering dangerous sequences for the wrong reasons understands their order will be screened and they will be caught," said Greg Sadler, CEO of Good Ancestors.

The US, New Zealand, the EU, and the UK are each taking steps toward gene synthesis screening requirements.

"Government knows this is a problem. AI is making it possible for people to use mail-order DNA to build bioweapons. The Department of Agriculture has been co-chairing SYNAPSE — the Synthetic Biology and AI Protection Security Effort — with Home Affairs for over a year, working alongside the AFP, CSIRO, Defence, and others. SYNAPSE is referenced in the National AI Plan, which also says regulators are responsible for addressing AI-related harms in their domains," said Greg Sadler, CEO of Good Ancestors. "AI safety and biosecurity experts have identified practical actions the Minister can take immediately, without new legislation. The Minister needs to act on this now, and then keep working through SYNAPSE to stay ahead of the problem as AI capability continues to advance."

Dr Lotti Tajouri, Associate Professor at Bond University, said AI-assisted microbial synthesis has become his "top worry for humankind survival" and warned that without action now, the problem will be impossible to reverse.

"AI presents both immense opportunities and risks for Australia and the world. Biosecurity is an area of immense risk, due to the possibility of one malicious actor causing tremendous damage through the development of an engineered pathogen — potentially the deaths of millions and massive damage to the economy. We need to be proactive with biodefense to prevent such a catastrophe," said Soroush Pour, CEO of Harmony Intelligence and former Head of Technology at Australian biotech firm Vow.

Associate Professor David Heslop of UNSW said the convergence of generative AI with synthetic biology is rapidly lowering barriers to designing and manipulating biological systems, shifting capability beyond traditional institutional controls.

Free screening tools are available, and screening is conducted digitally by the synthesis provider before dispatch. The letter says the change "targets the gap, not the norm."

"Free screening tools are available, and the major international providers already screen as a matter of course. Most Australian researchers in universities and industry are already ordering

from providers who screen, so this change wouldn't affect their work. It targets the small number of providers that bad actors could exploit," said Greg Sadler, CEO of Good Ancestors.

Signatories include Federal Member for Curtin Kate Chaney MP; Dr Cassidy Nelson, Director of Biosecurity Policy at the Centre for Long-Term Resilience; Janet Egan, Senior Fellow and Deputy Director at the Center for a New American Security; Dr Toby Ord of Oxford University; Associate Professor David Heslop of UNSW; and Professor Patrick Walsh of Charles Sturt University.

The full letter and current list of signatories is available at www.australiansforaisafety.com.au/letters/ai-bio-gene-synth-screening

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