AI could be used to develop bioweapons if not regulated urgently, says new report

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A new report from the Nuclear Threat Initiative (NTI) is calling on governments to take urgent steps to manage the threat of artificial intelligence developed "global biological catastrophe."

The report, "The Convergence of Artificial Intelligence and the Life Sciences: Safeguarding Technology, Rethinking Governance, and Preventing Catastrophe," comes as the UK government holds the AI Safety Summit this week.

To develop the report's recommendations the authors from the NTI, Science Policy Consulting and the University of Birmingham interviewed more than 30 AI, biosecurity, bioscience research, biotechnology, and emerging technologies governance experts. They evaluated the risks associated with the novel technology, assessed the biosecurity implications, and discussed options for safeguarding rapidly advancing AI-bio capabilities.

The report recommends six urgent steps needed at a national and international level to reduce risks associated with new AI-bio technologies without hindering scientific advances. They include:

- Establishing an international "AI-Bio Forum" to develop and share AI model guardrails that reduce biological risks.
- Developing a radically new, more agile approach to national governance of AI-bio capabilities.
- Implementing promising AI model guardrails at scale.
- Pursuing an ambitious research agenda to explore additional AI guardrail options.
- Strengthening biosecurity controls at the interface between digital design tools and physical biological systems.
- Using AI tools to build next-generation pandemic preparedness and response capabilities.

Dr. Nicole Wheeler, a research fellow at the Institute of Microbiology and Infection and the School of Computer Science at the University of Birmingham, and a co-author of the report said, "Advances in AI-bio technologies can offer amazing benefits for modern bioscience and

bioengineering, such as the rapid development of vaccines and new medicines, finding ways to develop new materials and fight the climate emergency."

"But there is also the possibility that artificial intelligence can be used, either accidentally or deliberately, to cause harm to others on a massive scale. As this technology continues to evolve it is imperative that governments and the scientific community get a firm grasp on it to prevent this from happening."

More information: The Convergence of Artificial Intelligence and the Life Sciences. www.nti.org/analysis/articles/ … d-the-life-sciences/

Provided by University of Birmingham

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