JASSI PANNU, MD
CURRICULUM VITAE

Legal Name:	Jaspreet Pannu	**Phone:**	██████████
Email:	██████████	**Citizenship:**	██████████

EDUCATION

2010-2014	McGill University, Montreal, Canada	B.Sc.	First Class Honors in Biology
2014-2020	Stanford University, Stanford, California	M.D.	Doctor of Medicine

RESEARCH TRAINING AND PROFESSIONAL EXPERIENCE

2025-Present	Center for Health Security	Assistant Professor

Bloomberg School of Public Health, Johns Hopkins University
- *Tenure-track, research focus on AI model safety and biosecurity*
- *Coauthor of the landmark generative genomic language model Evo 2, focusing on safety and security evaluations and mitigations*

2025-Present	Chan Zuckerberg Biohub	Board Director

- *The CZ Biohub is the primary philanthropic vehicle of the Chan Zuckerberg Initiative, and brings together frontier AI and frontier biology to cure and prevent all disease*

2022-Present	Blueprint Biosecurity	Board Director

- *Blueprint Biosecurity is a nonprofit dedicated to achieving breakthroughs in humanity's ability to prevent pandemics, by guiding the development of resilience technologies*

2024-2025	Department of Health Policy	Postdoctoral Scholar
	School of Medicine, Stanford University	& Health Policy Fellow

- *Applied technical understanding of frontier biological AI model capabilities, to develop appropriate policies for their safe and ethical implementation*

2020-2023	Department of Medicine	Resident Physician
	Stanford University	

- *Frontline physician during the Covid-19 pandemic, global health physician at Mulago Hospital, Kampala, Uganda*

2018-2020	Google AI	Medical Specialist
	Googleplex, Mountain View, CA	

- *Developed novel AI-enabled diagnostics*

LICENSURE AND CERTIFICATION

2022-Present	Medical Board of California	Physician's & Surgeon's License
2022-Present	Drug Enforcement Administration	License
2022-2023	Uganda Medical and Dental Practitioners Council	Temporary Physician's License
2024-Present	American Board of Internal Medicine	Board Certified

SELECTED PUBLICATIONS

Peer Reviewed Articles

Bloomfield, D., Black, J., Crook, O., Cicero, A., Inglesby, T., **Pannu, J.** Biological Data Governance in an Age of AI. *Science* (2025). [Accepted]

Pannu, J., Bloomfield, D., MacKnight, R., Hanke, M., Zhu, A., Gomes, G., Cicero, A., Inglesby, T. Dual Use Capabilities of Concern of Biological AI Models. *PLOS Computational Biology* (2025).

Brixi, G., Durrant, M., Ku, G., … **Pannu, J.**, … Collison., P., Costa, A., Hernandez-Boussard, T., Ho, E., Liu, M., McGrath, T., Powell, K., Burke, D., Goodarzi, H., Hsu, P., Hie, B. Genome modeling and design across all domains of life with Evo 2. *Nature* (2025). [Under Review]

Adamala, K., Agashe, D., Belkaid, Y., … **Pannu, J.**, Relman, D., Schwille, P., Smith, J., Suga, H., Szostak, J., Talbot, N., Tiedje, J., Venter, C., Winter, G., Zhang, W., Zhu, X., Zuber, M. Confronting risks of mirror life. *Science* (2024) *(All authors are listed alphabetically. Author contributions section notes that "JP led the writing, including writing the first draft outlining the working group's position".)*

Pannu, J., … Bloomfield, D., Berke, A., McKelvey, G., Cicero, A., Inglesby, T. Defining Hazardous Capabilities of Biological AI Models. *RAND Corp.* (2025)

Bloomfield, D.*, **Pannu, J.***, Zhu, A., Ng, M., Lewis, A., Bendavid, E., Asch, S., Hernandez-Boussard, T. AI and biosecurity: The need for governance. *Science* (2024). *(*Co-first authorship.)*

Sharma, S., **Pannu, J.**, Chorlton, S., Swett, J., Ecker, D. Threat Net: A Metagenomic Surveillance Network for Biothreat Detection and Early Warning. *Health Security* (2023).

Pannu, J., Palmer, M., Cicero, A., Relman, D., Lipsitch, M., Inglesby, T. Strengthen oversight of risky research on pathogens. *Science* (2022).

Articles, Editorials and Other Publications Not Peer Reviewed

Li, H., Lin, H., Shresta, P., Bhansali, R., Yan, Y., **Pannu, J.**, … Prakash, M. Octopi 2.0: Open and Scalable Microscopy Platform for AI-powered Diagnostic Applications. *medRxiv* (2025).

Pannu, J., Gebauer, S., McKelvey, G., Cicero, A., Inglesby, T. AI could pose pandemic-scale biosecurity risks. Here's how to make it safer. *Nature* (2024).

Pannu, J., Schmitt, J., Swett, J. ARPA-H Should Zero In on Pandemic Prevention. *ISSUES in Science and Technology: National Academies of Sciences, Engineering and Medicine & ASU*. (2023)

Conference Papers

Bloomfield, D., Hanke, M., Maiwald, A., Webster, T., Hernandez-Boussard, T., Berke, A., Crook, O., **Pannu, J.** Securing Dual-Use Pathogen Data of Concern. *NeurIPS* (2025).

Black, J., Hanke, M., Maiwald, A., Hernandez-Boussard, T., Crook, O., **Pannu, J.** Open-weight genome language model safeguards: Assessing robustness via adversarial fine-tuning. *Science* (2025).

Policy Briefs and Reports

Hanke, M., **Pannu, J.**, Hopkins, M., Zhu, A., Inglesby, T., Cicero, A. Response to the US AI Safety Institutes Request for Information on Safety Considerations for Chemical and/or Biological AI models. (2024).

Pannu, J., Bloomfield, D., Hopkins, M., Inglesby, T., Cicero, A. Response to Request for Information Related to NIST's Assignments Under Section 4.1, 4.5 and 11 of the Executive Order Concerning Artificial Intelligence (2024).

Selected Popular Press

Pannu, J., Swett, J. What if there was never a pandemic again? *The New York Times* (2023).

Schmitt, J., **Pannu, J.**, Swett, J. How the Advanced Research Projects Agency for Health (ARPA-H) can master the subtle art of risk-taking. *STAT* (2023).

SELECTED BRIEFINGS AND PRESENTATIONS

Recurring

"Landscape of biological AI models & science-informed policy approaches," Monthly briefings provided to the UK Government's Department of Science, Innovation and Technology. Oct 2024-Present. Remote.

Other

"Safety, security and ethics evaluations of genomic language models," Invited briefing to the UK AI Security Institute. June 11th, 2025. London, United Kingdom.

"National security considerations for biological AI models," Invited briefing to the House Select Committee on the Chinese Communist Party (CCP). May 20th, 2025. Remote.

"Safety, security and ethics evaluations of genomic language models," Invited briefing to the US AI Safety Institute. March 24th, 2025. Remote.

"Pathogen research policy recommendations," Moderated session at Hoover-OECD Responsible Innovation and Anticipatory Governance Workshop. February 27th, 2025. Stanford, California.

"General purpose frontier AI models with biological capabilities," Invited briefing to the EU Commission AI Office. February 12th, 2025. EU Commission Office, Paris, France.

"Responsible Biodesign: Policy Approaches," Invited briefing to the University of Washington Institute for Protein Design's Responsible Biodesign Convening. January 10th, 2025. Rockefeller Foundation Headquarters, Washington, D.C.

"Responsible AI for Biology: Red Teaming Priorities," Invited briefing to Microsoft's AI Red Team. Oct 10th, 2024. Remote.

Invited briefing to the NIH Director Monica Bertagnolli, deputy director Larry Tabak, and NIAID director Jeanne Marrazzo, regarding mirror biology publication in *Science*. August 1st, 2024. Remote.

"Mapping America's Biosurveillance," Invited briefing to the <u>Department of Defense</u>, Chemical and Biological Defense Programs. May 28th, 2024. Remote.

"Biomanufacturing Policy Roundtable," Invited panel with COL Matthew Clark, JPEO-CBRND. April 22nd, 2024. <u>Sands Capital Headquarters</u>, Washington, D.C.

"Global Health Security Policy," briefing to Stanford Congressional Staffer Biosecurity Workshop. Aug 7th, 2023. Stanford, California.

PROFESSIONAL ACTIVITIES AND SERVICE

2025   Asilomar 50th Anniversary Conference   Invited Participant
- *[Internationally recognized](#) conference to address governance of emerging biomedical technologies, including artificial intelligence. 1 of 300 invited participants.*

2024   AI-Bioscience Collaborative Summit   Invited Participant
National Science Foundation, Department of State, Microsoft
- *International summit for "internationally recognized leaders in the biosciences, internationally recognized AI scientists, internationally recognized researchers with expertise in AI methods in biology" alongside private sector representatives and USG government partners. 1 of 60 invited participants.*

2024   National Academies of Sciences, Engineering and Medicine   Planning Committee
- *[Navigating the Benefits and Risks of Publishing Studies of In Silico Modeling and Computational Approaches of Biological Agents and Organisms: A Workshop](#)*
- *Report outlining dual-use research publications at the intersection of AI and biology, and approaches for risk mitigation*

2024-Present   Frontier Model Forum   Working Group Member
- *The [FMF is a nonprofit industry consortium](#) launched by Anthropic, OpenAI, Google and Microsoft to ensure the development of safe and responsible frontier AI models.*

2024-Present   [AI-Bio Global Forum](#)   Working Group Member
Nuclear Threat Initiative

EDITORIAL AND OTHER PEER REVIEW ACTIVITIES

Associate Editor: Health Security
Peer reviewer: Science, NeurIPS, Annals of Internal Medicine, Health Security, Pathogens and Global Health, Asian Pacific Journal of Tropical Medicine, ICML 2025 Workshop on Technical AI Governance
Ad hoc: Invited to peer review UK government sponsored [International Scientific Report on the Safety of Advanced AI](#) chaired by Yoshua Bengio.

HONORS AND AWARDS

2022-2023   Emerging Leaders in Biosecurity   Fellow
Johns Hopkins Center for Health Security
- *Annual fellowship program that supports ~30 emerging leaders to attend convenings and meet policy professionals at the World Health Organization, United Nations, and White House.*