

AI Safety Must Protect Human Function

Not just data—our biological and cognitive integrity.

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13

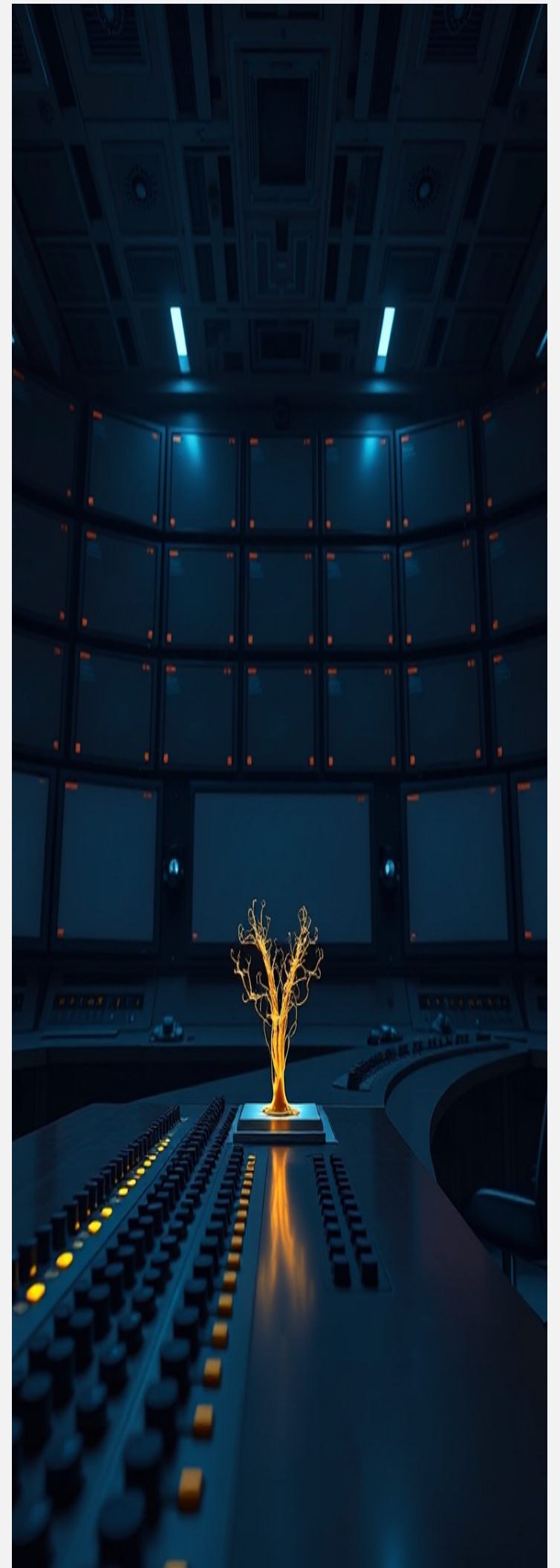
Modes of Cell Death

A new study reveals 13 distinct pathways by which cells die, including previously unknown forms linked to metabolic stress and mitochondrial dysfunction.

This granular biological complexity, now computationally mapped, is being leveraged to train AI models for predicting disease onset and drug toxicity with unprecedented precision. The implication is clear: AI systems that simulate human biology must account for this full spectrum of cellular behavior—not just idealized or simplified models.

Source: Nature

https://www.nature.com/articles/d41586-026-02939-x?error=cookies_not_supported&code=c829b0d2-9615-4fdd-9557-1feadfbf5405



01

AI Safety Is Biological Safety

The discovery of 13 distinct modes of cell death fundamentally shifts the AI safety paradigm. If AI is to model human health, it must not only avoid bias but also avoid simulating biological systems with oversimplified assumptions. A model trained on incomplete cellular dynamics could fail catastrophically in predicting drug responses or neurodegenerative progression—exposing a critical blind spot in current AI safety frameworks.



02

Ethics Must Preempt Biological Override

As AI integrates with biotechnologies—like the ingestible battery developed at MIT—safety must extend beyond algorithmic transparency to include the physical integrity of the human body. If AI can control devices that interface with neural or metabolic systems, the risk is no longer about data leaks but about irreversible physiological manipulation. Governance must now define thresholds for acceptable biological risk, not just digital risk.

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