FALLING WALLS SCIENCE SUMMIT 2024

"HOW ARTIFICIAL INTELLIGENCE DRIVES THE BIOMEDICAL REVOLUTION"

Panellists: Michael Bronstein (AITHYRA Institute, AT), Patrick Cramer (Max Planck Society, DE), Jan Ellenberg (SciLifeLab, SE), Heinz Fassmann (Austrian Academy of Sciences, AT), Heather Harrington (Max Planck Institute of Molecular Cell Biology and Genetics, DE), Richard Socher (you. com, US), Magdalena Skipper (Moderation) (Nature, GB)

Artificial intelligence (AI) is transforming biomedicine, with the potential to advance diagnostics, treatments, and scientific discovery itself. By processing data quickly and accurately, AI can aid in designing personalised drugs, accelerate clinical trials, and reduce costs. AI-driven models can also simulate biological processes, which helps improve treatment predictions and reduce reliance on animal testing. Cross-sector and international collaboration is essential to gather the vast amounts of data needed and fully unlock AI's potential in biomedicine. Larger, interdisciplinary teams and public-private partnerships can accelerate research and development, broadening AI's impact and scope in biomedicine.

Establishing trust is crucial for AI's widespread adoption in this ethically sensitive field. One key challenge is overcoming the perception of AI as a 'black box'. Building trust requires transparent data use and continued human oversight. Introducing AI in non-commercial contexts can help foster confidence, as can demonstrating real-world benefits for patients. AI can play a supportive role in the doctor-patient relationship by providing data that enables more in-depth, data-driven discussions about treatment options. This approach can preserve the human element of care and build public trust in the technology.

THE EXPERT PANEL ARTICULATES THE FOLLOWING CALLS TO ACTION:
Focus on demonstrating improved outcomes for patients.
1 — Deliver tangible, patient-centred results with AI applications to demonstrate the real-world benefits of AI in biomedicine and build trust in these tools.

Maintain human oversight.
2 — Use AI tools to equip healthcare professionals with data-driven insights that clarify treatment discussions, strengthening the doctor-patient relationship and ensuring that healthcare decisions remain guided by human judgement.

Open up the 'black box' of AI.
3 — Make AI processes and outputs more transparent by explaining how the model uses data.

Encourage cross-sector and international cooperation.
4 — Promote cooperation across scientific disciplines, industries, and countries to unlock AI's full potential in developing innovative biomedical solutions.

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