The Green Templeton Lectures 2026:

Innovation and the Future of Health: Find, Fail, Fly

Report

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About the Green Templeton Lectures
The Green Templeton Lectures are an annual lecture series in which distinguished speakers explore a contemporary theme through a range of perspectives, including historical, political, educational and philosophical lenses. The series provides a space for interdisciplinary reflection on major issues shaping society.

The 2026 Lectures' Theme: Innovation and the Future of Health
Innovation in healthcare and life sciences is rapidly evolving and a central societal priority. In the context of urgent global health challenges and the expanding role of biotechnology and digital health, Oxford is uniquely positioned to convene researchers, thought leaders, practitioners and future innovators to exchange ideas and foster meaningful dialogue.

The 2026 Green Templeton Lectures explore how discovery, experimentation and translation drive progress in medicine and health. The series considers the scientific, entrepreneurial and system-level shifts shaping the future of healthcare, while also reflecting on the broader state of the field and the conditions needed for innovation to flourish.

This year's theme builds on the Oxford Health Innovation Forum, a Green Templeton initiative launched in 2025 that emphasises the college's strong legacy in medicine, medical sciences, business and management. The Forum brings together students, alumni, researchers, clinicians, start-up representatives, investors and industry professionals to explore the future of innovation in the medical and life sciences sectors. It serves as a platform through which the college fosters entrepreneurship and drives dialogue on innovation in medical research, healthcare delivery and global health.

The Green Templeton Lectures 2026 are proudly sponsored by Mills & Reeve.

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Lecture 1: The Global AI Inflection Point

Thursday 12 February at Green Templeton College, University of Oxford

Hosted by Sir Michael Dixon (Principal of Green Templeton College), Dr Alison Stenton (Senior Tutor) and Associate Fellow Dr Christiaan de Koning, Chair of the Oxford Health Initiative Forum.

Dr Lennard Lee

(Green Templeton College Research Fellow; Associate Professor at the Nuffield Department of Medicine, University of Oxford)

Dr Anthony Hsieh

(Chief Science Lead of the UK Cancer Vaccine AI Scientist and Supercomputing project, University of Oxford)

Dr Lee began by making the case for the idea of a 'global AI inflection point', transforming everyday life, but also, potentially, scientific discovery: how knowledge is created, tested, and translated for societal benefit. Speaking directly to those at Green Templeton and beyond who are navigating this inflection point, as the world moves through a fourth technology revolution, he argued that AI technology has reached the point at which its huge implications for public health are becoming clear.

Dr Lee's excitement and optimism was infectious as he explained the concept of the 'AI Scientist': a system which works autonomously or semi-autonomously alongside human scientists to generate hypotheses, design experiments and learn from data. The UK government's commitment to positioning Britain as a global leader in AI supercomputing has created ideal conditions for the ambitious work of the AI Scientist and Supercomputing project, led by the University of Oxford, to accelerate the early stages of cancer vaccine discovery. The project aims to combine AI models of tumour-immune recognition, automated laboratory experimentation, and sovereign UK AI supercomputing into one integrated discovery platform, using automated research pods which iteratively refine cancer vaccine targets and formulations at scale.

Dr Hsieh outlined the scientific background of this work, and described the technology that is being developed. Tumour cells display distinct peptides, known as neoepitopes, on their surface via human leukocyte antigen (HLA) complexes. These peptide-HLA complexes are then recognised by T cells to trigger the body's defence mechanism. Cancer vaccines introduce peptide-HLA pairs to train the immune system to elicit a stronger and more targeted response against tumour cells bearing those neoepitopes. The project employs AI supercomputers and a closed-loop design to rapidly and precisely select the appropriate peptide-HLA pairs. Their model mirrors the structure of generative pre-trained transformers (GPT), such as ChatGPT, and requires a high number of tumour cell genome and health outcomes data for accurate training.

Speed is essential in the development of cancer vaccines. With approximately 120 million peptide-HLA pairs derived from over 12,000 tumours, rapid computational screening is crucial to identify immunogenic neoepitopes and deliver effective cancer vaccine on time. Dr Hsieh drew an analogy between the project and cars: they are building an engine for iterative vaccine design, in which AI predicts an immunogenic neoepitope which is tested through automated lab processes on human CD8 T-cells. Only once the engine is finished and functional can the car begin to accelerate.

Situated at the intersection of immunology and advanced supercomputing infrastructure, the project Dr Lee and Dr Hsieh outlined through their talks represents an ambitious step toward redefining the speed and precision with which cancer vaccines may be developed in the future, and an inspiring example of the kind of health innovation which this lecture series seeks to explore. Reflecting the interdisciplinary nature of the project, attendees from various professional, academic, and entrepreneurship backgrounds engaged in the discussion following the talk.

The UK Cancer Vaccine AI Scientist and Supercomputing project is a government-funded national flagship research initiative to use AI to make safer, more precise and more effective cancer vaccines. Named as one of ten UK projects to help us achieve world class research in the 10-year national cancer plan, and referenced in the government's AI for science plan, it strives to accelerate progress in establishing better immunity from cancer using cancer vaccines. It is hosted by the University of Oxford and supported by major UK funders, including ARIA, MRC, UKRI, Cancer Research UK and Department for Science Innovation and Technology.