Synthetic Biology for Health and Sustainability

11-13 March 2026

Hybrid Conference Programme

Start (/GMT)	Finish (GMT)	Presenter details
Wednesday 11 March 2026		
12:00	**13:00**	**Registration, lunch and networking**
12:45		*Briefing for Keynote speaker, microphone runners, chair, moderator & committee - Auditorium*
13:00	**13:10**	**Welcome**
		Wellcome Connecting Science:
		Nagehan Ramazanoglu Bahadir, Wellcome Connecting Science, UK
		Scientific Programme Committee:
		Sonja Billerbeck, Imperial College London, UK
		Barbara Di Ventura, Universty of Freiburg, Germany
		Tom Ellis, Imperial College London ,UK
		Katie Galloway, Massachusetts Institute of Technology, USA
		Marc Güell, Pompeu Fabra University, Spain
13:10	**14:00**	**Keynote speaker 1**
		Chair: Katie Galloway, Massachusetts Institute of Technology, USA
		Moderator: Alistair Dunham, Wellcome Sanger Institute, UK
		Towards sustainable, bio-sourced polymers
		Kristala Prather, Massachusetts Institute of Technology, USA
14:00	14:40	Refreshment break and networking
14:25		*Briefing for Session 1 speakers, sponsored talk, chair & moderator - Auditorium*
14:40	**16:10**	**Session 1: Towards sustainability**
		Chair: Sonja Billerbeck, Imperial College London, UK
		Moderator: Alistair Dunham, Wellcome Sanger Institute, UK
14:40	15:10	Re-programming natural carbon capture with synthetic biology
		Tobias Erb, Max Planck Institute for Terrestrial Microbiology, Germany
15:10	15:40	Artificial biomimetic spider silk
		Anna Rising, Karolinska Institutet, Sweden
15:40	15:55	A synthetic bacterium utilizes poly(ethylene terephthalate) as the sole carbon source
		Dekel Freund, The Hebrew University of Jerusalem, Israel
15:55	16:10	TPAsense: a real-time terephthalate biosensor accelerating enzyme discovery for plastic recycling and microplastic detection
		Marc Scherer, University of Bayreuth, Germany
16:10	**16:25**	**Sponsored talk**
16:10	16:25	Next-generation benchtop platforms for high-throughput ologo synthesis
		Linrun Feng, Founder and CEO of Linkzill
16:25	**16:40**	**Poster pitch talks for odd number posters**
16:40	**17:40**	**Poster session 1 - odd number posters and networking**
17:40		Dinner
17:40		Bar open (card payments only)

Thursday 12 March 2026

09:15		*Briefing for Session 2 speakers, chair & moderator - Auditorium*
09:30	**11:00**	**Session 2: Approaches for cell engineering**
		Chair: Katie Galloway, Massachusetts Institute of Technology, USA *Moderator: Nomthandazo Twala, Council for Scientific and Industrial Research, South Africa*
09:30	10:00	When dose matters: Dissecting the principles of chromosome counting at the onset of X-chromosome inactivation *Edda G Schultz, Max Planck Institute for Molecular Genetics, Germany*
10:00	10:30	Toward AI-driven genetic circuit design *Caleb Bashor, Rice University, USA*
10:30	10:45	Engineering robust bistable gene circuits to program multiple fates in mammalian cells *Emma Peterman, Massachusetts Institute of Technology, USA*
10:45	11:00	Engineering Zinc Finger Dimers for Precise and Tunable Gene Regulation *Lorena Postiglione, The Telethon Institute of Genetics and Medicine (TIGEM), Italy*
11:00	11:45	Refreshment break and networking
11:30		*Briefing for Session 3 speakers, chair & moderator - Auditorium*
11:45	**13:00**	**Session 3: Scaling up synthetic biology**
		Chair: Marc Güell, Pompeu Fabra University, Spain *Moderator: Kasey Love, Massachusetts Institute of Technology, USA*
11:45	12:15	Synthetic biology in the Anthropocene: A quantative framework for assessing sustainability potential *Claudia Vickers, Queensland University of Technology/ BioBuilt Solutions, Australia*
12:15	12:45	Sustainable by Design *Cleo Kontoravdi, Imperial College London, UK*
12:45	13:00	Enhancing high-throughput genome wide BE and PE screening with single cell DNA sequencing *Alistair Dunham, Wellcome Sanger Institute, UK*
13:00	14:30	Lunch and networking
14:15		*Briefing for Session 4 speakers, chair & moderator - Auditorium*
14:30	**16:00**	**Session 4: Computational approaches for synthetic biology**
		Chair: Marc Güell, Pompeu Fabra University, Spain *Moderator: Kasey Love, Massachusetts Institute of Technology, USA*
14:30	15:00	Synthetic phosphorylation signaling in human cells *Zibo Chen, Westlake University, China*
15:00	15:30	Binder design through backpropagation and inverse folding *Kiarash Jamali, Ellison Institute of Technology, UK*
15:30	15:45	Dose-response engineering of metabolite biosensors with deep learning and high-throughput phenotyping *Alperen Dalkiran, University of Edinburgh, UK*
15:45	16:00	Systems biology-based identification of small molecules to increase T Cell functionality *Ida Pelosi, Italian Institute of Technology, Italy*
16:00	16:40	Refreshment break and **Meet the Editors** Poonam Bheda, EMBO Molecular Systems Biology, Germany Anahita Bishop, Nature Biotechnology, UK Joanna Clarke, PLOS Biology, UK Kyle Legate, Cell Reports, Cell Press, UK Alex Munro-Clark, Trends in Biotechnology, Cell Press, UK
16:25		*Briefing for Session 5 speakers, chair & moderator - Auditorium*
16:40	**18:15**	**Session 5: Materials and microbes for health**
		Chair: Sonja Billerbeck, Imperial College London, UK *Moderator: Nomthandazo Twala, Council for Scientific and Industrial Research, South Africa*
16:40	17:15	Therapeutic editing of microbial genomes and metagenomes *Harris Wang, Columbia University, USA*
17:15	17:30	Skin Microbiome Engineering for On-Demand Microbial Thermogenesis *Guillermo Nevot, Universitat Pompeu Fabra, Spain*

16:40	**18:15**	**Session 5: Materials and microbes for health continued**
17:30	17:45	From metagenomes to mechansim: a synthetic biology platform to discover microbiome small proteins that modulate host metabolism *David Riglar, Imperial College London, UK*
17:45	18:15	Engineering Regulatory Networks and Metabolism for Sustainable Agriculture *Nicola Patron, University of Cambridge, UK*
18:15	**18:30**	**Poster pitch talks for even number posters**
18:30	**19:30**	**Poster session 2 - even number posters and networking**
19:30		Dinner
19:30		Bar open (card payments only)

Friday 13 March 2026

09:15		*Briefing for Session 6 speakers, chair & moderator - Auditorium*
09:30	**11:00**	**Session 6: Engineering biology for health**
		Chair: Barbara Di Ventura, Universty of Freiburg, Germany *Moderator: David Carreno Yugueros, Imperial College London, UK*
09:30	10:00	Predicting antibody *Sai Reddy, ETH Zurich, Switzerland*
10:00	10:30	Engineering antigen delivery for improved cancer immunotherapy *Priscilla Briquez, University of Freiburg, Germany*
10:30	10:45	Engineered microRNA feedback circuits enable tunable and autonomous control of synthetic receptor activity *Bryan Nathalia, Eindhoven University of Technology, Netherlands*
10:45	11:00	Reprogramming Neuronal Cells from Blood Cells *Mitsuru Ishikawa, Fujita Health University/ Keio University, Japan*
11:00	11:45	Refreshment break and networking
11:30		*Briefing for Keynote, chair, moderator & committee - Auditorium*
11:45	**12:35**	**Keynote speaker 2**
		Chair: Barbara Di Ventura, Universty of Freiburg, Germany *Moderator: David Carreno Yugueros, Imperial College London, UK*
		Combining protein engineering and synthetic biology to develop a therapeutic bacteria to treat lung diseases *Luis Serrano, Centre for Genomic Regulation (CRG), Spain*
12:35	**12:45**	**Closing remarks and prize presentation**
		Scientific Programme Committee: *Sonja Billerbeck, Imperial College London, UK* *Barbara Di Ventura, Universty of Freiburg, Germany* *Tom Ellis, Imperial College London ,UK* *Katie Galloway, Massachusetts Institute of Technology, USA* *Marc Güell, Pompeu Fabra University, Spain*
12:45	13:45	Lunch and departures
13:45		Coach departures for Stansted and Heathrow airports
13:55		Coach departures for Cambridge train station and city centre