

Hybrid Conference Programme

Start (GMT)	Finish (GMT)	Presenter details
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Monday 21 October 2024

12:00	12:55	Registration, lunch and networking
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12:40		<i>Briefing for Keynote & Session 1 speakers, microphone runners, chair, moderator & committee - Auditorium</i>
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12:55	13:10	Welcome
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Wellcome Connecting Science:
Nagehan Ramazanoglu Bahadir, Wellcome Connecting Science, UK

Scientific Programme Committee:
[Yasunori Aizawa, Tokyo Institute of Technology, Japan](#)
[Sonja Billerbeck, University of Groningen, Netherlands](#)
[Tom Ellis, Imperial College London, UK](#)
[Katie Galloway, Massachusetts Institute of Technology, USA](#)

13:10	14:10	Keynote I
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Chair: Katie Galloway, Massachusetts Institute of Technology
Moderator: Jacob Hepkema, Wellcome Sanger Institute, UK

Synthetic biology: making biology programmable
[Jim Collins, Massachusetts Institute of Technology, USA](#)

14:10	14:15	Comfort break
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14:15	15:45	Session 1: Approaches for cell engineering
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Chair: Sonja Billerbeck, University of Groningen, Netherlands
Moderator: Léa Meneu, Pasteur Institute, France

14:15	14:45	Targeted cancer therapy with engineered nanodevices Barbara Di Ventura, University of Freiburg, Germany
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14:45	15:15	Synthetic biology for sustainable chemical production using sugars and methane Ji-Sook Hahn, Seoul National University, South Korea
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15:15	15:30	Learning protein expression landscapes with machine learning <i>Yuxin Shen, University of Edinburgh, UK</i>
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15:30	15:45	Evolerator: An engineered in cellulose yeast system to drive rapid continuous evolution of proteins <i>Asli Azizoglu, ETH Zürich, Switzerland</i>
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15:45	16:30	Refreshment break and networking
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16:15 *Briefing for Session 2 speakers, chair & moderator - Auditorium*

16:30 18:00 Session 2: Living materials

Chair: Tom Ellis, Imperial College London, UK

Moderator: Taichi Akase, Institute Of Science Tokyo, Japan

16:30 17:00 Programming cells and materials with light
[*Wilfried Weber, Leibniz Institute for New Materials, Germany*](#)

17:00 17:30 Living Materials Programmed by Life
[*Chao Zhong, Shenzhen Institute of Synthetic Biology, China*](#)

17:30 17:45 Multi-enzyme nanoreactors transplant a drug biosynthesis pathway into cells
Raik Grünberg, Kaust, Saudi Arabia

17:45 18:00 Applying synthetic biology to bacteria made material
Anastasiya Kishkevich, Imperial College London, UK

18:00 18:20 Poster pitch talks for odd number posters

18:20 19:20 Poster session 1 - odd number posters

19:20 21:00 Dinner

Bar open (card payments only)

Tuesday 22 October 2024

09:15 Briefing for Session 3 speakers, chair & moderator - Auditorium

09:30 10:45 Session 3: Systems and genomics

Chair: Yasunori Aizawa, Tokyo Institute of Technology, Japan

Moderator: Livia Soro, Imperial College London, UK

09:30 10:00 Large scale genome engineering in *Saccharomyces cerevisiae*
[Pascale Daran-Lapujade, TU Delft, Netherlands](#)

10:00 10:30 Design of multi-scale dynamics and functions of microbial communities
[Ophelia Venturelli, University of Wisconsin-Madison, USA](#) VIRTUAL

10:30 10:45 Enhancer scrambling: High-throughput enhancer characterisation through engineered genome recombination.
Pierre Murat, Wellcome Sanger Institute, UK

10:45 11:00 STRAIGHT-IN Dual: a rapid and seamless platform for targeted dual integrations of large DNA payloads into hiPSCs
Albert Blanch Asensio, LUMC, Netherlands

11:00 11:45 Refreshment break and networking

11:30 Briefing for Session 4 speakers, chair & moderator - Auditorium

11:45 13:15 Session 4: Applications in health

Chair: Katie Galloway, Massachusetts Institute of Technology, USA

Moderator: MM Bernal Cabas, University Of Groningen, the Netherlands

11:45 12:15 Probing and programming multicellular systems for regenerative medicine
[Nika Shakiba, University of British Columbia, Canada](#)

12:15 12:45 A microbial platform for discovery and manufacturing of plant-inspired human therapeutics
[Michael Krogh Jensen, Technical University of Denmark/Biomia, Denmark](#)

12:45 13:00 Rapid Assembly of Synthetic Small Genomes for Vaccine and Therapeutic Development
Gregory Lohman, New England Biolabs, USA

13:00 13:15 Chemogenetic tuning of MAPK activity optimizes cell fate programming
Brittany Lende-Dorn, Massachusetts Institute Of Technology, USA

13:15 14:00 Lunch

14:00 14:45 Dessert with networking

14:30 Briefing for Session 5 speakers, microphone runners, chair & moderator - Auditorium

14:45 16:15 Session 5: Towards sustainability

Chair: Sonja Billerbeck, University of Groningen, Netherlands

Moderator: Léa Meneu, Pasteur Institute, France

14:45 15:15 Teaching E. coli to fix CO₂

[Ron Milo, Weizmann Institute, Israel](#)

15:15 15:45 Towards a bio-enabled circular economy for metals

[Louise Horsfall, Edinburgh University, UK](#)

15:45 16:00 Engineering microbial growth on CO₂ derived feedstocks – a feasible solution for a sustainable bioeconomy

Sebastian Wenk, National Biotechnology Center, Spain

16:00 16:15 Sowing the seeds of synthetic genomics: advancing functional studies in plants

William Shaw, Boston University, USA

16:15 17:00 Refreshment break and networking

16:45 Briefing for Session 6 speakers, chair & moderator - Auditorium

17:00 18:00 Keynote II

Chair: Tom Ellis, Imperial College London, UK

Moderator: Taichi Akase, Institute Of Science Tokyo, Japan

Harnessing plant metabolic diversity for food and health applications

[Anne Osbourn, John Innes Centre, UK](#)

18:00 18:20 Poster pitch talks for even number posters

18:20 19:20 Poster session 2 - even number posters

19:20 21:00 Dinner

Bar open (card payments only)

Wednesday 23 October 2024

09:15 Briefing for Session 6 speakers, chair & moderator - Auditorium

09:30 11:00 Session 6: Microbiome engineering

*Chair: Sonja Billerbeck, University of Groningen, Netherlands
Moderator: Jacob Hepkema, Wellcome Sanger Institute, UK*

09:30 10:00 Cutibacterium acnes as a synthetic biology chassis for skin modulation
[Marc Guell, Pompeu Fabra University, Spain](#)

10:00 10:15 Genetic approach to uncover impact of chemical pollutants on human gut bacteria
Indra Roux, University of Cambridge, UK

10:15 10:30 Prodrug-conjugated tumor-seeking commensals for targeted cancer therapy
Haosheng Shen, National University Of Singapore, Singapore

10:30 10:45 The Serine Shunt enables formate conversion to formaldehyde in vivo
Karin Schann, Centro Nacional de Biotecnología - CSIC, Spain

10:45 11:30 Refreshment break and networking

11:15 Briefing for Keynote speaker, Scientific Programme Committee, Chair and Moderator - Auditorium

11:30 12:30 Keynote III

*Chair: Yasunori Aizawa, Tokyo Institute of Technology, Japan
Moderator: MM Bernal Cabas, University Of Groningen, the Netherlands*

Scaling up genome engineering in yeast and mammals
[Jef Boeke, New York University, USA](#)

12:30 12:45 Closing remarks and prize presentation

Scientific Programme Committee:
[Yasunori Aizawa, Tokyo Institute of Technology, Japan](#)
[Sonja Billerbeck, University of Groningen, Netherlands](#)
[Tom Ellis, Imperial College London, UK](#)
[Katie Galloway, Massachusetts Institute of Technology, USA](#)

12:45 13:50 Lunch and departures

13:50 Coach departures for Stansted and Heathrow airports

14:00 Coach departures for Cambridge train station and city centre