

Biochemical and Molecular Engineering XXIII

Accelerating Biotech Solutions to Aid a
Changing World

Dublin, Ireland
21-25 July 2024

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Sunday, July 21, 2024

- 12:30 – 14:30 Conference Check-in (Pavilion Bar)
- 14:30 – 14:45 Opening Remarks (Conference Chairs and ECI Liaison)
- 14:45 – 16:25 **Session 1: Building Sustainability in Biomanufacturing and the Workforce**
Sponsored by Inscripta
Chairs: Natalie Farny, Worcester Polytechnic Institute, USA
Zengyi Shao, Iowa State University, USA
- 14:45 – 15:05 **How Biotechnology Innovation Drives Benefits to Patients and the Planet: Case Studies from Medicine Design & Manufacturing...1**
Philip Dellorco, GSK, USA
- 15:05 – 15:25 **Optimized manufacturing of Adeno-associated Virus for gene therapy...2**
Nicholas Donohue, APC Ltd, Ireland
- 15:25 – 15:45 **Deconstructing synthetic biology: a conceptual approach for training synthetic biologists...3**
Ashty Karim, Northwestern University, USA
- 15:45 – 16:05 **Teaching Old Dogs New Tricks — Elucidating Core Design Principles to Engineer Nonconventional Yeasts and Consortia as Microbial Factories...4**
Zengyi Shao, Iowa State University
- 16:05 – 16:25 **Transferring lab innovation into large scale application by thorough understanding of strains and processes...5**
Ralf Takors, University of Stuttgart, Germany
- 16:25 – 17:00 Coffee Break in Poster Area
- 17:00 – 18:00 **Keynote**
Next generation bioproducts: Accelerating the path from innovation to commercialization...N/A
Henk Noorman, DSM, the Netherlands
- 18:00 – 19:30 Dinner
- 19:30 – 22:00 **Poster Session I and Social Hour**
Sponsored by AstraZeneca
(Authors of odd-numbered posters are asked to stay with their presentations)
Chair: Ian Wheeldon, University of California, Riverside, USA
Co-Chairs: Wilfred Chen, University of Delaware, USA
Carolyn Mills, University of California, Santa Barbara, USA
Ben Woolston, Northeastern University, USA

Monday, July 22, 2024

- 07:00 – 08:30 Breakfast
- 08:30 – 09:30 **Keynote**
Biochemical Engineering: Tales at the Intersection of Technology, Fundamental Research, and Application...N/A
Kelvin Lee, NIIMBL/University of Delaware, USA
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Chairs: Laura Segatori, Rice University, USA
Tim Whitehead (University of Colorado, USA)
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Christina Chan, Michigan State University, USA
- 09:50 – 10:10 **Predicting outcomes of cardiac progenitor cell differentiation to cardiomyocytes based on integrated transcriptomics and epigenomics...7**
Sean Palecek, University of Wisconsin – Madison, USA
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- 11:00 – 11:20 **Engineering high-precision, dynamic genetic control systems for cellular reprogramming...9**
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Emmanuel Tzanakakis, Tufts University, USA
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Samira Azarin, University of Minnesota, USA
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Sponsored by Genentech
(Authors of even-numbered posters are asked to stay with their presentations)
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Sponsored by Accenture
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Markus Mund, Sanofi-Aventis Deutschland GmbH, Germany
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