

EUSynBioS

10:00	10:14	EUSynBioS	Opening Talk	Huseyin Tas
10:15	11:14	Panel I - Entrepreneurship in SynBio	How and when to start a company	Adam Amara Linda Dijkshoorn Nethaji Gallage Federico Muffatto Cyrille Pauthenier
11:15	11:44	Virtual sponsor booth Inscripta	Presentation and Q&A session	Laura Klitten
11:45	12:44	Panel II - Future of SynBio	Where will synbio be in the close and far future?	Daniela Azucena Garcia Soriano Tom Ellis Dora Tang Marc Guell Louise Horsfall

ASBE V

Delft, The Netherlands · November 2nd-4th 2020

Day 1 · Monday, November 2nd, 2020

Time	Activity	Speaker
Registration		
14.00–14.15	Welcome addressing	Pascale Daran-Lapujade & Pablo I. Nickel
14.15–15.00	Opening lecture followed by Q&As Chair & Discussion leader: Pablo I. Nickel , DTU Biosustain, DK	Jay Keasling Berkeley, USA

Session I – Genome engineering and Synthetic Biology toolbox

Session sponsored by Codex DNA

Chair & discussion leader: **Pascale Daran-Lapujade**, Delft University of Technology, NL

15.00–15.05: Introduction to the session

15.05–15.30	Featured speaker 1	John van der Oost , Wageningen University, NL
15.30–15.44	Partial genome transplantation strategy as a new tool for genome engineering	Luis Garcia Morales, Wageningen University, NL (#463)
15.44–15.58	Full humanization of the glycolytic pathway in <i>Saccharomyces cerevisiae</i>	Ewout Knibbe, Delft University of Technology, NL (#410)
15.58–16.08	Live Q&A session (10 min) Pascale Daran-Lapujade, John van der Oost, Luis Garcia Morales, Ewout Knibbe	
16.08–16.35	Flash poster presentation I	25 abstracts
16.35–16.55	Break	20 min

Session II – Biocatalysis and enzyme engineering

Session sponsored by Twist

Chair & discussion leader: **Tim Overton**, University of Birmingham, UK

16.55–17.00: Introduction to the session

17.00–17.25	Synthetic biology tools for the efficient and functional expression of membrane proteins	Marjan de Mey Ghent University, BE
17.25–17.39	Expanding the biocatalytic potential of <i>Pseudomonas putida</i> with surface-exposed designer protein scaffolds	Pavel Dvorak Masaryk University, CZ (#417)
17.39–17.53	A minimal artificial fluorescent phosphatase	Ana Cecília Roque NOVA University of Lisbon, PT (#488)
17.53–18.05	Live Q&A session (12 min) Tim Overton, Marjan de Mey, Pavel Dvorak, Ana Cecília Roque	

18.05-18.15	Break	10 min
18.15-20.00	Poster session I	# to #

Day 2 · Tuesday, November 3rd, 2020

Time	Activity	Confirmed Speaker
9:00-9:30	Engineering of a minimal chassis for treating lung diseases Chair & discussion leader: Manel Porcar , University of Valencia, SP	Maria Lluch-Senar Pulmobiotics Ltd., Barcelona & Universitat Internacional de Catalunya, Sant Cugat del Vallès, SP
Session III – Pathway engineering and synthetic metabolism <i>Session dedicated to the memory of Arren Bar-Even (1980-2020) · Session sponsored by Doulix</i> Chair & Discussion leader: Pablo I. Nikel , DTU Biosustain, DK 09.30-09.35: <i>Introduction to the session</i>		
9.35-10.00	Fixing CO₂ fixation – Building a photosynthesis 2.0 with synthetic biology	Tobias J. Erb Max Planck Institute for terrestrial Microbiology, Marburg, DE
10.00-10.14	The GED Cycle – Towards evolving synthetic CO ₂ fixation in <i>E. coli</i>	Beau Dronsella Max Planck Institute of Molecular Plant Physiology, DE (#464)
10.14-10.28	Synthetic metabolism of plastic monomers by <i>Pseudomonas</i>	Nick Wierckx Jülich Research Center, DE (#444)
10.28-10.38	Live Q&A session (10 min) Pablo I. Nikel, Tobias J. Erb, Beau Dronsella, Nick Wierckx	
10.38-11.00	Break	22 min
Session IV – Scaling-up synthetic biology <i>Session sponsored by m2p labs</i> Chair & Discussion leader: Ralf Takors , University of Stuttgart, DE		

11.00–11.05: <i>Introduction to the session</i>		
11.05–11.30	Reinventing chemical manufacturing using biotechnology: Manus Bio approach	Christine Santos Manus Bio, USA
11.30–11.44	Engineering of a robust <i>Escherichia coli</i> chassis strain for large-scale fermentations	Martin Ziegler University of Stuttgart, DE (#493)
11.44–11.58	Synthetic biology approaches to improve plasmid DNA production	Alvaro Lara Universidad Autónoma Metropolitana-Cuajimalpa, MX
11.58–12.08	Live Q&A session (10 min) Ralf Takors, Christine Santos, Martin Ziegler, Alvaro Lara	
12.08–12.50	Lunch	42 min
Session V – Biosensors, directed evolution and selection Chair & Discussion leader: Urartu Seker , <i>Bilkent University, TR</i> 12.50–12.55: <i>Introduction to the session</i>		
12.55–13.20	Biosensors for directed evolution, control, and forward engineering of cellular metabolism	Michael K. Jensen DTU Biosustain, DK
13.20–13.34	Engineering energy coupling of membrane transport and efficiency of sucrose dissimilation in <i>Saccharomyces cerevisiae</i>	Sophie de Valk Delft University of Technology, NL (#389)
13.34–13.48	A sticky solution to allow high-throughput screening for extracellular products using water-in-oil emulsions	Rinke van Tatenhove-Pel Free University (VU) Amsterdam, NL (#490)
13.48–14.00	Live Q&A session (12 min) Urartu Seker, Michael K. Jensen, Sophie de Valk, Rinke van Tatenhove-Pel	
14.00–14.30	Flash poster presentation II - Random selection	25 posters
14.30–14.45	Break	15 min

14.45–15.15	BC-sponsored talk: <i>A large-scale exploration of cell-free compositions to maximize protein production using active learning</i> Chair & discussion leader: Jean-Marie François , INSA Toulouse, FR	Olivier Borkowski INRA/Micalis, Paris, FR
15.15–15.25	Doulix	Platinum Sponsor
15.25–15.35	GenScript	Gold Sponsor
15.35–15.45	m2p-labs	Gold Sponsor
15.45–15.55	Beckman Coulter	Gold Sponsor
15.55–17.30	Poster session II	# to #

Day 3 · Wednesday, November 4th, 2020

Time	Activity	Confirmed Speaker
8.45–9.30	Microbial physiology: hosting synthetic biology Chair & Discussion leader: Pascale Daran-Lapujade , Delft University of Technology, NL	Bas Teusink Free University (VU) Amsterdam, NL
Session VI – Cell-free Synthetic Biology <i>Session sponsored by Genscript</i> Chair & Discussion leader: Marjan De Mey , Ghent University, BE 09.30–09.35: <i>Introduction to the session</i>		
09.35–10.00	Featured speaker	Sven Panke
10.00–10.14	<i>In vitro</i> evolution towards building a synthetic cell	Zhanar Abil Delft University of Technology, NL
10.14–10.28	Cell-free protein synthesis derived from non-growing prokaryotes	Martin Siemann-Herzberg Stuttgart University, DE (#489)
10.28–10.35	Live Q&A session (7 min)	

	Marjan De Mey, Sven Panke, Zhanar Abil, Martin Siemann-Herzberg	
10.35-11.00	Break	25 min
11.00-11.45	Keynote lecture followed by Q&As (45 min) <i>Synthetic biology tools to engineer plant natural products in microbes</i> Chair & discussion leader: Paola Branduardi , University of Milano, IT	Claudia Vickers CSIRO, AU
11.45–12.30	Keynote lecture followed by Q&As (45 min) <i>Rewriting DNA synthesis</i> Chair & discussion leader: Paola Branduardi , University of Milano, IT	Ross Kettleborough TWIST Bioscience
12.30–13.15	Lunch	45 min
13.15–14.00	Keynote lecture followed by Q&As (45 min) <i>Building a synthetic cytoskeleton</i> Chair & discussion leader: Pascale Daran-Lapujade , Delft University of Technology, NL	Marileen Dogterom Delft University of Technology, NL
14.00-14.45	Closing lecture followed by Q&As (45 min) <i>Engineering genomes, karyotypes and the dark matter of the human genome</i> Chair & discussion leader: Pascale Daran-Lapujade , Delft University of Technology, NL	Jef Boeke NYU Langone Health, USA
14.45	Closure, poster awards, and announcement of ASBE VI	Pascale Daran-Lapujade & Pablo I. Nickel

Steering committee

Marjan de Mey (Ghent, Belgium)

Jean-Marie François (Toulouse, France)

Vera Meyer (Berlin, Germany)

Paola Branduardi (Milan, Italy)

Ralf Takors (Stuttgart, Germany)

Jean-Loup Faulon (Paris, France)

Manel Porcar (Valencia, Spain)