



## BioProNET2 11<sup>th</sup> Annual Science Meeting, October 8th-9th 2024 GSK, Gunnels Wood Road, Stevenage

### DAY 1 - OCTOBER 8<sup>th</sup>

**11:00-12:30 Early Careers Workshop: Organised by** Valentina Faustinelli (UCL), Ankita Mishra (University of Kent), Matthew Reaney (University of Manchester), Ben Strain (Imperial College, London).

- **Ben Haji** (*Abselion*)
- **Mark Stockdale** (*Asimov*)
- **Pavlos Kotidis** (*GSK*)
- **Amy Felgate** (*Chartwell Consultancy Group*)
- **Rachel Crossley** (*Aber Instruments*)
- **Hooman Hefzi** (*Danish Technical University*)
- **Dan Gibson** (*Cell and Gene Therapy Catapult*)

### 12:30 - 13:00 – LUNCH

**13:00 -14:35 - Session 1 – Bioprocessing from novel systems to clinical GMP** (Chair – Paul Dalby)

Welcome and Introduction to GSK – Robyn Emmins

13:05 – 13:30 Bridging the gap: next-generation manufacturing strategies for cell and gene therapies - Kevin Vela (*Cell and Gene Therapy Catapult*)

13:30 – 13:55 Short Oligonucleotides: 21<sup>st</sup> Century Alchemy – Mark Cunningham (*Nucleic Acid Therapy Accelerator, NATA*)

13:55 – 14:20 Manufacturing of Autologous HSC Gene Therapies - Vassilis Paraskevas (*Orchard Therapeutics*)

14:20 – 14:30 Use of the Gyros Gyrolab xP System to Support High-throughput AAV Sample Testing - Charlotte Corkhill (*Pharmaron*)

14:30 – 14:35 Introducing the winners of the Bioprocessing Entrepreneurial Skills Training (**BEST**) 2024.

### 14:35 -16:05 - POSTER SESSION & BREAK

**16:05 -17:25 – Session 2 - Industry 5.0** (Chair – Alan Dickson)

16:05 – 16:30 Transforming Process Development with AI - From mAbs to Emerging Modalities - Miguel Pupo (*DataHow, Switzerland*)

16:30 – 16:55 Digital Transformation and Digital Twins: Prerequisites and Potentials - Christoph Herwig (*Koerber Pharma, Germany*)

16:55 – 17:05 Constraint-based modelling of CHO cells to propose high productivity metabolic signatures - Kate Meeson (*University of Manchester*)

17:05 – 17:15 Integrating industry leading datasets with Genome-scale metabolic models to direct CHO cell line engineering – Ben Strain (*Imperial College London*)

**19:30 - 22:30 - Drinks reception & Conference Dinner (Cromwell Hotel, Stevenage)**

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## DAY 2 - OCTOBER 9<sup>th</sup>

### 09:00-10:15 – Session 3 – Products/processes – predicting success (Chair – Bernie Sweeney)

09:05 – 09:30 Addressing the challenges of multi-specific expression - Sarah Dunn (AstraZeneca, UK)

09:30 – 09:55 OPENPichia: setting free protein biotech's yeast - Katrien Claes (VIB, University of Ghent)

09:55 – 10:05 Chloroplast engineering in the green alga Chlamydomonas for production of novel recombinant products – Luyao Yang (UCL)

10:05 – 10:15 Deciphering molecular drivers of lactate metabolic shift in mammalian cell cultures - Mauro Torres (University of Manchester)

### 10:15-11:15 - POSTER SESSION & TEA/COFFEE BREAK

### 11:15 -12:25 – Session 4 – New formats & next generation products (Chair – Cleo Kontoravdi)

11:15 – 11:40 Synthetic genetic systems for next-generation biomedicine manufacturing - David James (University of Sheffield)

11:40 – 12:05 Sequence engineering for improved developability of mAbs - Zahra Rattray (University of Strathclyde)

12:05 – 12:15 Rationalising mAb candidate screening with a single holistic developability parameter – Leon Willis (University of Leeds)

12:15 – 12:25 Biomanufacturing and formulation of magnetosome cocktails for biomedical applications - Alfred Fernández-Castané (Aston University)

### 12:25 -13:15 – ROUND TABLE SESSION: Handling the challenges for bioprocessing 2034

### 13:15 - 14:05 – POSTER SESSION & LUNCH BREAK

### 14:05-15:15 – Session 5 – Engineering Biology for Bioprocessing (Chair – Mark Smales)

14:05 – 14:15 Development of High Throughput Transfection Platform using Lonza's GS PiggyBac Transposase Technology – Titash Sen (Lonza)

14:15 – 14:25 Defining and Manipulating Cellular Mechanisms Underpinning DNA Transfection Efficiency to Enhance Transient Recombinant Protein Production – James Budge (University of Kent)

14:25 – 14:50 Sugars: sweet and simple – Rob Field (University of Manchester)

14:50 – 15:15 Combinatorial Design Testing in Yeast Genomes for Bioproduction - Tom Ellis (Imperial College)

### Meeting closure and awards for best selected oral and poster presentations

