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WELCOME FROM THE **MEETING CHAIR**

It is my privilege to welcome you to my home city of Edinburgh to participate in, what will be, a great meeting of the community that makes up the **European Society for the Advancement of Cell Technologies (ESACT)**. Initially intended to run in 2023, the COVID-19 pandemic reset all plans for face-to-face ESACT meetings until the return to biennial ESACT meetings in 2022 in Lisbon. So, we have had an extended planning cycle for this meeting and I have been fortunate to have the support of a great group of folk. Big thanks to all of you who have provided advice and support as part of the Local Organising and Scientific Committees, there would not be a meeting without your contributions. I am very grateful to many others who have willingly contributed their time to finess the meeting structure (reviewing abstracts for oral and poster presentations, developing subject-specific workshops and symposia, arranging the ESACT Frontiers lunch and reviewing posters at the meeting). Much of the "heavy-lifting" in the administration of the meeting and co-ordination activities has been down to the support provided by Conference Partners International (CPI) – thank you. Over the past 5 years the ESACT Executive Committee have provided a marvellous supporting network to me, as a resource of knowledge and guidance based on the wealth of experience built up over the organisation of multiple ESACT meetings. Before ending this section of acknowledgements, I want to thank all our sponsors. The ESACT community is grateful for your generosity and involvement in our shared interests, I hope you have a great conference.

The meeting theme - *application of animal cell technologies to advance the health and wealth of society* – has been designed to address the importance of animal cell products for therapeutic use. Our sessions cover the identification, design, development, manufacture, quality assessment and use of existing and emerging products coupled with the fundamental understanding that underpins the biology and technology required for future understanding. We have outstanding invited speakers covering the latest developments within the sector and exceptional keynote speakers who address broad thematic areas of scientific and societal significance. This gives us an overall vision that stretches from the clinician/patient perspective of new medicines to the factors key to the production and quality of emerging medicines to the sustainability of the processes that will be necessary for manufacture. The Scientific Committee (SC) faced the incredibly challenging task of identification of submitted abstracts to be nominated for short talks. Using the blinded scores from our abstract

review panel, the SC identified 33 presentations that have been incorporated into the oral scientific sessions. The SC also ranked the abstracts submitted for posters and generated the Top 100 posters that will compete for the poster prize. Lots of stimulating science and many interesting discussions await us over the next few days.

ESACT meetings are built around networking to enable discussions of excellent science and generate connections that will enhance the future interaction and collaboration. I am certain you will find this in the format we have arranged in Edinburgh. If you are new to ESACT or an early career researcher unsure of the next stages in your career path – join the ESACT Frontiers lunch on Sunday (fit this between the workshops where you will have had the opportunity to mix with colleagues with common interests). Be inspired by the game-changing science that underpins the ESACT Innovation Award and the contribution it makes to your research. Make full use of the poster sessions – capture participants to discuss the exciting data on your poster or engage that person who is using that technique you had only read about until now. Visit the exhibitors – there's a wealth of scientific and technical knowledge awaiting your discussion (including at the Industry Educational Sessions) and you know that your lab would be revolutionised by access to that shiny machine. Catch people at coffee and meal breaks or one the planned activities. We have planned social activities that will maximise your opportunities to network whether at the exhibitor reception, a poster session, a tour of the sights and sounds of Edinburgh or at the gala dinner.

I hope that you will all have great conference and are stimulated by the science and networking. We have a special welcome for 52 PhD and early career scientists who have received an ESACT2024 bursary to aid attendance at the meeting. ESACT2024 is a large multinational conference (we have registrants from 32 countries) but the community is very welcoming and we will all return home having made many new contacts and (most likely) friends.

Alan J Dickson

Alan J Dickson

Chair, ESACT 2024

WELCOME FROM THE **EXECUTIVE COMMITTEE**

On behalf of the ESACT Executive Committee it is my great pleasure to welcome you to the 28th ESACT meeting in Edinburgh – we look forward again to days of interesting discussions, networking and great science!

We have seen exciting times over the last years, overcoming a pandemic and observing the field to move forward in many diverse directions, from the standard platform technologies, to cell-based therapies on small scale for each individual patient which require completely different approaches from industrial manufacturing, and towards gene therapies and the technological challenges they entail. ESACT as a society over the years has aimed to integrate these new technologies which is indicated by our new name that was chosen during the last meeting in Lisbon in 2022: from now on we will be called the **European Society for the Advancement of Cell Technologies** which allows us to keep the well-established brand ESACT while reflecting the changes that the field has undergone.

What we aim to keep, however, is the format of our meetings: these have always been characterised by the lively exchange of ideas, networking and personal interaction which make this meeting the vibrant event it usually is.

We look forward to another such in this lovely city!

With kind regards

Nicole Borth

ESACT Chair

ESACT **COMMITTEES**

ESACT 2024 ORGANISING COMMITTEE

Alan Dickson
University of Manchester, UK (Chair, ESACT2024)

Nicole Borth
BOKU, Austria

Jonathan Dempsey
Pathway Biopharma, UK

Joanne Flannelly
University of Manchester, UK

Laura Kuhner
Kuhner Ag, Switzerland

Glenn Robinson
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Mark Smales
University of Kent, UK

Chris van der Walle
Cell & Gene Therapy Catapult, UK

ESACT EXECUTIVE COMMITTEE

Nicole Borth
BOKU, Austria (Chair)

Stefanos Grammatikos
UCB, Belgium (Vice-Chair)

Anne Tolstrup
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Francesc Gòdia
UAB, Spain (Treasurer)

Niall Barron
DCU and NIBRT, Ireland

Paulo Fernandes
Orchard Therapeutics, UK

Emma Petiot
CPE-Lyon Engineer School, France

António Roldão
IBET, Portugal

ESACT **COMMITTEES**

ESACT 2024 SCIENTIFIC COMMITTEE

Mark Smales
University of Kent, UK (Chair, Scientific Committee)

Christina Alves
Takeda, USA

Paula Alves
iBET and ITQB NOVA Universidade de Lisboa, Portugal

Niall Barron
DCU and NIBRT, Ireland

Mike Betenbaugh
John Hopkins WSE, USA

Andreas Castan
Cytiva, Sweden

Simon Fischer
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Laura Palomares
IBT-UNAM, Mexico

Susan Rosser
University of Edinburgh, UK

Anne Tolstrup
AbtBioConsult, Denmark

Till Wenger
Boehringer Ingelheim, Germany

ESACT 2024 POSTERS COMMITTEE

Claire Pearce
Xap Therapeutics, UK

Nuša Pristovšek
Novo Nordisk A/S, Denmark

Nikolas Zeh
Boehringer Ingelheim, Germany

SPONSOR **ACKNOWLEDGEMENTS**

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Thank you to our sponsors for your continued support of the European Society for Animal Cell Technology Meeting.

SPONSOR **ACKNOWLEDGEMENTS**

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EDUCATIONAL GRANTS

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The Educational Grants have been used exclusively to support the Scientific Programme

SPONSOR **ACKNOWLEDGEMENTS**

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SEED • Biosciences

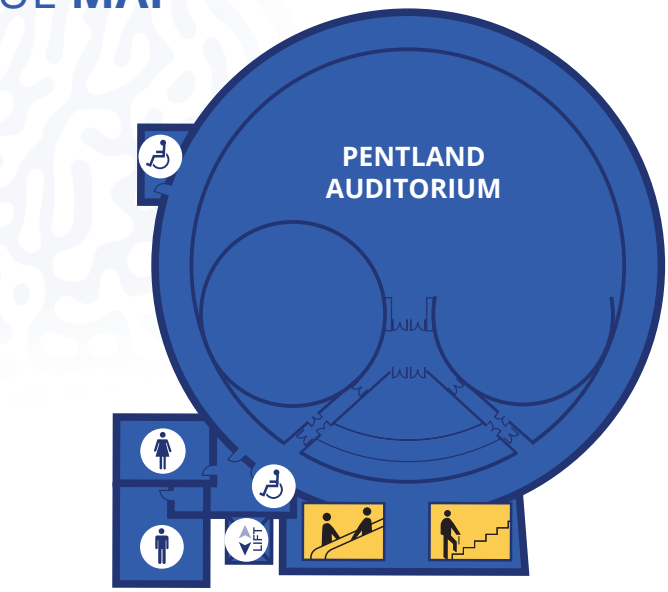
ThermoFisher Scientific

EXHIBITOR **ACKNOWLEDGEMENTS**

Thank you to our sponsors for your continued support of the European Society for Animal Cell Technology Meeting.

The above sponsors have paid to exhibit a stand and have had no input into the content of this meeting

VENUE **MAP**



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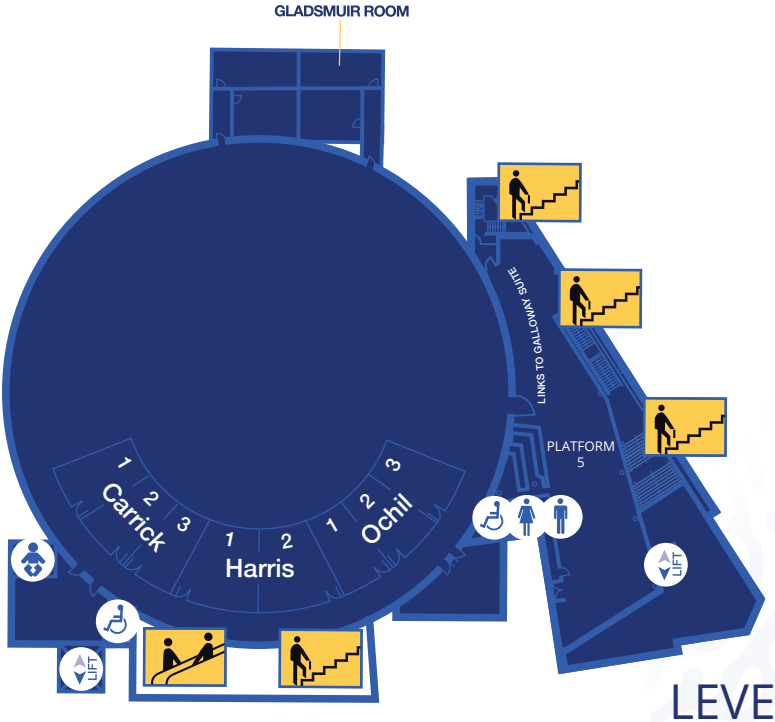
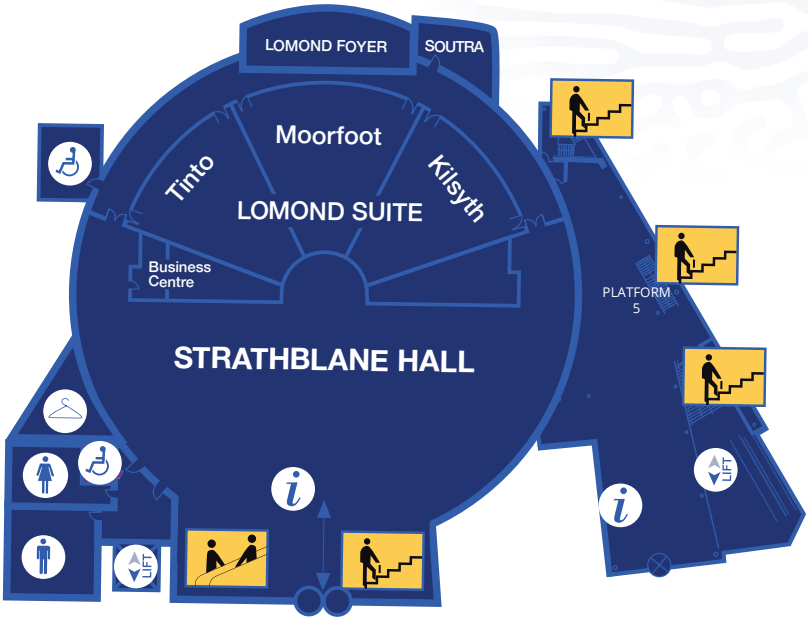


LEVEL **1**

VENUE **MAP**



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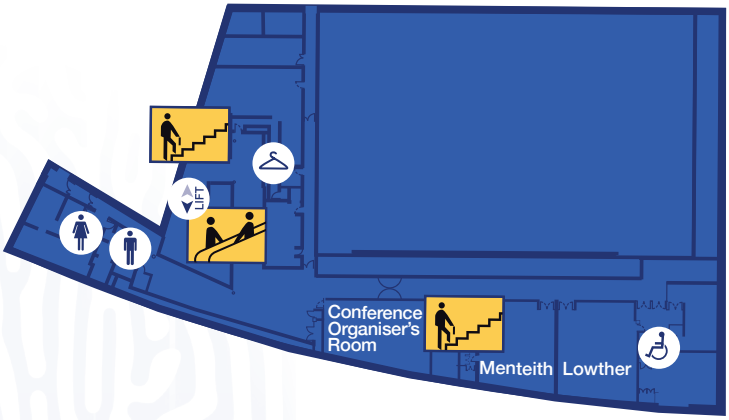
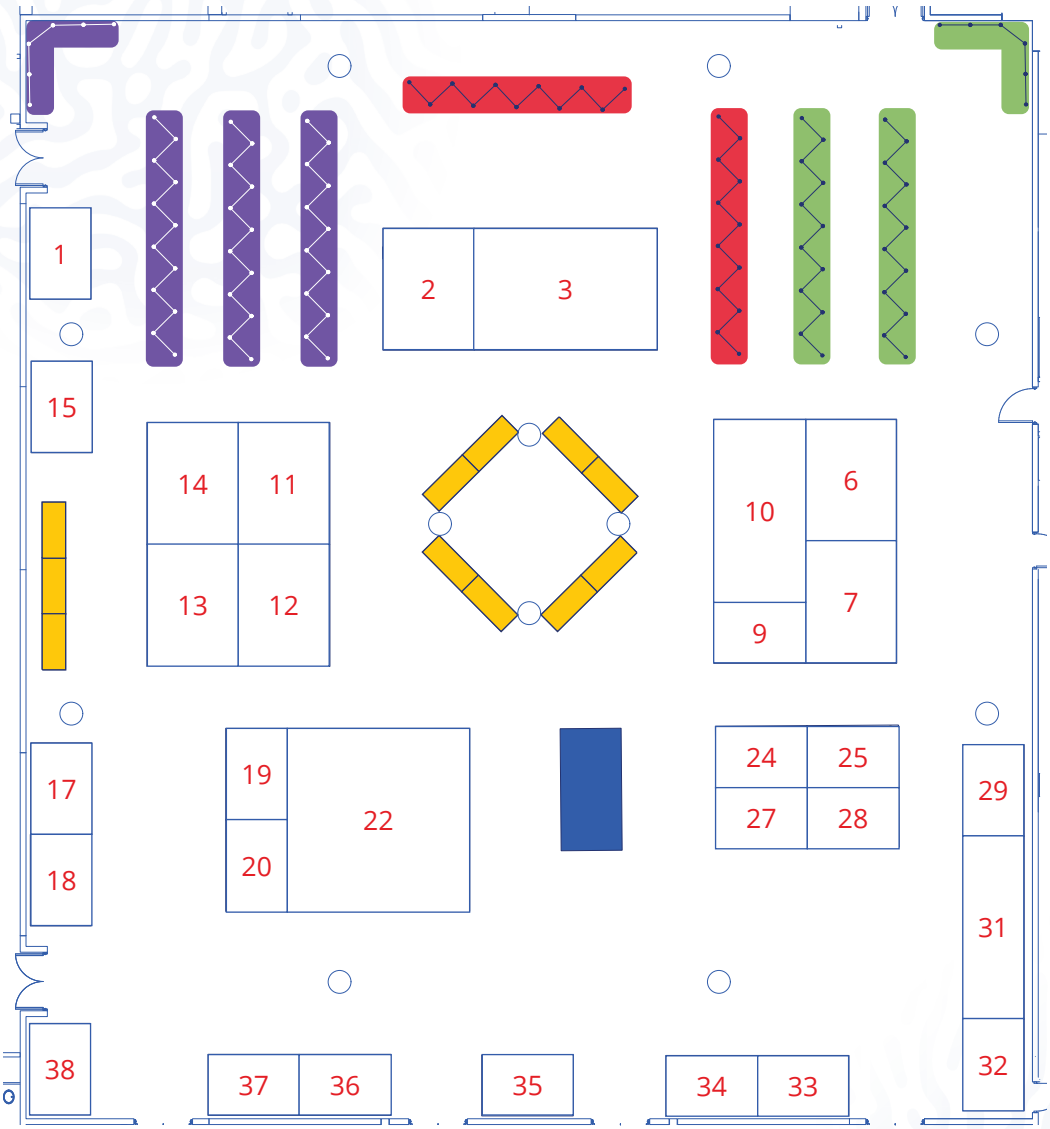


LEVEL **-1**

EXHIBITION MAP - **CROMDALE HALL**



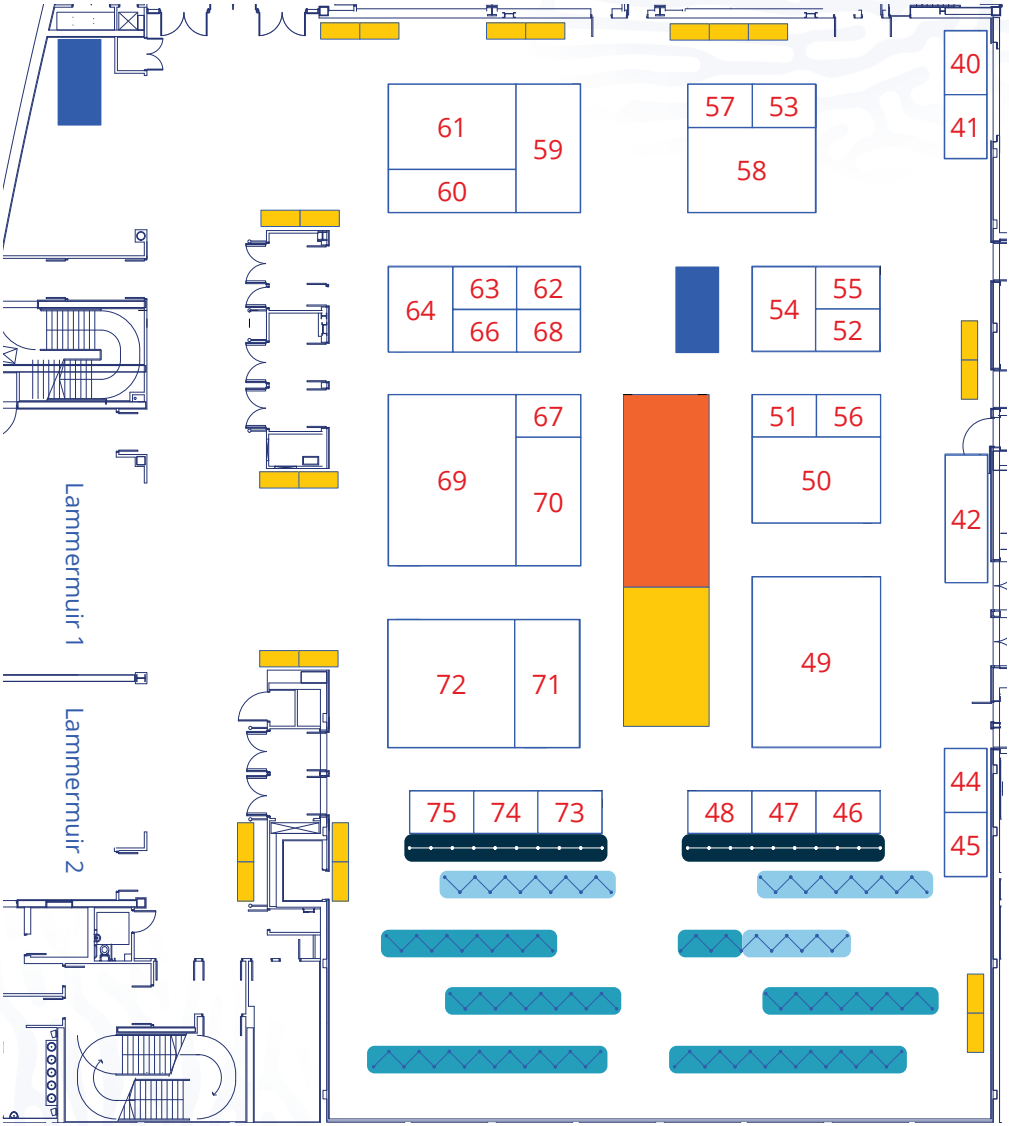
LEGEND

- Charging Station
- Catering
- Seating

POSTER THEMES

- Innovate or Die - Technology Innovation
- Cells as Factories
- Data, Cells and Processes
- Transitioning from Development to Manufacture
- Product Quality
- Other Topics

EXHIBITION MAP - **LENNOX SUITE**



LEGEND

- Charging Station
- Catering
- Seating

POSTER THEMES

- Innovate or Die - Technology Innovation
- Cells as Factories
- Data, Cells and Processes
- Transitioning from Development to Manufacture
- Product Quality
- Other Topics

A-Z EXHIBITING **PARTNERS**

STAND	ORGANISATION
11	908 Devices
9	Aber Instruments Ltd
32	Abselion
61	Adolf Kühner AG
15	ADVANCED INSTRUMENTS
19	Aseptic Group
28	Asimov
29	ATUM
22	Beckman Coulter Life Sciences
3	BioConcept Ltd.
51	Biofidus Ag
71	Bionet Servicios Técnicos, S.L.
52	Bpes
13	Bruker Cellular Analysis
36	Capricorn Scientific Gmbh

STAND	ORGANISATION
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10	CerCell A/S
41	Clean Cells
46	CYTENA GmbH
72	Cytiva
1	Cytomos
45	ENTEGRIS GMBH
25	Enzyscreen Bv
58	Eppendorf Bioprocess
44	Evonik Industries AG
33	Flownamics
40	Fox Biosystems
2	FrieslandCampina Ingredients
59	FUJIFILM Irvine Scientific
7	GEA

A-Z EXHIBITING **PARTNERS**

STAND	ORGANISATION
50	Getinge
56	Green Elephant Biotech GmbH
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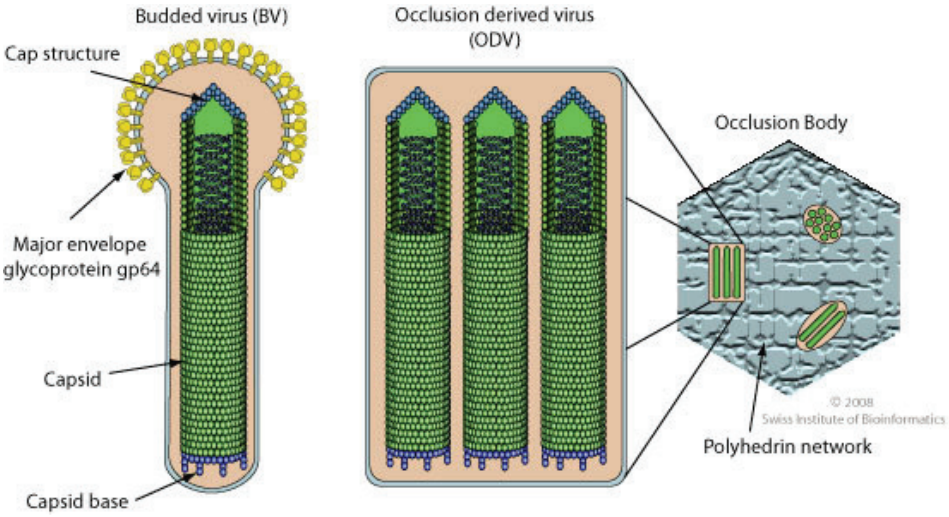
47	Iprasense
48	Ipratech
14	Kerry
74	Levitronix GmbH
18	Logos Biosystems
38	Lonza
69	Merck
12	Mettler-Toledo GmbH
27	Nova Biomedical
67	PAIA Biotech GmbH

STAND	ORGANISATION
17	Pfanstiehl Inc.
6	Qbdc Gmbh
37	RedShiftBio
60	Roche CustomBiotech
73	SANI Membranes
31	SaniSure
49	Sartorius
24	sbi, Scientific Bioprocessing
42	Securecell AG
34	SEED Biosciences SA
62	Sgs Vitrology
20	Shanghai RuiYu Biotech
35	Sphere Fluidics
57	Syngensys Ltd
75	SYNENTEC
64	TECNIC

NOVEL ESACT **PRACTICAL COURSE 2024**

INTRODUCTION TO CELL BIOREACTOR PRODUCTION AND MONITORING: Application to protein & virus processes



Maximum of 8 participants per year

Dates : 23rd to 27th of September 2024

Full hands-on program of 4 days in a Level 2 Facility

Course Coordinators: Emma PETIOT (Université Claude Bernard Lyon)
Karen Moreau (Université Claude Bernard Lyon)

Location: IUT Lyon – Département Génie Biologique
69100 Villeurbanne – France

Course fees: Academic €2500
Industrial €3300
(fees covers training and lunch, but do not cover hotel booking)

Mandatory pre-requisite: Academic or Industrials (PhD students, Post-Doc, Engineers, etc.) that already have cell culture knowledge, ideally, which have already followed one of the ESACT theoretical courses.

FULL DETAILS ON ESACT.ORG

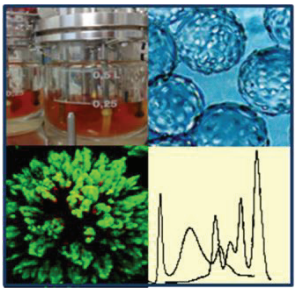
UPCOMING ESACT **COURSES 2024**

14th EDITION

ANIMAL CELL TECHNOLOGY COURSE

22-26 September 2024

Llafranc (Spain)



Photos: www.ibet.pt

Organisers

Francesc Gòdia
Universitat Autònoma de Barcelona (ES)

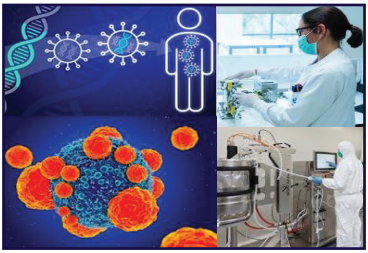
Paula Alves
iBET and ITQB Universidade NOVA de Lisboa (PT)

4th EDITION

BIOPROCESSING& MANUFACTURING GENE AND CELLTHERAPY PRODUCTS

29 September - 3 October 2024

Llafranc (Spain)



Photos: www.ibet.pt

Organisers

Eric J. Kremer
CNRS, IGMM Université de Montpellier (FR)

Joaquim Vives
Banc de Sang I Teixits (ES)

Margarida Serra
iBET (PT)

For more information and the course programmes see ESACT.org

UPCOMING ESACT **COURSES 2024**

9th EDITION

VACCINE TECHNOLOGY

6-10 October 2024

Llafranc (Spain)

Photos: Photos: EhI & MPI, Magdeburg, www.ibet.pt

Organisers

Amine Kamen
McGill University (CA)

Yvonne Genzel
Max-Plank Institut Magdeburg (DE)

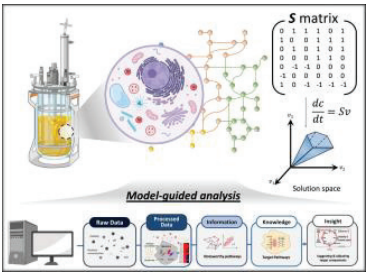
Laura Cervera
Universitat Autònoma de Barcelona (ES)

2nd EDITION

METABOLIC AND BIOPROCESS MODELLING FOR ANIMAL CELLS

13-17 October 2024

Llafranc (Spain)



Organisers

Dong-Yup Lee
Sungkyunkwan University (KP)

IoscaniJiménez del Val
University College Dublin (IE)

Emma Petiot
Université de Lyon (FR)

For more information and the course programmes see ESACT.org

JAACT Japanese Association for Animal Cell Technology
日本動物細胞工学会

THE 38TH ANNUAL AND INTERNATIONAL MEETING
JAACT2025 OSAKA

Monday December 8th - Thursday December 11th 2025

Venue :
Osaka International Conference Center

Meeting Chairperson :
Takeshi Omasa (Osaka U)

グランキューブ大阪
Osaka International Convention Center
（大阪府立国際会議場）

SOCIAL **PROGRAMME**

All delegates are required to wear their name badge to all of the social programme events.

Exhibitors Reception - Sunday 23 June, 19:30 – 21:00
Edinburgh International Conference Centre (EICC)

All participants are kindly invited to attend the Exhibitors Reception which takes place after the first Scientific Session on Sunday evening. Join colleagues and friends, old and new, in a relaxed setting.

Pub Quiz – Monday 24 June, 21:00 – 23:00
Malones Edinburgh

Join us for an evening of brain-teasing fun at the Pub Quiz sponsored by Evonik Industries AG. Get your thinking caps on and gather your team for a night filled with trivia, laughter, and maybe a few surprises!

Tickets are complimentary and on a first come first served basis. It is mandatory to be registered in advance.

EVONIK
Leading Beyond Chemistry

Sights and Sounds of Edinburgh – Tuesday 25 June, 17:30 – 20:00

Join colleagues and friends for group walking tours around Edinburgh to visit must-see spots recommended by Edinburgh locals.

Limited places available per tour, mandatory to be registered in advance.

ESACT Dinner – Tuesday 25 June, 20:00 – 23:00
Edinburgh International Conference Centre (EICC)

Network with colleagues and friends at this dinner within the EICC.

A ticket to this dinner is included within your delegate registration however sign up is required during registration.

Congress Dinner – Wednesday 26 June, 19:00 – 02:00
National Museum of Scotland

The National Museum of Scotland, in the heart of Edinburgh's Old Town, offers an iconic setting for this year's Congress Dinner. The Grand Gallery's soaring glass atrium and sweeping staircases present a breath-taking backdrop for friends and colleagues to celebrate the end of ESACT 2024!

A ticket to this dinner is included within your delegate registration however sign up is required during registration

ACTIP

Connecting Industry Expertise

Who we are

The Advanced Cell Technology Industrial Platform (ACTIP) is an independent non-profit association of European companies and institutions engaged in the industrial use of advanced cell technology for research, development and/or production of biopharmaceuticals, vaccines, gene & cell therapies and other therapeutic approaches. Its main objectives are to bring advanced cell technology experts together for networking, keeping up to date on cutting-edge developments and focus on technological and applied-oriented challenges for the industrial use of advanced cell technology.

Why become a member

- Become part of a well-connected community of cell technology practitioners and learn from your peers in the industry.
- Opportunity for a member company or institution representative to attend two scientific ACTIP meetings a year organized across Europe.
- ACTIP meetings feature high-level presentations on the latest advancements in cell technology by invited speakers from industry, academia, and regulatory agencies.
- The meeting program includes a site visit at a member company or institution providing detailed insight into their R&D activities, facilities, and organization.
- ACTIP meetings are small-scale with +/- 50 participants, informal and ideal to interact with experts across the industry, potential business partners, suppliers, or customers.
- Meet and interact with ambitious early career scientists in the field of cell technology invited to the ACTIP meetings through the ACTIP Fellowship Award program.
- Excellent opportunities for networking and building professional relationships.
- Receive three ACTIP newsletters a year with scientific and regulatory updates.

How to join

ACTIP membership is open to companies and institutions located in Europe, engaged in the industrial use of advanced cell technology, and performing significant research and development activities. For more information about the membership application process and fees please contact the ACTIP secretariat (secretariat@actip.org).

For more information, please visit our website: **actip.org**

ACTIP
Connecting Industry Expertise

ACTIP Fellowship Award program

ACTIP is connecting industry expertise and promoting talented early career scientists active in the field of advanced cell technology. Candidates who are awarded the ACTIP Fellowship are invited to present their research to the ACTIP community during a plenary session at one of the upcoming ACTIP scientific meetings. Over the years this has proven to be an excellent way to interact with industry experts and expand professional networks on a European scale.

The Fellowship Award includes all costs paid to attend and present your research at a two-day scientific ACTIP meeting and a €1000 prize!

How to apply

Every year ACTIP publishes a call for ACTIP Fellowship Award applications on its website. Eligible candidates must possess an academic degree in a field relevant to biomanufacturing and be located in Europe. An application includes an abstract, a few concise statements for the reviewers, and a current Curriculum Vitae. Received applications are evaluated and scored by ACTIP members based on their scientific quality, impact, novelty and value to the animal cell industrial community.

For more information about the application process and eligibility criteria please visit actip.org

IMPORTANT **INFORMATION**

VENUE

Edinburgh International Conference Centre (EICC), The Exchange, 150 Morrison Street, Edinburgh, EH3 8EE

MEETING SECRETARIAT

Conference Partners International (CPI) are the appointed Meeting Secretariat for ESACT 2024.

The team will be onsite at the ESACT 2024 Meeting and will be available from 23 – 26 June during registration opening hours:

Sunday	10:00 - 21:00
Monday	08:00 - 21:00
Tuesday	08:00 - 17:30
Wednesday	08:00 - 16:45

NAME BADGE

A name badge will be provided on your arrival at the ESACT 2024 registration desks located in the EICC. You must wear the name badge at all times and should be visible both inside the Meeting venue as well as the social events.

OFFICIAL LANGUAGE

The official language of the Meeting is English. No simultaneous translation will be provided.

DISCLAIMER

The European Society for Animal Cell Technology (ESACT) herby provides notice to conference attendees and anyone else, that ESACT makes no warranty of any kind whatsoever, expressed or implied, that any information, materials, techniques or products or anything else presented at this conference is

IMPORTANT **INFORMATION**

accurate, valid adequate or fit for any purpose whatsoever. Conference attendees are solely responsible for determining the validity, adequacy and fitness of any information, materials or products or anything else presented at this conference for any and all uses. Statements and descriptions made by ESACT at this conference and included in conference literature are information only and are not made or given as a warranty. The views, opinions and statements made at the conference are solely those of the speakers and may not reflect the views of ESACT.

Furthermore, speakers may have vested interests in the concepts and products they discuss.

It is further understood and agreed that ESACT shall not be liable whether in contract, in tort, under any warranty, in any negligence or otherwise for any kind of claim, loss, damage or expense of any kind arising out of or resulting from the use of any information, materials, products or anything else presented at this conference, and under no circumstances shall ESACT be liable for special, indirect or consequential damages.

ESACT and/or its agents have the right to cancel the conference or any of the arrangements, timetables, plans or other items relating directly or indirectly to the conference without prior notice for any reason beyond their control. The conference and/or its agents shall not be liable for any loss, damage, expenditure or inconvenience caused as a result of such alteration or cancellation.

ACCESS TO THE MEETING

The delegate fee gives access to the following:

- Access to all sessions to the ESACT 2024 Meeting
- Teas, coffees and lunches
- All social events

Accompanying person fee gives access to:

- All social events

Exhibition only passes gives access to:

- Exhibition and posters
- Exhibitors Reception on Sunday
- Teas, coffees and lunches

IMPORTANT **INFORMATION**

CLOAKROOM

A staffed cloakroom is available during meeting hours and can be found in the Strathblane Hall. Any items left at the cloakroom are the responsibility of the individual and ESACT 2024 cannot be held accountable for any loss of personal items.

WI-FI ACCESS

Network: *delegate*
Password: *haymarket*

FIRE SAFETY

On discovering a fire, please inform the nearest member of staff. In the event of a fire alarm activation you will hear a "two tone electronic sounder" and delegates shall be directed to the Assembly Points by EICC Staff & Hosts using the nearest Emergency Exits.

In the event of a medical emergency or someone requires First Aid treatment please contact any member of staff and request assistance.

SOCIAL MEDIA / PHOTOGRAPHY / VIDEO POLICY

Photography, audio recording and video recording may be taking place at the conference. The release, publication, exhibition, or reproduction of this content will be used for news, webcasts, promotional purposes, advertising, inclusion on websites, social media, or any other purpose by the conference and its affiliates and representatives. Please contact us at the registration desk if you wish to be removed from any such materials.

Taking pictures or videos of presentations is not permitted unless the speaker provides permission at the start of their talk.

IMPORTANT **INFORMATION**

POSTER POLICY

All attendees are to treat the posters as the property of the presenter and are not to copy them in any way. In the case that a poster presenter allows permission to take pictures of his or her work, official 'Photography OK' stickers are available from the registration desk. Taking pictures, videos or otherwise reproducing posters or any part thereof is not permitted without the permission of the presenter unless a 'Photography OK' sticker is found on the poster.

LIABILITY

The ESACT 2024 organising committee and the Meeting Secretariat cannot accept liability for personal injuries, loss of or damage of whatever nature incurred by participants and/or accompanying persons to their luggage and/or personal belongings.

SPEAKER PREVIEW ROOM

The speaker preview room is located in the Soutra Room. This room will be open for speakers to provide their presentations between the following times:

Sunday	10:00 - 19:00
Monday	08:00 - 19:30
Tuesday	08:00 - 17:30
Wednesday	08:00 - 17:00

Presentations must be uploaded no later than 2 hours prior to the scheduled session.

IMPORTANT **INFORMATION**

CODE OF CONDUCT

ESACT 2024 is dedicated to providing a harassment-free conference experience for everyone, regardless of gender, gender identity and expression, age, sexual orientation, disability, physical appearance, body size, race, ethnicity, religion (or lack thereof), or technology choices. We do not tolerate harassment of delegates in any form. Inappropriate language and imagery are not acceptable to be included in presentations, workshops, networking forums and other online media. Conference delegates violating these rules may be sanctioned or expelled from the conference without a refund at the discretion of the conference organisers.

LEAD SCANNING

Your name, organisation, country and email will be shared with our industry partners should you agree to have your delegate badge scanned at any stage during ESACT 2024. You may receive promotional and non promotional material from the industry partner who scanned your delegate badge. Please note you can opt out at any time by contacting the industry representative directly.

MOBILE PHONES

We request that attendees keep their mobile phones on silent in all rooms where scientific and educational sessions are being held, as well as in and around the poster and exhibition area.

ESACT **INNOVATION AWARD**

The ESACT Innovation Award is to recognize outstanding **innovators and contributors** to the field of Animal Cell Culture Technology (ACCT). ESACT has had a profound impact on the development of ACCT-based production of biologicals as human therapeutics as well as diagnostics. Over the years, several landmark contributions have been made by scientists and organizations associated with ESACT, yet, there has not been a mechanism to recognize such contributions and disseminate their impact. This Award aims to fill this need.

For the purpose of this Award and to provide clarity, ESACT defines "Animal Cell Culture Technology" as:

Applied science, technologies, systems and processes that enable, facilitate or improve the use of cultured animal cells in research, diagnostic and therapeutic applications.

The Award is presented at the discretion of the ESACT Award Committee during the ESACT bi-annual Scientific Meeting. The Award recipient(s) is(are) invited to present the **ESACT Innovation Award Lecture** at the ESACT2024 Scientific Meeting immediately following the award presentation. The invitation to attend the ESACT Meeting will further include all travel expenses, accommodation during the Meeting and a waiver of registration fees. The value of the Award will be a sum of £5000 together with a commemorative plaque.

ESACT Executive Committee members, as well as Award Committee members, are ineligible for the Award during the term of their respective Committee membership and for a two-year period thereafter. All other individuals or organizations that satisfy the Award criteria above are eligible for nomination for the Award.

INNOVATION AWARD RECIPIENT

ESACT MEDAL **: JAACT**

The Japanese Association for Animal Cell Technology (JAACT) was founded in 1991. It is an Association for the exchange of academic information by researchers and engineers specializing in science and technology related to animal cells. The academic field covered by JAACT ranges from cell cultivation and analysis of cell characteristics to production and control of useful materials, cell therapy and the creation of artificial cells. In other words, it covers all the areas, applied and basic, for making animal cells contribute to supporting a healthy, normal life. One of the explicit goals in our society's mission statement is "the advancement and dissemination of animal cell technologies" focusing on "advanced industry-academia collaboration", "international and interdisciplinary", "supporting industrial activities", and "science and engineering for practical use". The two research tenets of JAACT are "Food and Health" and "Biologics Production" and hence, JAACT provides a platform for active discussions via various international and national meetings and symposia.

A strong relationship with ESACT was formed already in 1994 and began with the participation of a number of JAACT members at the 1994 ESACT meeting in Veldhoven. Representatives from ESACT are since then regularly invited to JAACT conferences and vice versa to stimulate interaction and exchange of ideas across continents.

Dr. Takeshi Omasa, Professor of Osaka University and Dean of Graduate School/School of Engineering has served as JAACT's president since 2019. On top of his JAACT president role, Dr. Omasa is also serving as President of AFOB (Asian Federation of Biotechnology). On behalf of JAACT, Dr Omasa received the ESACT medal at the JAACT meeting in Nagoya, Japan, in November 2023, in recognition of the long and stimulating collaboration between JAACT and ESACT.

ESACT MEDAL : **PAULA ALVES**

Paula Alves is the CEO of iBET and Professor at NOVA University of Lisbon. She received her B.Sc. in Biochemistry from the Sciences Faculty of the University of Lisbon, in 1991 and her Ph.D. in Biochemical Engineering from the NOVA University of Lisbon, in 2001.

Paula has been working on the advancement of cell culture technologies for more than 30 years. Her research integrates understanding of cell metabolism with biochemical engineering tools for the improvement of bioprocesses efficiency. Paula´s work has contributed to the development of industrially relevant and academically recognized tools and technologies for the production of biopharmaceuticals and ATMPs (Advanced Therapy Medicinal Products), in particular pluripotent stem cells and viral vectors for cell and gene therapy. The 40 PhD students, plus masters and postdocs she supervised contributed to Paula´s exciting research career. She is co-author of more than 300 papers that, together with many communications in scientific conferences, contributed to the global recognition of iBET.

Participating at ESACT meetings since 1991, Paula was elected to the ESACT Executive Committee in 2005. She served this committee as regular member (2005-2008), as secretary (2009-2013), vice-chairperson (2013-2017) and chairperson (2017-2022). During this period Paula was actively involved in establishing ESACT legal statutes and on the development of the ESACT web page and communication strategy. Together with Francesc (Quico) Godia from UAB-Spain, Paula started the ESACT course series in 2011. She was the Chair of ESACT2022 Conference (Lisbon) and a member of the Scientific Committee of ESACT 2013, ESACT 2017 and ESACT 2024 meetings and of the Organizing Committee of ESACT 2015 meeting. Paula participates in meetings and courses organized by related societies promoting the ESACT activities, namely the training of young scientists in animal cell technology.

Paula was elected member of the National Academy of Engineering (USA) in 2021 for her leadership in biomanufacturing, advanced biotherapeutics, and bridging the gap between academia and industry. She received the Scientific Merit Award from NOVA University of Lisbon in 2009.

ESACT **GRANTS**

ESACT Grants are intended to support young scientists to participate in scientific conferences to present research and results related to animal cell technology. Grants can also be given to support attendance at courses or short research based internships.

- ***Grants are open to all ESACT members***
- ***Grants provide fixed rate contribution to travel to attend conferences not organised by ESACT***
- ***Grants are for early career Researchers & Post Docs within 2 years of graduation***

APPLY FOR AN **ESACT GRANT**

All the ESACT Grant application criteria and requirements, along with the simple online application are available by either visiting ESACT.org or scanning the QR code below on your mobile phone.

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PROGRAMME **SCHEDULE**

SUNDAY 23	
10:00 - 21:00	Registration (open all day)
11:00 - 12:30	Academic Workshops
12:30 - 13:30	Lunch, Networking & Connect by ESACT Frontiers
13:30 - 15:00	Sponsored Symposia
15:00 - 16:30	Academic Workshops
16:30 - 17:00	Networking
17:00 - 18:30	Opening Session & ESACT Innovation Award Lecture
18:30 - 19:15	Prof Charlie Gourley Impact of biological therapeutics: perspective of the cancer clinician and the cancer patient
19:15 - 21:00	Exhibitors Reception

PROGRAMME **SCHEDULE**

MONDAY 24	
08:00 - 21:00	Registration (open all day)
08:45 - 09:30	Prof Sir David MacMillan Micromapping: A chemical approach to biological insights and therapeutic intervention
09:30 - 10:00	Innovate or Die – New Technologies
10:00 - 11:00	Morning Refreshment Break, Networking and Industry Educational Sessions
11:00 - 12:30	Cells as Factories and Therapies
12:30 - 14:15	Lunch, Networking and Industry Educational Sessions
14:15 - 15:45	Poster Session 1
15:45 - 17:15	Product Quality – Relevance and Assessment
17:15 - 17:30	Afternoon Refreshment Break, Networking and Industry Educational Sessions
17:30 - 18:00	
18:00 - 19:30	Transitioning from Development to Manufacture
19:30 - 21:00	Poster Session 2 & Networking
21:00 - 23:00	Pub Quiz

PROGRAMME **SCHEDULE**

TUESDAY 25	
08:00 - 17:30	Registration (open all day)
08:45 - 09:30	Prof Sir Adrian Bird Towards genetic therapies for Rett syndrome
09:30 - 10:00	Innovate or Die – New Technologies
10:00 - 11:00	Morning Refreshment Break, Networking and Industry Educational Sessions
11:00 - 12:30	From Big Data to Better Cells and Processes
12:30 - 14:30	Lunch, Networking and Industry Educational Sessions
14:30 - 16:00	Poster Session 3
16:00 - 17:30	Cells as Factories and Therapies
17:30 - 20:00	"Networking activity: Sights and sounds of Edinburgh"
20:00 - 23:00	Dinner at Conference Venue

PROGRAMME **SCHEDULE**

WEDNESDAY 26		
08:00 - 16:45	Registration (open all day)	
08:45 - 09:30	Dr Marinna Madrid An AI- and Laser-based Biomanufacturing Platform to Scale Production of Personalized Regenerative Cell Therapies	
09:30 - 10:00	Poster Flashes Top 10	
10:00 - 11:15	ESACT General Assembly	Morning Refreshment Break, Networking and Industry Educational Sessions
11:15 - 12:45	Product Quality – Relevance and Assessment	
12:45 - 14:00	Lunch, Networking and Industry Educational Sessions	
14:00 - 15:30	Transitioning from development to manufacture	
15:30 - 16:15	Prof Alois Jungbauer Environmental Footprint of Biomanufacturing: strategies for sustainability	
16:15 - 16:45	Closing Ceremony Awards	
19:00 - 02:00	ESACT 2024 Congress Dinner	

CONFERENCE **WORKSHOPS**

Sunday 23 June 2024 11:00 – 12:30 Room: Kilsyth

Addressing the challenges of multi-specific biotherapeutic development
Organised by Dr Sarah Dunn, AstraZeneca and Dr Chris Sellick, Sanofi
Sponsored by AstraZeneca

Multispecific antibodies are a growing class of biotherapeutic with over 140 different molecules currently in clinical testing. They provide distinct advantages over monoclonal antibodies in their ability to bind to and engage multiple target proteins. Their use is most evident in oncology where a target specific antigen binding domain can be coupled with an immune effector cell binding domain to directly activate the immune system within the tumour microenvironment for enhanced therapeutic effect.

Despite the therapeutic potential of multispecific antibody formats the manufacture of these novel molecules can present significant challenges- they often express at low levels, can generate a range of different product related impurities which are difficult to purify and are challenging to characterise.

Format of the workshop:
This workshop will focus on the development and manufacturability of multispecifics. We will first introduce the wide range of different multispecifc antibody formats that are currently in clinical trials. We will then present some case studies to examine how standard cell line development and analytical pipelines have been modified to better suit multispecific production. In the second part of the workshop we invite participants to join working groups to discuss the opportunities and challenges related to the successful molecular design, production and characterisation of these complex biotherapeutics.

Chairs: Chris and Sarah

1. Chair introduction to Multispecifics: Chris and Sarah
2. Case studies highlighting challenges faced with specific industrially relevant molecules
3. Working group discussion focusing on approaches that may:
   - Enhance design for improved developability
   - Improve the production process
   - Develop high throughput tools to better characterize multispecifics
4. Wrap up

CONFERENCE **WORKSHOPS**

Sunday 23 June 2024 11:00 – 12:30 Room: Moorfoot

From Lab to Industry: Enable quality by control through automation, AI and computational fluid dynamics

Organised by Dr Wolfgang Sommeregger, QUBICON AG, Dr Mark Duerkop, Novasign GmbH and Dr Christian Witz, SimVantage GmbH

This workshop addresses the challenges and benefits of transferring learnings from laboratory experiments to manufacturing processes, specifically focusing on overcoming scale-up issues and implementing automated and advanced process control. It highlights the scarcity of FDA-approved products in the biotech industry that are manufactured using completely automated processes and proposes potential solutions. The goal of the session is to demonstrate how these integrated strategies can facilitate in-silico optimization and scale-up, alongside prospects for fully automated process control. Digital technologies already accelerate the development and scale-up of cell culture processes today. However, so far, mostly encapsulated areas have been looked at and attempted to be optimized. In this workshop we try to establish a connection between digital technologies such as streamlined data acquisition from Design of Experiments, hybrid modelling and computational fluid dynamics to transfer as much as possible from the learnings of laboratory scale into production. Participants will get an idea of how digital techniques can be interlinked to accelerate process development. Additionally, in-depth discussions are planned regarding the reasons behind the current underutilization of these solutions.

Format of the workshop:
Additional speakers are: Mark Duerkop, Novasign GmbH, Vienna, Austria and Christian Witz, SimVantage GmbH, Graz, Austria

1. Lab Scale – Process Understanding and Data Aggregation
Attendees will discover methods for digital transformation in lab and production settings, focusing on the integration of data from diverse analytical and processing equipment. Furthermore, the workshop will showcase workflows designed to accelerate learning from experiments, highlighting the principles of model-based and intensified Design of Experiments. Additionally, the integration of Computational Fluid Dynamics (CFD) results, derived from an innovative solver adds a deeper understanding of the reactor characteristics.

CONFERENCE **WORKSHOPS**

2. Scale-Up with Process Know-How from the Lab
Enhancing process understanding together with the in-depth equipment characterization is crucial for automating process controls, optimizing production conditions, and ensuring consistent quality during the scale-up from laboratory to industrial scale. It allows for the identification and mitigation of potential scale-up issues before they occur, reducing development time and costs.

3. Large scale production – Automation, Process Optimization and Process Transfer
After successful scale-up, advanced process control should ensure consistent and cost-effective production. At its heart a digital twin, trained from reactor geometries and experimental data during late-stage development and scale-up, will allow to autonomously control the process inside certain boundaries. Therefore, the understanding of quality by design will be transformed into quality by control.

Sunday 23 June 2024 11:00 – 12:30 Room: Tinto

PAT implementation in development and biomanufacturing
Organised by ACTIP – Advanced Cell Technology Industrial Platform

ACTIP is an independent non-profit association of European companies and institutions engaged in the industrial use of advanced cell technology for research, development and/or production of biopharmaceuticals, vaccines and other preventative or therapeutic approaches. Its main objectives are to bring advanced cell technology experts together for networking, keeping up to date on cutting-edge developments and focus on technological and applied-oriented challenges for the industrial use of advanced cell technology.

ACTIP welcomes participants to a symposium dedicated to the latest trends in process analytical technologies (PAT) for bioprocess development and manufacturing. Short 10-minute introductory presentations followed by 5 minutes of Q&A will set the stage and provide insights into some of the concepts which shape the biologics and gene & cell therapy industry today. The program will cover aspects such as real-time product quality and process monitoring, application of multi-attribute methods for process and product

CONFERENCE **WORKSHOPS**

characterization, platform and automation methods to support accelerated programs and hybrid modeling for PAT implementation. The presentations will be followed by a discussion, which will allow participants and experts to interact and exchange on these topics.

Format of the workshop
Chairs: Dr Erwin van Vliet (ACTIP, The Netherlands), Dr Jonathan Bones (NIBRT, Ireland), Dr Jochen Sieck (Merck Life Science, Germany)

11:00 – 11:05 Welcome & Introduction of ACTIP

11:05 – 11:20 PAT for Cell and Gene Therapy: A Call to Arms
James Piret, University of British Columbia, Canada

11:20 – 11:35 PAT for cell therapy development at Bayer
Jens Traenkle, Bayer, Germany

11:35 – 11:50 Innovations in In-Line Monitoring: Raman Transfer in mAb Production & Glycosylation Profiling?
Fabien Caron, Merck Life Science, France

11:50 – 12:05 Real-time process control and continuous product characterization platform through automated high frequency sampling from multiple bioreactor systems
Noemí Dorival-García, NIBRT, Ireland

12:05 – 12:20 Hybrid modeling a versatile tool in context with PAT implementation
Gerald Striedner, University of Natural Resources and Life Science Vienna B.O.K.U., Austria

12:20 – 12:30 Discussion & Wrap up

SPONSORED **SYMPOSIA**

Sunday 23 June 2024 13:30 – 15:00 Room: Tinto

Case Study on N-1 Perfusion Development by Fresenius Kabi and Related Innovations in Perfusion Technology for Cell Retention and Cell Line Development by Merck
Sponsored by Merck

When N-stage perfusion is not a viable option from cost perspective, N-stage intensification is a great opportunity for time and cost reduction. This often requires the use of N-1 perfusion to build up sufficient biomass for the intensified fed-batch phase. We will present the work performed to develop this N-1 stage at Fresenius Kabi to enable future N-intensified process development.

Successful implementation of perfusion relies on robust and scalable cell retention technology. The Cellicon® Perfusion Solution meets this need by providing flat-sheet filters designed for cells, in a single-use assembly for seamless process control. We will share data demonstrating this technology in perfusion applications to quantify process improvements.

During CLD for perfusion bioprocesses, it is essential to select clones that demonstrate high qP, moderate growth rates, and high titer. Traditional CLD methods may identify clones that perform well in fed-batch but miss the best perfusion clones. We will highlight advantages of using perfusion-specific CLD processes to create more productive clones and provide an integrated CLD solution for intensified processing using CHOZN® GS-/-, best-in-class media, and the Mobius® Breez Microbioreactor.

Live Q&A session to follow the presentations.

Moderator:
Jennifer Campbell, Upstream Technical Specialist, Process Solutions, Merck

Speakers:
Camille Payre, Upstream Process Development Senior Scientist, Fresenius Kabi SwissBioSim GmbH
Geraldine Contrufo, Senior Biomanufacturing Engineer, Upstream MSAT EMEA, Merck
David S. Razafsky, Ph.D., R&D Manager, Biopharmaceutical Expressions System Team, Merck

SPONSORED **SYMPOSIA**

Sunday 23 June 2024 13:30 – 15:00 Room: Kilsyth

Driving Performance, Scalability, and a Simplified Path to Cell & Gene Therapy Commercialization
Sponsored by Sartorius

The ability of cell and gene therapies to improve patient lives has been clearly demonstrated with the successful approval of over 65 products globally. In 2023 alone we saw 6 approvals for gene and gene-modified cell therapies, signaling rapid growth and a promising future. These clinical successes motivate therapy developers to hasten market entry, yet the challenge remains to develop high-quality, safe products with reduced cost per dose. The industry is actively looking for more effective development processes—processes built to consistently perform, seamlessly scale, and adhere to complex and evolving regulatory requirements. These factors set the stage for a simplified path to commercialization, but how can early-stage developers balance today's demands while getting prepared for future clinical success? In this workshop, hear from a diverse panel of experts from across industry—from University to CDMO—on the novel approaches and innovative technologies that are pushing the boundaries of CGT development and manufacturing to drive performance, scalability, and regulatory compliance. Following short individual presentations, our distinguished speakers will gather to discuss key challenges, considerations, and the future outlook on this dynamic field.

Moderator:
Lorraine Borland, Senior Expert Bioprocess Solutions, Cell & Gene, Sartorius

Speakers:
Pierre Springuel, PBioChemEng PhD Candidate, University College London
Klaus Graumann, CEO Phoenestra GmbH
Ahmed Youssef, Senior Manager USP, Ascend Advanced Therapies
Harm Niederländer, Platform Development Specialist, Sartorius

CONFERENCE **WORKSHOPS**

Sunday 23 June 2024 15:00 – 16:30 Room: Kilsyth

Transitioning Advanced Therapies from Research to Development and Manufacturing - What Have We Learned About Developability?
Organised by Dr Till Wenger, Boehringer Ingelheim Pharma and Dr Simon Fischer, Boehringer Ingelheim Pharma

Advanced therapeutic medicinal products (ATMPs) used for cell and gene therapy applications are an emerging class of biopharmaceuticals with the potential to become curative treatments for diseases that were considered untreatable so far. These novel modalities are amongst the most complex biological formats found under clinical development and rely on animal cell technology. In contrast to the more established protein-based therapeutics, prior knowledge about development and manufacturing is still scarce, making the transition from research to development and manufacturing more cumbersome. In this workshop, we propose to bring together experts from research and development working on these novel modalities to discuss about how ATMP products can be designed to function as efficient and safe drugs, and how advancements and challenges in the development of these novel products can be overcome in the future.

ATMPs represent a fast-growing novel class of biopharmaceuticals and their manufacturing is highly dependent on animal cell derived expression systems. While ATMP research at academic institutions has been carried out for many years, an increasing number of small and large biopharmaceutical companies have only recently stepped in to the development of ATMP products. Consequently, regarding clinical development and manufacturing this field is still in its infancy. In recent years, also the ESACT community has faced a growing interest in topics related to ATMPs and therefore this workshop is intended to bring together experts from academia and industry to streamline the development of innovative ATMP products in the future.

Format of the workshop:

1. Introductory comments by the session chairs Till Wenger and Simon Fischer

2. Overview presentations on various topics on ATMP developability

CONFERENCE **WORKSHOPS**

- Dr Markus Hoerer, Ascend Gene & Cell Therapies, Germany
  CMC stumbling blocks that need to be removed at an early stage in the development of AAV gene therapeutics

- Dr Marie Clincke, UCB Pharma, Belgium
  Efficient development of rAAV manufacturing process through integrated CMC development with the end in mind

- Dr Raphael Drerup, Boehringer Ingelheim Viral Therapeutics Center, Germany
  The power of a platform: accelerating the development of an oncolytic virus

- Dr Oliver Kraemer, Flagship Pioneering, USA
  Navigating the shift from research to development in advanced therapies: Understanding the critical impact of early CMC decisions on the success of ATMPs

3. Interactive speaker panel and audience discussion moderated by the session chair

Sunday 23 June 2024 15:00 – 16:30 Room: Moorfoot

Cultivated meat – A new frontier in animal cell technology
Organised by Dr Jonathan Dempsey, Pathway Biopharma

The science of producing meat using cell culture has generated enormous interest since the first burger was grown in a lab over ten years ago. Many of the skills needed to produce cultivated meat are already found in our scientific community. Bioprocessing, cell therapy and regenerative medicine provide the starting point for designing cultivated meat processes but there are many new challenges in making this industry a success. Scale and cost are the most pressing challenges as are the development of suitable cell lines, culture medium and large-scale bioreactors. We aim to present the science

behind solving these challenges from leading cultivated meat developers and technology providers.

This field will require the skills and knowledge of the ESACT community. It also provides new opportunities for scientist at all points in their career. Cultivated meat presents a huge moral opportunity to address the key challenges facing humanity, with solutions that our community are key to solving.

Format of the workshop:

1. Welcome and Introduction (Jonathan Dempsey, Pathway Biopharma)

2. Cultivated meat is not too big a bite - Ricardo Gouveia, CSO + co-Founder, 3D Bio-Tissues Ltd

3. Continuous Bioprocess of C2C12 Muscle Cells A Proof of Concept – Martina Miotto, CSO and Co-founder CellRev.

4. Poster Flashes, Livestock Pluripotent Stem Cells for Cultivated Meat, Roslin Technologies.

    a. Well-Characterised Porcine iPSCs and c-Myc quantification for cultivated meat applications (Madeleine Carter).

    b. Getting Fat: Adipogenesis of Pluripotent Stem Cells in Livestock Species for Cultivated Meat (Sarah Ho).

    c. Well Characterised Panel Of Bovine ESCs Embryonic Stem Cells for the Cultivated Meat Applications Industry (Niamh Hyland).

4. Panel Discussion, Jon, Martina, Simon Best (Board Director, Roslin Technologies) Madeleine, Niamh, Sarah and Ricardo.

CONFERENCE **WORKSHOPS**

Sunday 23 June 2024 15:00 – 16:30 Room: Tinto

Sustainability in biomanufacturing
Organised by Dr Prof Alois Jungbauer, University of Natural Resources and Life Sciences Vienna

The impact of bioprocessing on the environment is often neglected or even ignored because it is believed that the social impact of modern medicine relieves scientists of the obligation to implement sustainability in their products and processes. In this workshop we aim to raise awareness of the environmental impact of modern bioprocesses for the production of drugs from mammalian cells.

The ESACT community is highly involved in development of bioprocesses in biopharma to reliably deliver drugs in a relatively short time frame with high quality within a tight regulatory framework. Bioprocesses are highly complex, the level of automation is moderate, and there is constant pressure to improve efficiency and costs. In addition, climate change and resource scarcity require a reduction in the environmental footprint of bioprocesses and manufacturing facilities. The global environmental impact of the entire healthcare industry is completely ignored due to the positive impact it has on our daily lives, especially extending life expectancy without disability.

Format of the workshop:
We will address following topics/questions in an interactive format:

1. Metrics for assessing the environmental footprint of a bioprocess.
2. Metrics for assessing the societal impact of biopharmaceuticals.
3. How to improve the environmental footprint, batch, fedbatch, intensified and continuous integrated bioprocesses.
4. Circular bioeconomy exemplified by waste stream management for single-use technologies

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SCIENTIFIC **PROGRAMME**

SUNDAY 23

Pentland Auditorium

17:00 – 17:45	**ESACT 2024 Opening Session** Prof Alan Dickson, The University of Manchester
17:45 – 18:30	**ESACT Innovation Award Lecture** Session Chair: Prof Eleftherios (Terry) Papoutsakis, University of Delaware The ESACT Innovation Award for 2024 will be presented (as a Group Award) to The International CHO GENOME Community for transforming of biopharmaceutical manufacturing through collaboration and sharing of genomic and associated knowledge that benefits industry and enhances patient access to high quality medicines. Presenter: Prof Michael Betenbaugh, Johns Hopkins WSE Other Key Members of the Group: Prof Kelvin H. Lee, Prof Nathan Lewis and Prof Nicole Borth
18:30 – 19:15	**Keynote Lecture** Session Chair: Prof Nicole Borth, BOKU **Impact of biological therapeutics: perspective of the cancer clinician and the cancer patient** Prof Charlie Gourley, The University of Edinburgh
19:15 – 21:00	**Exhibitors Reception in the Exhibition Halls**

SCIENTIFIC **PROGRAMME**

MONDAY 24

Pentland Auditorium

08:45 – 09:30	**Keynote Lecture** Session Chair: Prof Mark Smales, University of Kent/NIBRT Ireland **Micromapping: A chemical approach to biological insights and therapeutic intervention** Prof Sir David MacMillan, Princeton
09:30 – 10:00	**Innovate or Die – New Technologies** Session Chair: Dr Till Wenger, Boehringer Ingelheim
09:30 – 09:38	**Confined bioprinting in inflatable bioreactor: toward the sterile bioproduction of tissues and organs** Dr Christophe Marquette, 3d.FAB - University Lyon 1
09:38 – 09:46	**Morphological profiling of senescent cells for label-free quality control of mesenchymal stem cells** Kenjiro Tanaka, Nagoya University
09:46 – 09:54	**From Moonshot to One-Pot: A New Paradigm for Multispecifics Manufacturing** Dr Guogang Dong, Pfizer

SCIENTIFIC **PROGRAMME**

MONDAY 24

09:54 – 10:00	**Q&A with Panel**
10:00 – 11:00	**Refreshment Break, Networking & Industry Educational Sessions in Exhibition Halls**
11:00 – 12:30	**Cells as Factories and Therapies** Session Chairs: Dr Christina Alves, Takeda and Prof Niall Barron, UCD and NIBRT
11:00 – 11:30	**The Sleeping Beauty transposon system: A molecular parasite tamed for genome engineering** Prof Zoltan Ivics, University of Leipzig
11:30 – 11:40	**Deciphering key adenoviral elements in the production of recombinant AAV vectors** Dr Sofia Fernandes, iBET
11:40 – 11:50	**Trigger-induced drug release from particle-loaded macrophages** Dr Omkar Desai, Helmholtz Centre For Infection Research

SCIENTIFIC **PROGRAMME**

MONDAY 24	
11:50 – 12:00	**Complementary Gene Editing Technologies Enhance Rapid Generation of Stable Cell Lines Producing Enveloped Viral-Like Particles** Dr Corey Brizzee, Demeetra Agbio
12:00 – 12:30	**Evolving CAR cell Therapies** Dr Isabelle Riviere, Takeda
12:30 – 14:15	**Lunch, Networking & Industry Educational Sessions in Exhibition Halls**
14:15 – 15:45	**Poster Session 1 in Exhibition Halls**
15:45 – 17:15	**Product Quality – Relevance and Assessment** Session Chairs: Dr Chetan Goudar, Amgen and Dr Anne Bondgaard Tolstrup, AbtBioConsult
15:45 – 16:15	**Control and Characterization of Thousands-Diverse Recombinant Polyclonal Antibodies** Rena Mizrahi, GigaGen
16:15 – 16:30	**Product Quality Control through Raman Spectroscopy** Prof Thomas Villiger, University of Applied Sciences Northwestern Switzerland

SCIENTIFIC **PROGRAMME**

MONDAY 24	
16:30 – 16:45	**Unveiling mAbs & viral vectors´ attributes by Mass Spectrometry-based advanced bioanalytics** Dr Sofia B Carvalho, iBET
16:45 – 17:00	**Novel analytics for cell and gene therapy manufacturing** Dr Stacy Springs, MIT
17:00 – 17:15	**Using high-throughput sequencing to identify IgG sequence variants and the molecular mechanism for their occurrence** Dr Claire Harris, AstraZeneca
17:15 – 18:00	**Refreshment Break, Networking & Industry Educational Sessions in Exhibition Halls**
18:00 – 19:30	**Transitioning from Development to Manufacture** Session Chairs: Dr Andreas Castan, Cytiva and Prof Laura Alicia Palomares Aguilera, IBT-UNAM
18:00 – 18:30	**Developing and manufacturing CRISPR-engineered T cell therapies in the academic setting** Dr Brian Shy, University of California, San Francisco

SCIENTIFIC **PROGRAMME**

MONDAY 24

18:30 – 18:40	**Improvement of USP scale-down models for biopharmaceutical production processes: A case study** Dr Timm Keil, Boehringer Ingelheim Pharma GmbH & Co. KG
18:40 – 18:50	**"Organized stress" for robust scale-up of intensified process with non-perfusion seed bioreactor** Antoine Piednoir, UCB Pharma S.A. Braine-Alleud
18:50 – 19:00	**Mimicking Impacts of Production Scale Heterogeneous Mixing on Cellular Performance Using the Single Multi-Compartment Bioreactor** Ralf Takors, University of Stuttgart, Institute of Biochemical Engineering
19:00 – 19:30	**Scaling-up Covid vaccine manufacture: Combating the pandemic** Prof Catherine Green, University of Oxford

19:30 – 21:00 **Poster Session 2 & Networking in Exhibition Halls**

21:00 – 23:00 **Pub Quiz at Malones Edinburgh**
Sponsored by Evonik

SCIENTIFIC **PROGRAMME**

TUESDAY 25

Pentland Auditorium

08:45 – 09:30	**Keynote Lecture** Session Chair: Prof Alan Dickson, The University of Manchester **Towards genetic therapies for Rett syndrome** Prof Adrian Bird, University of Edinburgh
09:30 – 10:00	**Innovate or Die – New Technologies** Session Chair: Dr Stefanos Grammatikos, UCB
09:30 – 09:38	**Enabling the intensification of cell culture processes by using modified amino acids** Aline Zimmer, Merck Life Science Kgaa
09:38 – 09:46	**Microfluidic Device for the Expansion of T Cells under Continuous Perfusion** Jorge Aranda-Hernandez, UCL
09:46 – 09:54	**Integration of stem cell-derived pancreatic aggregates into FN-silk network for in vitro maturation** Kelly Blust, KTH Royal Institute of Technology
09:54 – 10:00	**Q&A with Panel**

SCIENTIFIC **PROGRAMME**

TUESDAY 25	
10:00 – 11:00	**Refreshment Break, Networking & Industry Educational Sessions in Exhibition Halls**
11:00 – 12:30	**From Big Data to Better Cells and Processes** Session Chairs: Prof Mike Betenbaugh, Johns Hopkins WSE and Dr Simon Fischer, Boehringer Ingelheim
11:00 – 11:30	**4D simulations of a growing minimal bacterial cell** Prof Zaida Ann Luthey-Schulten, University of Illinois
11:30 – 11:40	**miRNome analysis of HEK293-F cells during AAV production** Madina Burkhart, Biberach University of Applied Sciences
11:40 – 11:50	**Culture media customization to the target molecule using hybrid AI systems** Prof Rui Oliveira, Nova University Lisbon
11:50 – 12:00	**In Silico Modelling for Bioprocesses: An Epigenetic and Machine Learning Approach** Dr Karlheinz Landauer, Qbdc Gmbh

SCIENTIFIC **PROGRAMME**

TUESDAY 25

12:00 – 12:30	**Towards digital process development - How (hybrid) modeling and transfer learning could change the way we develop and operate processes** Dr Moritz von Stosch, DataHow
12:30 – 14:30	**Lunch, Networking & Industry Educational Sessions in Exhibition Halls**
14:30 – 16:00	**Poster Session 3 in Exhibition Halls**
16:00 – 17:30	**Cells as Factories and Therapies** Session Chairs: Dr Christina Alves, Takeda and Prof Niall Barron, UCD and NIBRT
16:00 – 16:30	**Precision gene delivery through protein engineering** Prof Andreas Pluckthun, University of Zurich
16:30 – 16:40	**The serendipitous discovery of a novel and highly efficient transposase to advance mammalian cell factories** Dr Moritz Schmidt, Boehringer Ingelheim
16:40 – 16:50	**Model-driven Synthetic Biology Approaches to Engineer Improved Stable Cell Lines for Lentivirus Manufacturing** Dr Brianna Jayanthi, Asimov, Inc.

SCIENTIFIC **PROGRAMME**

TUESDAY 25	
16:50 – 17:00	**Expression in CHO cells of a bacterial biosynthetic pathway prevents proteolysis of recombinant proteins** Prof Octavio Ramírez, Instituto De Biotecnología. Unam
17:00 – 17:10	**A large-scale deletion screen defines the essentiality of the "dark matter" of the CHO genome** Federico De Marco, ACIB Austrian Centre of Industrial Biotechnology
17:10 – 17:20	**A Novel Cell Engineering Platform for High-Yield AAV Production and Improved Manufacturability** Dr Kathy Ngo, CHO Plus, Inc.
17:20 – 17:30	**Cord blood natural killer cells: a promising source of cytotoxic extracellular vesicles for cancer immunotherapy** Isabel Doutor, IST - IBB
17:30 – 20:00	**Sights and Sounds of Edinburgh**
20:00 – 23:00	**ESACT 2024 Tuesday Dinner at EICC**

SCIENTIFIC **PROGRAMME**

WEDNESDAY 26

Pentland Auditorium

08:45 – 09:30	**Keynote Lecture** Session Chair: Prof Paula Alves, iBET and ITQB NOVA **An AI- and Laser-based Biomanufacturing Platform to Scale Production of Personalized Regenerative Cell Therapies** Dr Marinna Madrid, Cellino
09:30 – 10:00	**Poster Flashes Top 10**
10:00 – 11:15	**ESACT General Assembly**
10:00 – 11:15	**Refreshment Break & Networking in Exhibition Halls**
11:15 – 12:45	**Product Quality – Relevance and Assessment** Session Chairs: Dr Chetan Goudar, Amgen and Dr Anne Bondgaard Tolstrup, AbtBioConsult
11:15 – 11:45	**Process Analytical Utility of Raman Microscopy for Cell Therapy Manufacturing** Dr James Piret, UBC

SCIENTIFIC **PROGRAMME**

WEDNESDAY 26	
11:45 – 11:55	**Assessing Extractables and Leachables from Single-Use Systems used in Advanced Therapy Medicinal Product Production** Dr Roberto Menzel, Sartorius Stedim Biotech
11:55 – 12:05	**Identification and Characterization of CHO Host Cell Proteins that can Degrade Polysorbate in Drug Products** Dr Inn Yuk, Genentech
12:05 – 12:15	**How to address challenges in characterization and modeling of CD markers in MSCs?** Jean-françois Michiels, Pharmalex
12:15 – 12:45	**Making Analytical Characterisation Routine** Dr Jonathan Bones, NIBRT
12:45 – 14:00	**Lunch & Networking in Exhibition Halls**
14:00 – 15:30	**Transitioning from development to manufacture** Session Chairs: Dr Andreas Castan, Cytiva and Prof Laura Alicia Palomares Aguilera, IBT-UNAM

SCIENTIFIC **PROGRAMME**

WEDNESDAY 26

14:00 – 14:30	**Mitigating risk during biologics manufacturing using discovery stage developability assays and state of the art machine learning based optimization** Dr Jyothsna Viswesvaraiah, Seismic Therapeutic
14:30 – 14:42	**Safe and economic clinical manufacturing of arenavirus-based immuno-virotherapies: challenges and solutions** Dr Binod Prasad, Abalos Therapeutics GmbH
14:42 – 14:54	**High-Throughput Virology and Design of Experiment for Rapid Vector Production Process Optimization** Andrea Vervoort, Virica Biotech
14:54 – 15:06	**End-to-end CHO Platform Across Research, PD and Manufacturing to Efficiently Identify Molecules with High Yield** Dr Natalia Gomez, Amgen

SCIENTIFIC **PROGRAMME**

WEDNESDAY 26	
15:06 – 15:18	**Utilizing oxygen transfer rate monitoring to transfer cell cultures from microtiter plates to stirred-tank reactors** Anne Neuß, RWTH Aachen University - AVT. BioVT
15:18 – 15:30	**Towards Scalable Allogeneic CAR-T Manufacturing: Perfusion Optimisation and Multi-litre Scale-up in Single-use Stirred-tank Bioreactors** Pierre Springuel, University College London
15:30 – 16:15	**Keynote Lecture** Session Chair: Dr Stefanos Grammatikos, UCB **Environmental Footprint of Biomanufacturing: strategies for sustainability** Prof Alois Jungbauer, BOKU University
16:15 – 16:45	**Closing Ceremony Awards**
19:00 – 02:00	**ESACT 2024 Congress Dinner at National Museum of Scotland**

INDUSTRY EDUCATIONAL **SESSIONS**

Monday 24 June 2024 10:20 - 10:50 Room: Lammermuir 1

Next top model: in silico design, scalability, and optimization of a bioreactor platform
Sponsored by Cytiva

In this session, we discuss the theory of bioreactor scaling and strategies for in silico bioreactor design. We'll also show how we developed a new bioreactor platform using data from computational fluid dynamics (CFD) calculations, physical characterization, and cell culture runs.

Speaker: Neil Ross - Senior Global Product Marketing Manager, Cytiva / Will Scott-Dunn - Senior Product Manager, Upstream in Silico PD

Monday 24 June 2024 10:20 - 10:50 Room: Lammermuir 2

Ask the experts: Revolutionizing Cell and Gene Therapy Development and Downstream Processing from Bench to Industry
Sponsored by Eppendorf Bioprocess

Exosomes, and more specifically stem cell-derived exosomes, are of great interest as cell-free therapeutic tools due to their strong diagnostic and therapeutical potential in various diseases models including skin, nervous system, heart, liver, and kidney. However, to explore the use of exosomes in the different biomedical areas, large amounts of high-quality exosomes need to be produced.

Speakers: Dr Pascal Rowart Application Specialist EAT Cell and Molecular Biology and Dr Philipp Nold Business Development Manager CGT

INDUSTRY EDUCATIONAL **SESSIONS**

Monday 24 June 2024 12:50 – 13:50 Room: Lammermuir 1

Simple and readily deployable Process Analytical Technology (PAT) solutions for comprehensive monitoring and analysis of upstream monoclonal antibody production
Sponsored by 908 Devices

Robust and informative PAT solutions supporting upstream production of biopharmaceutics are required to improve efficiency. Despite considerable interest in spectroscopic in-line techniques like Raman, the obstacles associated with constructing and validating models have impeded their widespread adoption. The deployment of specific methods that provide quantitative information on individual process components or product quality attributes is still challenging. Process analytics that provide direct quantitative readouts enable better process understanding, improvements, and modelling, as well as building and validating additional spectroscopy chemometric models.

Speakers: Milla Neffling, PhD, 908 Devices / Steve Driscoll, PhD, 908 Devices / Jonathan Bones, PhD MBA, National Institute for Bioprocessing Research and Training

Monday 24 June 2024 12:35 - 13:05 Room: Lammermuir 2

Harnessing the Power of the Beacon® Platform to Advance Cell Therapies and Accelerate Cell Line Development Workflows
Sponsored by Bruker

The revolution in life science research is focused on understanding the function of single cells, which is essential for developing new therapies. Traditional methods like FACS and scRNASeq provide only partial insights into cellular behavior. Bruker's Beacon® Optofluidic system offers a comprehensive approach, delivering a complete picture of single-cell function. The Beacon enables serial multi-modal analysis and real-time imaging of the same live cell and its progeny, allowing simultaneous measurement of thousands of single cells or colonies. This platform integrates two advanced technologies:

INDUSTRY EDUCATIONAL **SESSIONS**

1. Light-driven Optoelectronic Positioning (OEP) gently controls single cells and beads, facilitating customized experiments without harming the cells.

2. A microfluidic chip with NanoPen® chambers ensures continuous media and assay reagent flow, enabling dynamic cellular biology studies over time with a high-resolution microscope.

This powerful technology has propelled advancements in cell line development (CLD) using Bruker's Opto CLD workflow on the Beacon platform. Typically, CLD campaigns demand extensive technical and resource investments, requiring repeated cell function assessments of candidate clones over several months using various methods to select lead clones for cell banking. The Beacon platform streamlines these measurements, enabling them to be conducted at the earliest stages of a CLD campaign, meaningfully accelerating clone selection. For instance, productivity and quality measurements can be performed within days of single cell cloning (SCC), and stability measurements within the first 4-6 weeks of SCC. Here, we present the principles underpinning these substantial advancements and discuss the outcomes they enable for CLD practitioners utilizing the Beacon platform.

Monday 24 June 2024 13:10 – 13:40 Room: Lammermuir 2

Scale-up from flask through 50L Bioreactor – the effect of Gibco Media on maximizing performance and quality in fed-batch and perfusion processes
Sponsored by Thermo Fisher Scientific

Thermo Fisher Scientific™ and their collaborative research with Zurich University of Applied Sciences dives into the forefront of advancing CHO cell culture processes. We address the complexities of scale-up and process development while conducting comparisons of fed-batch and perfusion strategies. Leveraging Gibco™ catalog media and feeds, coupled with automated glucose control, we ensure the nutrient requirements for high viability and cell density from benchtop to pilot. Utilizing diverse bioreactor technologies, we demonstrate the seamless scalability of our methodologies.

Speaker: Vivian Ott, M.Sc., ZHAW Zurich University of Applied Sciences

INDUSTRY EDUCATIONAL **SESSIONS**

Monday 24 June 2024 13:45 – 14:15 Room: Lammermuir 1

The Future of Media Hydration - Balanced media in automated single use platforms
Sponsored by FUJIFILM Irvine Scientific

While maintaining a strong and robust supply chain, biomanufacturers are looking to maximize facility utilization and increase process efficiency to drive down the cost of goods, without compromising the quality of the final product. To move away from conventional mixer technology for media hydration and automate the process, FUJIFILM Irvine Scientific has developed a new platform technology that can rapidly and consistently hydrate media, feeds and buffers. This platform optimizes and balances powdered media to achieve a more efficient automated on demand hydration system versus conventional mixing. Learn more about our latest bioprocessing solutions for process development and manufacturing, in the upstream and downstream environment, across multiple modalities.

PN 019847 Rev.00

Speaker: Guy Matthews, FUJIFILM Irvine Scientific

Monday 24 June 2024 14:00 – 14:15 Room: Lammermuir 1

C.STATION: End-to-end automation for generating stable cell lines for the development of advanced therapeutics
Sponsored by CYTENA

Revolutionize cell line development (CLD) workflows with CYTENA's C.STATION. This turnkey automated solution offers efficient single cell isolation, documented clonality assurance, high producer/high-quality clone enrichment, increased throughput, process consistency,

and improved data traceability and integrity. It is tailored and configured with the best-in-class instruments and software for monoclonal antibody development, viral vector production, and iPSCs for cell therapy. Join us to explore its transformative impact and discover the future of CLD.

Speaker: Mike Helme, Senior Sales Specialist Biopharma UK/Ire/Nordics, CYTENA

Monday 24 June 2024 17:30 – 18:00 Room: Lammermuir 1

Galactose and Mannose Supplementation in Cell Culture - Glycoform Modulation and Other Considerations
Sponsored by Pfanstiehl

Galactose and Mannose are two important carbohydrates that are widely used as cell culture media supplements for recombinant protein production (Innovator protein therapeutics, Biosimilars, Biobetters etc.) and other applications. Galactose not only plays important role in protein Glycoform modulation but also aids in Cellular energy production, Synthesis of Glycoproteins and Glycolipids and Energy storage. Similarly, Mannose plays important role in Glycoform modulation, energy production and signal transduction. Purity and quality are two very important aspects that must be considered when choosing the cell culture media supplements. Contamination of cell culture media supplements with heavy metals can significantly impact cell growth and function. Metals/Elemental Impurities can enter cell culture media through various sources, including the raw materials used to manufacture the media. Therefore, it is of paramount importance to use highly pure, well characterized, and low metal containing supplements (including Galactose and Mannose) in cell culture applications. In this presentation, I will present case studies demonstrating the importance of Galactose and Mannose supplementation in Cell Culture and talk about Pfanstiehl high purity, low endotoxin and low metal Galactose and Mannose offerings.

Speaker: Dr Christian Lotz, Pfanstiehl

INDUSTRY EDUCATIONAL **SESSIONS**

Monday 24 June 2024 17:30 – 18:00 Room: Lammermuir 2

Assurance of monoclonality in mammalian cell line development through the combination of state-of-the-art single-cell deposition and high-fidelity imaging technologies
Sponsored by Seed Biosciences

In recent years, the advent of new single cell dispensing and imaging technologies has significantly shortened the cell line development workflow for novel clinical assets while simultaneously facilitating the demonstration of monoclonality. Incorporating this information into regulatory filings to support the claim of monoclonality is of great importance in biologics development. Here, we applied a state-of-the art dispensing and imaging workflow for the generation of mammalian cell lines, with exquisite probability of monoclonality.

Speaker: Dr Olga Rimkevich, Associate Director, Process Development, Mural Oncology

Tuesday 25 June 2024 10:20 – 10:50 Room: Lammermuir 1

High-Recovery Lentiviral Vector Purification Using an LV Tailored Anion-Exchange Membrane Design
Sponsored by Sartorius

The rapid expansion of Cell and Gene Therapy clinical trials has led to a corresponding increase in demand for viral-based gene delivery vectors. Lentiviral Vectors (LVs) have become highly sought after for ex vivo modification of patient cells, particularly in Chimeric Antigen Receptor T-cell (CAR-T) therapies. However, the industry faces challenges in manufacturing these advanced therapeutics, resulting in limited global supply of drug products, restricted patient access, and low early-line usage. One major bottleneck in LV production lies in their purification. Efficient

and reliable LV purification poses a significant challenge due to their structural complexity, typically resulting in low product recoveries of 15-25%. Anion-Exchange (AEX) chromatography, using convective membrane adsorbents, is commonly utilized for the primary capture of LVs from cell culture supernatant. However, this unit operation alone accounts for most of the DSP process losses and typically results in functional product recoveries of only 10-30%. As LVs are increasingly adapted to treat a growing number of disease indications, AEX chromatography presents a widely applicable and adaptable purification method. Therefore, enhancing recoveries is crucial for expanding access to LV drug products.

Speaker: George Pamenter, PhD Researcher, Oxford Biomedica (UK) Ltd., Department of Biochemical Engineering, University College London, London, UK

Tuesday 25 June 2024 10:20 – 10:50 Room: Lammermuir 2

ELEVECTA cell lines for next-generation AAV manufacturing - Combining high scalability and increased quality by reducing encapsidated host cell DNA
Sponsored by Cytiva

Gene therapy has revolutionized human medicine for inherited diseases. Recombinant adeno-associated virus (AAV) has been used extensively to deliver transgenes in clinical studies. A major challenge is establishing production processes that can keep up with the increasing demand for quantity and quality of viral vectors.

Speaker: Michelle Hussong, Head of Molecular Biology and Analytics, Cytiva

INDUSTRY EDUCATIONAL **SESSIONS**

Tuesday 25 June 2024 12:40 – 13:40 Room: Lammermuir 2

Developing Optimal Cell Culture Media and Processes for Enhanced Biologics Production
Sponsored by FUJIFILM Irvine Scientific

Cell culture medium remains the most fundamental component for utilizing cells as factories and therapies.. Therefore, media development and optimization are a key area of focus for the biopharmaceutical industry to deliver therapies faster to market with reduced manufacturing cost. Streamlining the development of biotherapeutic processes includes using the right media and understanding the relationship between media components, the cell culture process, and the final product.

In this presentation, we will highlight three areas of innovation that provide end-to-end cell culture media solutions for: CHO perfusion processes for mAbs production, high-throughput media formulation screening workflow tailored for human embryonic kidney 293 (HEK293), and the use of DMSO-free cryopreservation medium for successful preservation of a range of primary cells and cell lines.
You will discover:

- How to improve productivities with a rationale designed perfusion medium in a continuous steady-state tabletop bioreactor without maintaining peak cell densities.
- How to design and implement a customizable, streamlined process for the development of cell culture media to facilitate the production of desired biological products in diverse cell lines.
- How to achieve media design and optimization using high-throughput screening methods while reducing time and cost.

PN 019812 Rev.01

Speakers: Luis Rodriguez, PhD, R&D Manager, Shan Gao, PhD, R&D Senior Scientist II, Chandana Sharma, PhD, R&D Sr. Director

INDUSTRY EDUCATIONAL **SESSIONS**

Tuesday 25 June 2024 12:40 – 13:40 Room: Lammermuir 2

Industry perspectives on cell line development
Sponsored by Lonza

Taking a therapeutic protein through from discovery to commercial launch is a challenging process with multiple potential pitfalls and challenges. Along the development timeline, different protein expression processes will be used, such as transient and stable gene expression, that all need to achieve titre, quality and speed metrics so that therapeutic and commercial targets are met on time. As such, the choice of expression platform as well as the optimisation of such multi-component tools, is critical. In this workshop/discussion panel, we'll be taking a deeper look at a therapeutic protein's journey from discovery to commercial supply, and look specifically at each stage of the process from DNA design to clone selection. We'll discuss how high titres can be achieved across the development timeline, and also consider what further optimisations could be made. Join us for an exciting debate involving leading experts from across industry and academia.

Tuesday 25 June 2024 13:50 – 14:30 Room: Lammermuir 1

Should Dissolved CO2 Be a Critical Process Parameter? Unpacking the Impact: An Analysis of Recent Research in Cell Culture Applications
Sponsored by Hamilton Bonaduz Ag

This 45 minute session will explore the significance of real-time monitoring of dissolved CO2 as a Critical Process Parameter (CPP) within biopharmaceutical manufacturing with cell culture, specifically focusing on benefits for scaling up/down and extended perfusion operations. It will highlight recent research, showing that accurate control of dissolved CO2 levels is crucial for optimizing cell culture conditions, ensuring efficient process scalability, and maintaining long-term productivity.

INDUSTRY EDUCATIONAL **SESSIONS**

Speakers: Prof Dr Thomas Villiger, Lecturer In Bioprocess Technology and Team Leader Bioprocess Technology – School of Life Sciences FHNW – Institute for Pharma Technology Muttenz (Switzerland).
Mr Giovanni Campolongo, Senior Segment Manager Process Analytics Biopharma – Hamilton Bonaduz AG

Tuesday 25 June 2024 13:50 - 14:30 Room: Lammermuir 2

Streamlining mAb Discovery & Development Processes with Automated High- Throughput Antibody Analytics
Sponsored by Beckman Coulter Life Sciences

In the rapidly advancing field of antibody discovery and development, the integration of high-throughput and automation solutions has revolutionized workflow efficiency, significantly increasing both speed and sample output. To harness these advancements fully, it is crucial to implement automation-friendly bio-analytics that prevent process bottlenecks.

Explore the innovative ValitaTiter and the newly launched Valita Aggregation assays. These simple, high-throughput, plate-based assays are designed for antibody quantification and quality assessment, seamlessly integrating into automated workflows. Discover how these assays, automated on the Biomek workstations, can streamline your processes, enhance throughput, and maintain the high standards required in antibody analytics.

Speakers:
Emma Sharkey, Application Specialist, Beckman Coulter Life Sciences
Eligio Iannetti, Senior Business Development Manager, Beckman Coulter Life Sciences

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by ESACT FRONTIERS

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Building a robust **network** is of paramount importance in today's professional landscape. The **ESACT conference** serves as an excellent platform to connect with a diverse group of professionals. However, particularly for those who are **new to the community** it can be **challenging forging long-term acquaintances**.

ESACT Frontiers have ingeniously addressed this networking challenge. We prepared stickers that attendees can affix to their conference badges. **Each sticker corresponds to a category**, representing either a **personal** or **professional interest**. This simple yet effective method allows attendees to **visually share their interests**, acting as the perfect icebreaker for initiating conversations and fosters a **more engaging and inclusive conference environment**.

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- Culinary Pursuits
- Gaming & Entertainment
- Creative Arts

Professional interest

- Big & Smart Data
- Cells as Factory
- Cells as Product

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POSTER **PRESENTATIONS**

Theme 01. Cells as Factories

Poster Session 1, June 24, 2024, 2:15 PM - 3:45 PM
Poster Session 2, June 24, 2024, 7:30 PM - 9:00 PM
Poster Session 3, June 25, 2024, 2:30 PM - 4:00 PM

PS1-1 **Design and validation of a semi-automated workflow for therapeutic cells expansion, harvest, and final fill.**
Dr Julien Muzard[1], Mr. Donnie Beers, Mr Ross Acucena
[1]Entegris, Moirans, France, [2]Entegris, Billerica, USA

PS2-2 **Overcoming expression challenges of x-specific antibodies by balancing chain expression**
Dr Anett Ritter[1]
[1]Novartis Pharma AG, Basel, Switzerland

PS3-3 **Lentiviral vector production in HEK293-T suspension cells with single-use bioreactors**
Dr Johanna Viiliäinen[1], M.Sc Josefin Thelander[1], M.Sc Christine Sund-Lundström[1], Dr Greta Hulting[1], M.Sc Ann-Christin Magnusson[1]
[1]Cytiva, Uppsala, Sweden

PS1-4 **Expression of complex therapeutic proteins at very high yields with stable CHO GPEx Lightning pools**
Dr Philipp Claar[1]
[1]CSL Behring Innovation Gmbh, Marburg, Germany

PS2-8 **Automated plasmid purification can reduce labour time and increase AAV9 titres in small-scale productions**
Mrs Sanne Rönning[1], Mr Hannes Thorell[1], Dr Magdalena Malm[1], Prof Johan Rockberg[1]
[1]KTH Royal Institute of Technology, Stockholm, Sweden

PS3-9 **Interaction studies of artificial globular C1q variants with pentameric and hexameric IgM**
Ms Maria Magdalena John[1], Ms. Monika Hunjadi[1], Ms. Vanessa Hawlin[1], Prof. Renate Kunert[1]
[1]BOKU University of Natural Resources and Life Sciences, Vienna, Austria

PS1-10 **Sar1A overexpression improves antibody productivity of CHO cells through secretion process engineering**

Mr Yu Tsunoda[1,2], Assoc. Noriko Yamano-Adachi[1,2,3], Prof. Takeshi Omasa[1,2,3]
[1]Graduate School of Engineering, Osaka University, Osaka, Japan, [2]Manufacturing Technology Association of Biologics, Hyogo, Japan, [3]Institute for Open and Transdisciplinary Research Initiatives, Osaka University, Osaka, Japan

PS2-11 **Production of recombinant proteins and virus-like-particles for antibody development using baculovirus-free insect cell expression system**

Ms Seyhan Demiral[1], Mr. Marcel Jaron[1], Mr. Jonathan Benecke[1], Ms Nina Lehmler[1], Dr. Maren Schubert[1], Prof. Dr. Michael Hust[1], Prof. Dr. Stefan Dübel[1]
[1]TU Braunschweig - Department of Biotechnology, Braunschweig, Germany

PS1-13 **Strategic design of antibiotic selection marker drives high titer in the GOCHO™ platform**

Ms Sheffali Dash[1], Seungjo Park[1], Michelle Sabourin[1], Peggy Lio[1]
[1]Cytiva, Marlborough, United States

PS2-14 **Efficient Targeted Integration in CHO Using BXB Integrase**

Mr Tobias May[1], Dr. Kristina Nehlsen[1], Dr. Anne Dittrich[1]
[1]InSCREENeX, Braunschweig, Germany

PS3-15 **Influenza A Defective Interfering Particles as Broad-Spectrum Antivirals**

Lars Pelz[1], Tanya Dogra[1], Daniel Ruediger[1], Julia Boehme[2], Olivia Kershaw[3], Dunja Bruder[2], Dr Sascha Young Kupke[1], Udo Reichl[1,4]
[1]Max Planck Institute DCTS, Bioprocess Engineering, Magdeburg, Germany, [2]Helmholtz Centre for Infection Research, Immune Regulation, Braunschweig, Germany, [3]Freie Universitaet Berlin, Department of Veterinary Pathology, Berlin, Germany, [4]Otto von Guericke University, Bioprocess Engineering, Magdeburg, Germany

PS1-16 **Battle of the Barriers: Preventing Transgene Silencing with Barrier Elements.**

Miss Rebecca Sizer[1], Dr. Claire Arnall[2], Dr. Emma Biggs[2], Dr. Leon Pybus[2], Prof. Nia Bryant[1], Prof. Robert White[1]
[1]University Of York, York, United Kingdom, [2]Fujifilm Diosynth Biotechnologies, Billingham, United Kingdom , [3]IBioIC, Glasgow, United Kingdom

PS2-17 **Epigenetic engineering via targeted DNA demethylation can improve biologic production in CHO cells**

Miss Sienna Butterfield[1], Miss Rebecca Sizer[1], Miss Sarah Smart[2], Dr. Fay Saunders[2], Prof. Nia Bryant[1], Prof. Robert White[1]
[1]University Of York, York, United Kingdom, [2]FUJIFILM Diosynth Biotechnologies, Billingham, United Kingdom, [3]iBioIC, Glasgow, United Kingdom

PS3-18 **Scalable High-Density Microcarrier Suspension Culture of Human Adipose and Wharton's Jelly Mesenchymal Stem Cells**

Dr Anamaría Daza[1,2], Ms Pilar Vera[1,2], Mr Jaime Plane[1,3], Dr. Sebastián Alvarado[4], Dr. David Vantmann[5], Dr. Barbara Andrews[1,2], Dr. Pablo Caviedes[1,3], Dr. Juan A. Asenjo[1,2]
[1]Centre for Biotechnology and Bioengineering (CeBiB), Department of Chemical Engineering, Biotechnology and Materials, University of Chile, , Chile, [2]Institute for Cell Dynamics and Biotechnology (ICDB), , Chile, [3]Program of Molecular& Clinical Pharmacology, ICBM, Faculty of Medicine, University of Chile, , Chile, [4]Hospital Clinico San Borja Arriarán, , Chile, [5]Centro de Estudios Reproductivos - CER, , Chile

PS1-19 **Establishment of a scalable stable lentivirus manufacturing process in suspension perfusion mode.**

Dr. Holger Laux[1], Mr. Maximilian Klimpel[1], Ms. Marta Arrizabalaga[2], Ms. Vathsalya Pabbathi[2], Ms. Nikki Lal[1], Prof. Qasim Rafiq[2], Ms. Vicky Pirzas[1]
[1]CSL Behring, Marburg, Germany, [2]UCL, London, UK

PS2-20 **Modifying Chimeric Antigen Receptor (CAR) expression in T cells using m6A-associated elements-containing UTR sequences**

Dr Nga Lao[1], Dr., Simeng Li[1], Prof. Niall Barron[1,2]
[1]NIBRT, Dublin [4], Ireland, [2]School of Chemical and Bioprocess Engineering, UCD,, Dublin [4], Ireland

PS3-21 **Exploring bioprocess operation modes for the expansion of human Mesenchymal Stromal Cells**

Ms Johanna Pechan[1,2], Kristina Engström[2,3], Lina Sörvik[2,3], Prof. Véronique Chotteau[1,2]
[1]Cell Technology group, Dept. of Industrial Biotechnology, School of Engineering Sciences in Chemistry, Biotechnology, and Health, KTH - Royal Institute of Technology, Stockholm, Sweden, [2]AdBIOPRO, Competence Centre for Advanced BioProduction by Continuous Processing, , , [3]Cellcolabs AB, Solna, Sweden

PS1-22 **Design of Experiment (DoE) Enabled Scale-Up for Adeno-associated Virus (AAV) Production**

Ms Alexandra Bogdanovic[1,2,5], Dr Jessica Whelan[2,3], Dr Susan McDonnell[2], Dr Nicholas Donohue[1,4], Prof Brian Glennon[1,2]
[1]Applied Process Company Limited (APC Ltd), Dublin, Ireland, [2]School of Chemical and Bioprocess Engineering, University College Dublin, Dublin, Ireland, [3]Conway Institute of Biomolecular & Biomedical Research, University College Dublin, Dublin, Ireland, [4]National Institute for Bioprocessing Research and Training (NIBRT), Dublin, Ireland, [5]Funded by the Irish Research Council EBPPG/2022/38

PS1-25 **Novel hyperglycosylated recombinant bovine follicle-stimulating hormone (rbFSH): a potential candidate for veterinary use**

Mr Javier Villarraza[1,2], Mr Sebastián Antuña[3], Mr María Belén Tardivo[3], Dr María Celeste Rodríguez[1,2,4], Dr Diego Fontana[1,2,3], Mr Lucas Etchevers[2,5], Dr María Emilia Odriozola[2,5], Dr Pablo Díaz[2,5], Dr Hugo Ortega[2,5], Dr Natalia Ceaglio[1,2], Dr Claudio Prieto[1,3]
[1]UNL, FBCB, Centro Biotecnológico del Litoral (CBL), Santa Fe,, Argentina, [2]CONICET, , Argentina, [3]Biotecnofe S.A., Santa Fe,, Argentina, [4]UNL, FBCB, Cátedra de Química Analítica II, Santa Fe,, Argentina, [5]UNL, ICiVet-Litoral, Centro de Medicina Comparada (CMC), Esperanza,, Argentina

PS3-27 **Producing Oncolytic Newcastle Disease Virus in EB66 cells**

Mr Lennart Jacobtorweihe[1], Mr. Brice Madeline[2], Mr. Dr. Arnaud Léon[2], Ms. Prof. Yvonne Genzel[1], Mr. Prof. Udo Reichl[1,3]
[1]Max Planck Institute for Dynamics of Complex Technical Systems, Magdeburg, Germany, [2]Valneva SE, Saint-Herblain, France, [3]Otto-Von-Guericke-University, Magdeburg, Germany

PS1-28 **Exploiting time-delayed IL-21 supplementation in repeated-batch cultivation for controlled B cell expansion and differentiation**

Ms Elisabeth Ranze[1], Mr. Moritz Helm[1], Dr. Katrin Gollner[2], Dr. Ullrich Gollner[2], Dr. Valérie Jérôme[1], Prof. Ruth Freitag[1]
[1]University Of Bayreuth, Bayreuth, Germany, [2]Praxis am Schießgraben, Kulmbach, Germany

PS1-31 **Production of Adeno-associated virus containing pro-apoptotic TRAIL is enhanced by shRNA interference.**

Dr Simeng Li[1], Dr Nicholas Donohue[1], Dr Stefano Boi[1], Prof. Niall Barron[1]
[1]National Institute for Bioprocessing Research and Training, Blackrock, Ireland

PS3-33 **Context-dependent genomic locus effects on antibody production in recombinant CHO cells generated through random integration**

Dr Jae Seong Lee, Ms. Hyun Jee Woo, Mr. Jaehoon Kim, Ms. Seul Mi Kim, Mr. Dongwoo Kim, Dr. Jae Yun Moon, Dr. Daechan Park

[1]Ajou University, Suwon, South Korea

PS1-34 **Sericin Reduces Glucose Consumption and Increases Cellular Population and Amount of Biologics**

Mr. Naoki Shimizu[1], Mr. Yuya Murakami[1], Mr. Ryo Masugi[1], Dr. Satoshi Terada[1], Dr. Jun Takahashi[2]

[1]University of Fukui, Fukui, Japan, [2]SEIREN Co. Ltd., Fukui, Japan

PS2-35 **Improvement of the Biological Production Supplementing with SERICIN into Hyperosmotic Culture**

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PS3-36 **Finding the Needle in the HEKstack - Media Screening for AAV Production in HEK293**

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PS1-37 **A CHO cell-based simultaneous display and secretion platform for accelerated bispecific antibody development**

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PS2-38 **IDENTIFICATION OF TRANSGENE INTEGRATION SITES, THEIR STRUCTURE AND EPIGENETIC STATUS WITH CAS[9]-TARGETED NANOPORE SEQUENCING**

Dr Nicolas Marx[1], Mr. Klaus Leitner[2], Dr. Krishna Motheramgari[2], Prof. Nicole Borth[1,2]

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PS3-39 **Biomass specific perfusion rate as a control lever for the continuous manufacturing of biosimilar antibodies**

Dr Eunice Leong[1], Ms Wen Qin Tang[1], Mr Jake Chng[2], Ms Lyn Chiin Sim[1], Ms Zi Ying Zheng[1], Dr Wei Zhang[1], Dr Ian Walsh[1], Dr Gerben Zijlstra[3], Mr Maarten Pennings[2], Dr Say Kong Ng[1]

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PS1-40 **A two-dimensional model to predict influenza virus and defective interfering particle coinfection in tissue-like systems**

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PS2-41 **Adeno-associated virus production intensification by continuous bioprocess with repeated transfections in high cell-density perfusion bioreactors**

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PS3-42 **A high-throughput screen identified microRNAs to increase AAV production in HEK293 suspension cells**

Ms Madina Burkhart[1], Ms. Bettina Finkbeiner[2], Mr. Jona Röscheise[1], Dr. Andreas Schulze[2], Ms. Sabrina Reichl[2], Dr. Florian Sonntag[2], Dr. Markus Hörer[2], Prof. Dr. Kerstin Otte[1]
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PS1-43 **Establishment of a suspension-based perfusion process for the effective production of lentiviruses**

Miss Marta Arrizabalaga Cascallana[1,2], Mr. Maximilian Klimpel[2], Dr. Stephen Goldrick[1], Dr. Holger Laux[2], Prof. Qasim Rafiq[1]
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PS2-44 **Evaluation of biofabrication of ³D cellularized constructs for monoclonal antibody production**

Mr Elliott Cowles[1], Dr Laura Chastagnier[1], Dr Julia Niemann[2], Dr Magali Barbaroux[3], Dr David Pollard[4], Dr Oscar Reif[2], Dr Christophe Marquette[1], Dr Emma Petiot[1]
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PS3-45 **Optimizing defective interfering particles of influenza virus for antiviral treatment**

Ms Tanya Dogra[1], Lars Pelz[1], Daniel Ruediger[1], Julia Boehme[2], Maike Baelkner[2,3], Olivia Kershaw[4], Yvonne Genzel[1], Dunja Bruder[2,3], Sascha Young Kupke[1], Udo Reichl[1,5]
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PS1-46 **Increased energy production in producing cells to satisfy demands for growth, productivity and maintenance energy**

Ms Jerneja Štor[1,2], Dr. nat. techn. David Ruckerbauer[1,3], PhD Diana Széliová[3], Dr. Sarah Sacco[4], Prof. Jamey Young[4], Ao. Univ. Prof. Dr. Nicole Borth[1,2], Univ.-Prof. DI Dr. Jürgen Zanghellini[3]
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PS2-47 **Understanding the Mechanism of Intracellular Multispecific Antibody Aggregation in CHO Cells**

Dr Lauren Kraft[1], Dr. Hillary Warrington[1], Thomas Kelly[1]
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PS3-48 **Expanding the Apollo™X Cell Line Development toolbox: Strategies for challenging modalities**

Dr Devika Kalsi[1], Mr Samuel Walker[1], Dr Leon Pybus[1], Dr Fay Saunders[1]
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PS1-49 **Effect of AAV gene expression in the transcriptome of CHO cells**

Ms Konstantina Tzimou[1], Prof Lars K. Nielsen[1], Dr Jesús Lavado-García[1]
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PS2-50 **N-1 perfusion process for intensification of AAV production**

Dr Johanna Viiliäinen[1], Dr. Srdja Drakulic[1], M.Sc Christine Sund-Lundström[1], M.Sc Ann-Christin Magnusson[1], M.Sc Thomas Falkman[1]
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PS3-51 **On-demand hydrogel microcarrier production by ink-jet bioprinting for stem cell scalable suspension culture**

Dr Carlos Chocarro Wrona[1], Dr Mark SZCZYPKA[2], Dr. Julia NIEMANN[3], Dr. Martha MAYO[4], Dr. David POLLARD[4], Dr Magali BARBAROUX[5], Dr Emma PETIOT[1]

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PS1-52 **Engineering and Production of a Novel Cytokine Trap for the Treatment of Canine Atopic Dermatitis**

Mr Pablo Esteban Mussio[1,2], Dr. María Celeste Rodríguez[1,2], Dr. Claudio Prieto[1,2]

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PS2-53 **Unlocking DOE potential selecting the most appropriate design for rAAV optimization.**

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PS3-54 **Impact of MOI and Baculovirus Ratio on rAAV Production with the Baculovirus Expression Vector System**

Mr Mels Schrama[1], Pranav Puri[2], Femke Hoeksema[2], prof.dr. Monique van Oers[1], prof.dr.ir. Gorben Pijlman[1], prof.dr.ir. Rene Wijffels[1], dr.ir. Dirk Martens[1]

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PS1-55 **Enhancement of rAAV2 Viral Vector Yield Recovery in Upstream Lysate Material**

Dr Lorna Kelly[1], Mr Shandel Pariag[1], Mrs Taelor Patterson[1], Miss Kirsty McManus[1]

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PS2-56 **Mechanisms of antiviral action of the influenza defective interfering particle "OP7"**

Dr Julita Piasecka[1], Dr. Daniel Rüdiger[1], Jan Küchler[1], Dr. Sascha Kupke[1], Prof. Udo Reichl[1,2]

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PS3-57 **CHO based production of vaccines, therapeutic enzymes and antibodies with bespoke glycosylation.**

Mr Bjoern Voldborg[1,2]

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PS1-58 **Lowering culture temperature changes ubiquitinated proteins in the Endoplasmic Reticulum of Chinese Hamster Ovary cells**

Mr David Ryan[1,2], Dr Michael Henry[2], Ms Christiana Kondylo-Sideri[1,2], Dr Selvaprakash Karuppuchamy[2], Dr Esen Efeoglu[2], Dr Paula Meleady[1,2]

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PS2-59 **Engineering a lactate sensing and controlling system in CHO cells**

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PS1-60 **Custom cell culture media increased production by 70% in a platform CHO fed-batch process**

Dr Kimberly Curtis[1], Dr. Nan Lin[1], Dr. Zhou Jiang[1]

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PS1-61 **Breaking Boundaries: From Hybridoma Adaptation to the Development of Analytical Techniques**

Miss María Jesús Leopold[1,2], Dr. Ricardo Kratje[1,2], Dr. Marcos Oggero[1,2], Dr. Natalia Ceaglio[1,2]

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PS2-62 **In pursuit of a minimal genome: Establishment of a large-scale genome deletion strategy**

Mrs Melina Braeuer[1], Linus Weiss[1], Tobias Jerabek[1], Hannah Fahrion[1], Dr. Nadja Raab[2], Dr. Nikolas Zeh[3], Dr. Simon Fischer[3], Prof. Dr. Kerstin Otte[1]

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PS3-63 **Transient cell line for high-titer rAAV production with low-level hcDNA encapsidation**

Dr Ben Hudjetz[1], Sabine Schmidt-Hertel[1], Tamara Grabeck[1], Keerthana Srinivasan[1], Dr. Michael Mühle[1], Christian Niehus[1], Dr. Michelle Hussong[1], Kelly Cybulski[2], Tala Calvi[2], Anne MacIntyre[2], Akshay Gutha Ravichandran[2], Adam Hejmowski[2], Dr. Michelle Olson Peabody[2], Dr. Nikola Strempel[1], Dr. Markus Krieger[1]

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PS2-65 **Bridging the gap: perfusion scalability for process intensification using WAVE™ 25 bioreactor**

Mr Jeron Larsen[1], Ms Josefine Anfelt[2], Ms Susanna Tronnersjo[2]
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PS3-66 **Evaluation of Small Molecule Antagonists of Cellular Innate Immunity for Efficient Manufacturing of T-cell Therapeutics**

Dr. Jean-Simon Diallo, Dr. Jondavid de Jong, Ms. Keara Sutherland, Ms Andrea Vervoort
[1]Virica Biotech, Ottawa, Canada

PS1-67 **Designing a 1.5 L bench-scale model of a perfusion process**

Ms Josefine Anfelt[1], Mr Sahebagouda Alagur[2], Mr Christopher Prem Kumar Isaacraj[2], Mr Mike Dango[3], Mr Thomas Falkman[1]
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PS2-68 **High-throughput screening for high-performance cell culture media development**

Dr. Shan Gao[1], Mr. Matthew Tenorio[1], Mr. Hamid Soleymani[1], Dr. Xiaofei Wang[1], Dr. Yosuke Kurokawa[1], Dr. Ken Naruse[1], Dr. Omid Taghavian[1], Dr. David T. Ho[1], Dr. Chandana Sharma[1]
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PS3-69 **Large-Scale Production of Human iPSCs with Automated Stirred Tank Bioreactors for Bioprinting Applications**

Mrs Mira Genser Nir, Mrs Rukmini Ladi[1], Debbie L. L. Ho[2], Stacey Lee[2], Jianyi Du[2], Jonathan Weiss[2], Tony Tam[2], Soham Sinha[2], Danielle Klinger[2], Sean Devine[1], Art Hamfeldt[1], Hope Leng[2], Jessica Herrmann[2], Mengdi He[2], Lee Fradkin[2], Tze Kai Tan[2], David Standish[1], Peter Tomasello[1], Donald Traul[1], Noushin Dianat[3], Quentin Vicard[3], Kishore Katikireddy[1], Mark Skylar-Scott[2]
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PS1-70 **Optimizing Antibody Expression through Refined Vector Element Screening in Isogenic CHO Cell Lines**

Mrs Marzia Rahimi[1], Dr. Jesús Lavado García[1], Mrs Anna Christina Adams[1], Dr Lise Marie Grav[1], Prof Lars Keld Nielsen[1]
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PS2-71 **Engineering mammalian cell growth dynamics for biomanufacturing**

Dr Mauro Torres[1], Prof. Alan Dickson[1]
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PS3-72 **Internalization of DNA:PEI polyplexes in transient transfection of HEK293 cells is mediated by Glypican-4 coalescence**

Mr. Pol Pérez Rubio[1], Dr. Meritxell Vendrell Flotats[1], Ms. Elianet Lorenzo Romero[1], Dr. Laura Cervera Gràcia[1], Dr. Francesc Gòdia Casablancas[1], Dr. Jesús Lavado García[2]
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PS1-73 **Development of a CDM for duck cell process intensification for the cultured meat industry**

Mr Andy Díaz-Maneh[1,2], Mr. Andreu Camacho-Sucarrats[1,2], Dr. Javier Fuenmayor-Garcés[1], Dr. Natasa Ilic[1], Dr. Yuliana Enciso[1], Ms. Natalia García-Aranda[1], Dr. Mario Notari[1], Dr. Jesús Lavado-García[3], Dr. Francesc Gòdia[2], Dr. Raquel Revilla[1]
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PS2-74 **Baculovirus as a versatile tool for recombinant protein expression and mammalian cell line engineering**

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PS3-75 **Inducible expression systems for recombinant protein production in mammalian cells**

Ms Maria Toth[1], Dipl.-Ing. PhD. Manuel Reithofer[1], Priv.-Doz. Dipl.-Ing. Dr. Astrid Dürauer[1], Univ.Prof. Dipl.-Ing. Dr.rer.nat. Reingard Grabherr[1]
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PS1-76 **Evaluation of Targets for CHO Cell Line Engineering and Generation of Enhanced Host Cell Lines**

Mrs Ann-Cathrin Leroux[1], Ms Daniela Kirchmeier[1,2], Ms Jennifer Klein[1], Mr. Jannis Marzluf[1], Mr Daniel Ziegner[1], Mr. Christoph Zehe[1]
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PS2-77 **T22 peptide-conjugated GagGFP-VLPs: A novel approach for targeted therapy in metastatic colorectal cancer**

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PS3-78 **Inefficient transcription is a production bottleneck for artificial therapeutic BiTE® proteins**

Mr Tobias Jerabek[1], Ms Madina Burkhart[1], Ms Selina Goetz[2], Mr Benedikt Greck[2], Mrs. Anika Menthe[2], Dr. Ruediger Neef[2], Prof. Dr. Kerstin Otte[1]
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PS1-79 **Unleashing the Power of Perfusion: A Breakthrough in Cell Line Development for Intensified Processes**

Mr. Vincent Balassi[1], Ms. Mary Otto[1], Mr. Corey Kretzmer[1], Dr. Amber Petersen[1], Dr. Trissa Borgschulte[1], Dr David Razafsky[1]
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PS2-80 **CHO-Cell Expansion Optimization for Monoclonal Antibody Production**

Mr Luís Bernardo Silva[1], PhD Bassem Ben Yahia[1], PhD Wolfgang Paul[1]
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PS3-81 **HEK Cell line development to optimize rAAV production**

Dr Stefano Boi[1], Ms. Yi-Hsuan Huang[1], Dr. Sven Mathias[1], Dr. Monika Zauner[1], Ms. Martina Raasholm[1], Dr. Dominik Haidas[1], Ms. Angelika Hinkelmann[1], Mr. Najd Badri[1], Dr. Sadfer Ali[1], Dr. Kathrin Teschner[2], Dr. Ulrike Jung[1], Dr. Kristin Thiele[1]
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PS1-82 **Development of fed-batch-based processes for intensified rVSV-vectored SARS-CoV-2 vaccine production in suspension HEK293 cells**

Miss Cristina Aglaia Silva[1,2], Prof. Amine A Kamen[2], Prof. Olivier Henry[1]
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PS2-83 **DirectedLuck®: A careful transposon design boosts expression beyond the limit**

Dr Thomas Rose[1], Dr. Sven Krügener[1], Dr. Susanne Seitz[1], Dr. Annett Hillemann[1], Dr. Karsten Winkler[1], Ms. Anneliese Krüger[1], Ms. Anika Bauer[1], Ms. Nurgül Korkmaz[1], Ms. Fränzi Creuzburg[1], Ms. Anne Furthmann[1], Ms. Sophia Sörensen[1], Dr. Volker Sandig[1]
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PS3-84 **Developing inducible stable producer cell line for rAAV production via site-specific integration**

Dr Seongkyu Yoon[1], Mr Qiang Fu[1], Ms Emily Doleh[2], Prof. Mark Blenner[2]
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PS2-86 **Heterogeneity in Adeno-Associated Virus Transfection-Based Production Process Limits the Production Efficiency**

Mr Brian Ladd[1,2], Ms Sofia Tunmats[1,2], Prof Torbjorn Graslund[2,3], Prof Véronique Chotteau[1,2]
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PS1-88 **Comparison of CHO-K1 cell lines following serum-free and suspension adaptation.**

Mr Matthew Reaney[1], Dr. Jon Dempsey[2], Prof. Alan Dickson[1]
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PS2-89 **Unraveling Productivity-Enhancing Genes in CHO Cells via CRISPR Activation Screen Using Recombinase-Mediated Cassette Exchange System**

Ms Minhye Baek[1], Dr. Che Lin Kim[2], Dr. Su Hyun Kim[1], Dr. Karen Julie la Cour Karottki[2], Dr. Hooman Hefzi[2], Dr. Lise Marie Grav[2], Dr. Lasse Ebdrup Pedersen[2], Prof. Nathan E. Lewis[3], Prof. Jae Seong Lee[4], Prof. Gyun Min Lee[1]
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PS3-90 **Optimization of the Autographa californica multiple nucleopolyhedrovirus genome by CRISPR-Cas^9 for biologics production**

Miss Madhuja Chakraborty[1], Ms. Lisa Nielsen[1], Miss Jacqueline Powichrowski[1], Dr. Marc Aucoin[1]
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PS2-92 **DNA-based genomic barcoding for clonal diversity monitoring and control in cell-based complex antibody production**

Mr Niels Bauer[1], Mr. Christoph Oberist[1], Dr. Michaela Poth[1], Prof. Julian Stingele[2], Dr. Oliver Popp[1], Dr. Simon Auslaender[1]
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PS3-93 **Optimising a novel cell desiccation and storage protocol: an in vitro and in vivo study**

Ms Lady Barrios Silva[1]
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PS1-94 **Self-controlled synthetic cells for detection and counteraction of bacterial infections**

Mr Sushobhan Sarker[1], Mr Omkar Desai[1], Dr Natascha Gödecke[1], Dr Hansjörg Hauser[1], Dr Mario Köster[1], Prof Dr Dagmar Wirth[1]
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PS2-95 **Optimization of scalable rAAV-production for gene therapy – leveraging at-line amino acid measurements**

Dr Milla Neffling[1], Prasanna Srinivasan[2], John Joseph[2], Tam N T Nguyen[3], Graziella Piras[1], Prof. Anthony J Sinskey[4], Prof. Richard D Braatz[5], Jacqueline Wolfrum[2], Paul W Barone[2], Stacy L Springs[2]
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PS3-96 **Spent media analysis aids in determining metabolic mechanisms of superior CAR T-cell products**

Dr Milla Neffling[1], Heather Lin[2], Dejah Blake[2], William Liu[3], Subir Goyal[4,5], Ruby Freeman[2], Anupam Patgiri[3,5], Lily Yang[5,6], Edmund Waller[2,5], Sarwish Rafiq[2,5]

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PS1-97 **Systematic Bioprocess Characterisation of NISTCHO, a Freely Available Producer Cell Line**

Ms Larissa Hofer[1], Ms Jerneja Štor[1], Mr Dominik Hofreither[2], Ms Laura Liesinger[2], Dr. Veronika Schäpertöns[3], Mr Thomas Berger[3], Dr. Wolfgang Esser-Skala[3], Prof. Dr. Nicole Borth[1], Prof. Dr. Ruth Birner-Grünberger[2], Dr. Nikolaus Fortelny[3], Prof. Dr. Christian Huber[3]

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PS2-98 **Increasing LVV quality via stable overexpression of VSV-G in suspension producer cell lines**

Maximilian Klimpel[2], Dr. Susi Wudtke[1], Nikki Indresh Lal[2], Vathsalya Pabbathi[2], Melina Braeuer[2], Herbert Dersch[2], Dr Holger Laux[2], Vicky Pirzas[2]

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PS3-99 **Advancing Ferritin's Potential for Antigen Presentation in Vaccine Development**

Ms. Margarida Queluz Rodrigues[1,2], Ms. Sara Patão[1,2], Dr. Brian Kloss[3], Mrs. Mónica Thomaz[1,2], Mr. Tiago Nunes[1,2], Dr. Paula Marques Alves[1,2], Dr. António Roldão[1,2]

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PS1-100 **Establishment of novel CHO-MK cells and optimal culture strategy for enhancement of therapeutic protein production**

Dr. Junshin Iwabuchi[1,2], Ms Erike Widyasari Sukowati[1], Ms. Ryoko Aoki[1], Mr. Takashi Kaieda[1,2], Ms. Kayo Nishida[1,2], Ms. Michi Kubota[1,2], Dr. Takayuki Horiuchi[1,2]
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PS3-102 **Reality-cHEK – How Innate Immunity Impacts Lentivirus Production in HEK293 and How to Address It**

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PS2-104 **Unravelling the link between genotype and fast-growth via optimized CHO whole genome knockout screening**

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PS3-105 **Exploring different transcriptional responses in isogenic multi-copy CHO cells upon recombinant protein production**

Ms Giulia Scapin[1], Mr Leo Dworkin[3], Ms Daria Seergeeva[2], Ms Lise Marie Grav[1], Mr Gyun Min Lee[4], Mr Lars Keld Nielsen[2,5]
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PS1-106 **Amino acid response elements for inducible control of gene expression in Chinese hamster ovary cells**

Ms Maja Papež[1], Dr. Nicolas Marx[2], Prof. Dr. Nicole Borth[2]
[1]Austrian Centre of Industrial Biotechnology (acib) GmbH, Vienna, Austria, [2]University of Natural Resources and Life Sciences (BOKU), Vienna, Austria

PS2-107 **Scalability of spheroid-derived extracellular vesicles production in stirred system**

Mr. Thibaud Dauphin[1], Ms. Laurence De Beaurepaire[1], Dr. Apolline Salama[1], Ms. Karine Haurogne[1], Ms. Sophie Sourice[1], Mr. Quentin Pruvost[1], Dr. Eric Olmos[2], Dr. Steffi Bosch[1], Dr. Blandine Lieubeau[1], Dr. Mathilde Mosser[1]
[1]Oniris, INRAE, IECM, F-44300 Nantes, France, [2]Université de Lorraine, CNRS, LRGP, F-54000 Nancy, France

PS1-109 **Precise methylation of FUT8 promoter regions allows isolation of CHO cells with a fine-tuned glycoprofile**

Mr Victor Jimenez Lancho[1,2], Dr. Nicolas Marx[1], Prof. Nicole Borth[1,2]

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PS2-110 **Investigating Titre and Genome Packaging during Recombinant AAV (rAAV) Gene Therapy Viral Vector Production**

Miss Kseniia Pidlisna[1], Dr Pamela Gamba[2], Dr Vera Lukashchuk[2], Dr Michela Pulix[2], Dr Sue Podmore[2], Prof Mark Smales[1,3]

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PS1-112 **Genetically encoded sensor circuits for the development of therapies: a theragnostic approach**

Ms Eunice Gonçalves[1,2], Ms Ana Isabel Almeida[1,2], Dr Miguel Guerreiro[1,2], Dr Sofia Fernandes[1,2], Dr Ana Sofia Coroadinha[1,2]

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PS2-113 **Unveiling the mechanisms behind high rAAV titers in HeLaS3 platform using Genome Wide Genetic Screens**

Miss Filipa Moura[1,2], Miss Mariana Antunes[1,2], Dr Patrícia Gomes-Alves[1,2], Dr Paula M. Alves[1,2], Dr José Escandell[1,2]

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PS3-114 **Advancing T cell manufacturing through tight control of cell activation in stirred-tank bioreactors.**

Miss Constança Costa[1,2], Margarida S. Costa[1,2], Marta H. G. Costa[1,2], Nádia Duarte[1,2], Paula M. Alves[1,2], Margarida Serra[1,2]

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PS1-115 **Impact of oxygenation on hWJ-Mesenchymal Stromal Cells (MSCs) growth and EVs production in mixed bioreactors**

Mr Kevin Audoux[1], Dr Jessica Schiavi[1], Prof Eric Olmos[1]

[1]University Of Lorraine, CNRS, LRGP, Nancy, France

PS2-116 **Dual Technology Intensification- Fixed Bed Bioreactor Technology Combined with Viral Sensitizers for Adherent Cell Lines**

Dr. Jean-Simon Diallo[1], Emmanuelle Cameau[2], Megan Cloughley[2], Elena Godbout[3], Anne Landry[3], Andrew Chen[3], Ms. Keara Sutherland[1], Tianxiao Yang[1], Dr. Jondavid de Jong[1], Ms Andrea Vervoort[1]

[1]Virica Biotech, Ottawa, Canada, [2]Cytiva, Marlborough, USA, [3]Ottawa Hospital Research Institute, Ottawa, Canada

PS3-117 **Label-Free Quantitative Proteomic Analysis of CHO-DP12 and CHO-K1 Cells under ER Stress Conditions**

Miss Christiana-Kondylo Sideri[1,2], Dr Michael Henry[2], Dr Esen Efeoglu[2], Prof Paula Meleady[1,2]

[1]Life Sciences Institute, DCU, Dublin, Ireland, [2]School of Biotechnology, DCU, Dublin, Ireland

PS1-118 **Improvement of IgG Production in Chemically defined Systems via Protein Hydrolysate Supplementation**

Mr Brandon Wrage[1], Angel Varela-Rohena[1], Salewa Akande[1], Brittany Patterson[1]

[1]Kerry, Beloit, United States

PS2-119 **Enhanced production of AAV2 and AAV9 in HEK293 cells through DoE-optimization of triple plasmid ratio.**

Mr Sungje Park[1], Dr. Seunghyeon Shin[1], Prof. Haeshin Lee[2], Prof. Jae-Hyung Jang[3], Prof. Gyun Min Lee[1]

[1]Department of Biological Sciences, KAIST, Daejeon, South Korea, [2]Department of Chemistry, KAIST, Daejeon, South Korea, [3]Department of Chemical and Biomolecular Engineering, Yonsei University, Seoul, South Korea

PS3-120 **Optimizing T-cell expansion with a high-performance medium free of animal derived components.**

Dr. Joanna Kern[1], Mr Kyle Zastrow[1], Ms Lauren Kapus[1], Mr Evan Zynda[1], Mrs Anna Hachmann[1]

[1]Thermo Fisher Scientific, Grand Island, United States

PS1-121 **Novel human cell lines, HAT, for high-yield AAV production**

Dr. Yugo Hirai[1,2], Dr Yu-Hsin Chang[1,2], Ms. Kazuko Aizawa[2,3], Ms. Arisa Yamamoto[1,2], Mr. Ryo Asahina[1,2], Ms. Rena Moromizato[1,2], Ms. Michi Kubota[1,2], Prof. Kazuaki Nakamura[2,3], Dr. Takayuki Horiuchi[1,2]

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PS3-123 **A scalable insect cell (Sf9)-dual baculovirus system for non-viral gene therapy (NVGT) production**

Dr Adhvait Shah[1], Dr Swetha Kumar[1], Mr Hyun-Woo Kim[1], Dr Darrick Yu[1], Dr Jeong Lee[1]
[1]GMU CMC, Sanofi, Waltham, United States

PS1-124 **Thermo-Responsive Microcarrier as A New Tool for Expansion Cell Culture**

Dr Young-jin Kim[1], Mr. Shoya Hiratoko[1], Mr. Sora Ikeya[1], Dr. Toshinobu Toyoshima[1], Dr. Toshifumi Mogami[1]
[1]Tosoh Corporation, Ayase, Japan

PS2-125 **Accelerating CRISPR Therapies: A Scalable eVLP Manufacturing Platform for Breakneck Advances in Gene Therapies**

Dr. Lúcia Santos[1,2], MSc Rodrigo Nogueira[1,2], Dr. Ana Sofia Coroadinha[1,2]
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PS3-126 **Enhancing Outgrowth of Glutamine Synthetase Double KO in CHO-K1 using Directed Evolution**

Mr Rehmadanta Sitepu, Dr. Martina Baumann, Dr. Nicolas Marx, Prof. Nicole Borth
[1]Institute of Animal Cell Technology and Systems Biology, University of Natural Resources and Life Sciences (BOKU), Vienna, Austria

PS1-127 **Influence of different culture media exchange ratios on umbilical cord blood-derived Natural Killer cell expansion**

Mr Gabriel Costa[1,2], Isabel Doutor[1,2], Prof Ana Fernandes-Platzgummer[1,2]
[1]Department of Bioengineering and iBB – Institute for Bioengineering and Biosciences, Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal, [2]Associate Laboratory i[4]HB - Institute for Health and Bioeconomy at Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal

PS2-128 **Epigenetically Heritable Gene Expression Patterns Are Associated With Stress Resistance in CHO Cell Lines**

Assoc. Prof. Mark Blenner[1], Mr. Spencer Grissom[1], Zach Dixson[1], Prof Abhyudai Singh[1]
[1]University of Delaware, Newark, United States

PS3-129 **Defining and Manipulating Cellular Mechanisms Underpinning DNA Transfection Efficiency to Enhance Transient Recombinant Protein Production**

Dr James Budge[1], Prof. Mark Smales[1,2]
[1]University Of Kent, Canterbury, United Kingdom, [2]NIBRT, Dublin, Ireland

PS1-130 **Supplying NAD+ Precursor improves specific productivity of mAb and modulates glucose metabolism in CHO cells**

Hye-Jin Han[1], Ms. Hagyeong Kim[1], Mr. Hyun Gyu Yu[1], Mr. Jong Uk Park[1], Ms. Joo Hee Bae[1], Mr. Ji Hwan Lee[1], Prof. Jong Youn Baik[1]
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PS2-131 **Strategies to optimize the generation of high-titer CHO production cell lines**

Dr Alexandra Baer[1], Dr Peter Ravn[1]
[1]Bioneer A/S, Hørsholm, Denmark

PS3-132 **Investigation of the metabolism and fed-batch culture development of Jurkat cells**

Miss Markella Zacharouli[1,2], Prof Veronique Chotteau[1,2]
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PS1-133 **Engineering of CHO Cell Lipid Metabolism Results in Expanded ER and Enhanced Recombinant Biotherapeutic Production**

Dr James Budge[1], Dr Tanya Knight[1], Dr Jane Povey[1], Miss Joanne Roobol[1], Mr Ian Brown[1], Dr Gurdeep Singh[2], Dr Andrew Dean[2], Ms Sarah Turner[2], Dr Colin Jaques[2], Dr Robert Young[2], Dr Andrew Racher[2], Prof. Mark Smales[1,3]
[1]University of Kent, Canterbury, United Kingdom, [2]Lonza Biologics, Slough, United Kingdom, [3]NIBRT, Dublin, Ireland

PS2-134 **Towards an Understanding of Donor-to-Donor Heterogeneity in In Vitro Natural Killer Cell Production**

Mr Brian Ladd[1,2], Ms Markella Zacharouli[1,2], Dr. Per-Henrik Holmqvist[3], Dr. Stefanie Renken[3], Dr. Pontus Blomberg[4,5], Prof Véronique Chotteau[1,2]

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PS3-135 **Building up a tailored, CHO host library via cell line engineering**

Dr Sam Zhang[1], Dr. Yu Zhang[1], Dr. Tao Sun[1], Dr. Shuai Wang[1], Ms. Qiao Gao[1], Dr. Zichen Qian[1], Dr. Weichang Zhou[1]

[1]Wuxi Biologics, Shanghai , China

PS2-137 **Evaluation of an Engineered CHO Cell Line as novel host for Enhanced Biopharmaceutical Production**

Mrs. Kristin Thiele[1], Dr. Ann-Cathrin Leroux, Dr. Jimit Shah, Ms. Imme van der Kamp, Mr Lukas Klein, Ms. Martina Raasholm, Ms. Carmen Leichtle, Dr. Christoph Zehe

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PS3-138 **Novel Directed-Evolution Approach to Engineering Cells for Significantly Improved Therapeutic Protein and Viral Vector Production**

Mr Larry Forman[1], Dr Kathy Ngo[1], Dr Lawrence Chasin[2]

[1]Cho Plus, South San Francisco, United States, [2]Columbia University, NewYork, United States

PS1-139 **Achieving High Monoclonal Antibody Production in Fed-Batch Cultures by Engineering Requisite Phenotypes into CHO Cells**

Mr Larry Forman[1], Dr Kathy Ngo[1], Dr Lawrence Chasin[2]

[1]Cho Plus, South San Francisco, United States, [2]Columbia University, New York, United States

PS2-140 **A cell line biosensor for viral detection and quantification**

Miss Eunice Gonçalves[1,2], Ana Isabel Almeida[1,2], Miguel Guerreiro[1,2], Sofia Fernandes[1,2], Ana Sofia Coroadinha[1,2]

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PS3-141 **Exploring the potential of secreted products from canine mesenchymal stromal/stem cells against antibiotic-resistant bacteria**

Mrs Amira Aburza[1], Prof Xavier Donadeu[1], Dr Gavin Paterson[1], Dr Cristina Esteves[1]
[1]University Of Edinburgh, Roslin Institute , Edinburgh , United Kingdom

PS1-142 **Implementation of a scalable downstream processing of immunoregulatory small extracellular vesicles**

Mr Quentin Pruvost[1], Mr Thibaud Dauphin[1], Ms Clémentine Claire[1], Ms Valérie Lalanne[1], Mr Grégoire Mignot[1], Ms Blandine Lieubeau[1], Mr Jean-Marie Bach[1], Ms Apolline Salama[1], Ms Laurence De Beaurepaire[1], Ms Mathilde Mosser[1]
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PS2-143 **Novel isolation and activation platform with active-release technology for scalable cell therapy manufacturing**

Mr. George Prout, Maren Grün[1], PhD Hany Meås[2], Sylvie Kjær[2], PhD Artur Javmen[3], Joanna Kern[4], Hendrik Adams[5], Laurens Sierkstra[5], Eugene Kang[6], PhD Tuva Hereng[2], Heidi Vebø[2]
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PS2-146 **2G-UNic genetic enhancers applied in the CGT field for increasing viral titers and payload expression**

Dr Maurice van der Heijden[1], Bart Engels[1], Annemarie de Jel[1], Chantal Tilburgs[1], Elena Gugiatti[1], Bircan Coban[1], Raymond Verhaert[1]
[1]ProteoNic, Leiden, Netherlands

PS1-148 **Improving Monoclonal Antibody Production in CHO Cells for Gastric Cancer: Assessing Promoters and Vector Designs**

Dr Yesenia Latorre[1,2], Ms. Isis Araya[2,6], Dr Carla Gutiérrez[2], Dr. María Carmen Molina[1], Dr. Claudia Altamirano[2,3,4,5]
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PS2-149 **Enhancing Monoclonal Antibody Yield in CHO Cells for Gastric Cancer: Assessing Ratios of Global Regulators**

Dr Yesenia Latorre[1,2], Ms Isis Araya[2,3], Dr Karen Toledo[1], Dr Carla Gutierrez[2], Mr Jose Rodriguez[2], Dr María Carmen Molina[1], Dr Claudia Altamirano[2,4,5,6]

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PS3-150 **Improvement of the production of an innovator human monoclonal antibody again MICA receptor**

Mr Jose Alejandro Rodriguez-Siza[1], Dra Karen Toledo-Stuardo[3], Dr Mauricio Vergara[1,4], Dra Maria Carmen Molina[3], Dra Claudia Altamirano[1,2,4,5]

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PS1-151 **Rational design of inducible rep gene for rAAV packaging cell line generation in HEK293 cells**

Mrs Laia Bosch-Molist[1], Dr. Xavier León[2], Dr. Miquel Garcia[2], Dr. Laura Cervera[1], Dr. Francesc Gòdia[1]

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PS2-152 **An improved CRISPR-Cas9 protein-based method to engineer Sf9 insect cell genes**

Mr Miguel Graça[1,2], Dr. Nikolaus Virgolini[1,2], Dr. Ricardo Correia[1,2], Dr. Jose Escandell[1,2], Dr. António Roldão[1,2]

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PS1-154 **Use of Drosophila S2 Cells for Production of Highly Immunogenic Antigens**

Dr. Magdalena Skrzypczak[1], Dr. Stine Clemmensen[1], Ms. Tanja Domeyer[1], Dr. Anders H. Hansen[2], Prof. Adam F. Sander[3], Dr. Louise Goksøyr[3], Dr. Cyrielle E. Fougeroux[3], Assistant Prof. Manja Idorn Haugum[4], Dr. Lasse Ebdrup Pedersen[5], Dr. Willem A. de Jongh[3]

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PS2-155 **Large-scale Production of Extracellular Vesicles derived from hPSC for cardiac repair**

Ms Ana Meliciano[1,2], Dr Ana Filipa Louro[1,2], Mr Pedro Vicente[1,2], Ms Claudia Diniz[1,2], Mr João Jacinto[1,2], Dr Margarida Serra[1,2]

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PS3-156 **Synthetic biology and Inducible genetic circuits: A pathway to next generation Biotherapeutics**

Dr Rajinder Kaur[1], Ms Sheryl Lim, Dr. Alfonso Blanco, Dr. Ioscani Jimenez Del Val

[1]University College Dublin, Dublin, Ireland

PS1-157 **Data-driven reprogramming towards plasma cell phenotype to enhance recombinant protein production**

Dr. Ieva Berzanskyte

PS2-158 **Perfusing a mixture of four cell lines – insight into cell line divergence**

Ms Anna Christina Adams[1], Dr. Lise Marie Grav[1], Prof Andreas Laustsen[2], Prof Lars Keld Nielsen[1]

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Theme 02. Product Quality

Poster Session 1, June 24, 2024, 2:15 PM - 3:45 PM
Poster Session 2, June 24, 2024, 7:30 PM - 9:00 PM
Poster Session 3, June 25, 2024, 2:30 PM - 4:00 PM

ESACT

PS3-159 **Characterization and Risk Assessment of Polysorbate-Degrading Hydrolases in Monoclonal Antibody Products**

Mr. Stefan Schneider[1], Mr. Linus Weiß[1,2], Ms. Melanie Maier[2], Dr. Nikolas Zeh[2], Dr. Valerie Schmieder-Todtenhaupt[2], Mr. Daniel Heinzelmann[2], Dr. Moritz Schmidt[2], Prof. Dr. Kerstin Otte[1], Dr. Daniel Lakatos[2], Dr. Simon Fischer[2]
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ESACT

PS1-160 **Creating robust calibration models for Raman spectroscopy to monitor and control cell culture condition**

Mr Wataru Kobayashi[1], Mr Hiroaki Yamanaka[1], Ms Ayaka Suetsuna[1], Mr Natsuki Fukui[1], Mr Soichiro Shimoda[1]
[1]Yokogawa Electric Corporation, [2-9-32] Nakacho, Musashino-shi,, Japan

PS2-161 **Heparin-binding motif mutations of human diamine oxidase allow the development of a first-in-class histamine-degrading biopharmaceutical**

Dr Elisabeth Gludovacz[1], Kornelia Schuetzenberger, Marlene Resch, Katharina Tillmann, Karin Petroczi, Markus Schosserer, Sigrid Vondra, Serhii Vakal, Gerald Klanert, Jürgen Pollheimer, Tiina A. Salminen, Bernd Jilma, Nicole Borth, Thomas Boehm
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ESACT

PS3-162 **Rapid glycosylation profiling of capsid proteins of COVID-19 and AAV viruses**

Dr Yongjing Xie[1], Dr Michael Butler[1]
[1]National Institute for Bioprocessing Research & Training (NIBRT), Dublin [4], Ireland

PS1-163 **High-Throughput Raman Spectroscopy Titer Prediction in Pharmaceutical Manufacturing: PAT as a Tool for Analytical Reduction**

Dr João Medeiros Garcia Alcântara[1], Dr Mengyao Li[1], Mr. Jean-Michel Kessler[1], Dr. Annemarie Schoenfeld[1], Dr. Benjamin Sommer[1], Dr. Olivier Graf[1], Dr. David Garcia[1]
[1]Novartis Pharma AG, Basel, Switzerland

PS2-164 **A Novel Strategy to Reduce Polysorbate Degradation? Influence of Cultivation Media on CHO Hydrolase Expression**

Mr Linus Weiss[1,2], Ms. Elena Bollgönn[2], Dr. Nikolas Zeh[2], Ms. Melanie Maier[2], Mr. Andreas Unsöld[2], Prof.Dr. Kerstin Otte[1], Dr. Simon Fischer[2]

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PS3-165 **Interplay of Heavy Chain introns influences efficient transcript splicing and product quality of mAbs**

Dr Suzanne Gibson[1], Dr Emma Kelsall[1], Dr Claire Harris[1], Dr Diane Hatton[1], Dr Sarah Dunn[1], Dr Titash Sen[1]

[1]Cell Culture and Fermentation Sciences, BioPharmaceuticals Development, R&D, AstraZeneca, UK

PS1-166 **New Cell Culture Analyser Technology at Large Scale: Case study of implementation, issues and resolution**

Dr Jesús E. Martínez-López[1], Dr Josiah O'Sullivan[1], Dr Gearóid Duane[1], Dr Andrew Kelly[1], Ms Anne Marie Molloy[1]

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PS2-167 **Fine-Tuning Post-Translational Modifications in Mammalian Cells: Exploring Media Optimization and Gene Editing Strategies**

Mr Lateef Aliyu[1], Dr Michael Betenbaugh[1]

[1]Johns Hopkins University, Baltimore, United States

PS3-168 **Advancing Raman model calibration for perfusion bioprocesses**

Mr Louis Hellequin[1]

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PS3-171 **Investigating the effect of linker peptides on the fragmentation of Fc-fusion protein in mammalian cells**

Mrs Eunji Lee[1,2], Prof Yeon-Gu Kim[1,2]

[1]Korea Research Institute of Bioscience and Biotechnology, Daejeon, South Korea, [2]Korea National University of Science and Techonology (UST), Daejeon, South Korea

PS1-172 **Considerations for Selecting Hydrolysates for use in Cell Culture Process**

Mr Jagadeesh Kanagala[1], Mr Madhava Ram Paranandi[1]

[1]Kemwell Biopharma, Bangalore, India

PS2-173 **Protein database modification to construct CHO SWATH-MS spectral library for quantitative profiling of high-risk HCPs**

Dr Tomoko Matsuda[1,2,3], Prof. Norichika Ogata[1,2,3], Ms. Mari Yukimaru[3], Ms. Ryoko Tani[3], Dr. Hideo Takahata[3], Prof. Takeshi Omasa[1,2,3]

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PS3-174 **A novel bioassay for predicting the immunogenicity of biologics in pre-clinical stages of development**

Miss María Jesús Leopold[1,2], Dr. Agustina Gugliotta[1,2], Dr. Marina Etcheverrigaray[1,2], Dr. Eduardo Mufarrege[1,2]

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PS2-176 **Cell-free Raman spectroscopy in Ambr® bioreactor system utilizing automated flocculation**

Mr. Tobias Habicher[1], Mr Nicolas Maguire[1], Dr. Thomas Wucherpfennig[1], Ms. Carina Guelch[1], Dr. Jochen Schaub[1]

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PS3-177 **Without a Trace: Multiple Knockout of Host Cell Hydrolases to Tackle the Polysorbate Degradation Challenge**

Mr Linus Weiss[1,2], Dr. Nikolas Zeh[2], Ms. Melanie Maier[2], Dr. Simon Fischer[2], Prof. Kerstin Otte[1]

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PS1-178 **Immunocompetent human 3D CNS cell models to advance ATMP development**

Miss Catarina M. Gomes[1,2], Dr. Gabriela Silva[1,2], Dr. Stephan Holtkamp[3], Dr. Maria João Sebastião[1], Dr. Daniel Simão[1], Dr. Mark Trautwein[3], Dr. Patrícia Gomes-Alves[1], Dr. Catarina Brito[1,2]

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PS2-179 **Amplification and fragmentation free Nanopore sequencing enables direct identification of adeno-associated virus (AAV) ssDNA**

Ms Alice Karlsson[1], Mr Maximilian Karlander[1], Mr Martin Ryner[2], Dr Luigi Grassi[3], Dr Claire Dobson[3], Dr Janet Saunders[3], Dr Fiona Cusdin[3], Dr Lekan Daramola[3], Dr Diane Hatton[3], Dr Magdalena Malm[1], Prof Johan Rockberg[1]

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PS3-180 **A case study for ultrafiltration of high concentration mAb –Challenges and mitigation strategy**

Mrs Anindita Das[1], Mr Kishor Galani[2], Mr Abhishek Bhatt[3], Mr Rijikappoor Nagoorkani[4], Mr Madhava Paranandi[5]

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PS1-181 **Well Characterised Panel of Bovine Embryonic Stem Cells for Cultivated Meat Applications**

Ms Niamh Hyland[1], Ms Elena Silverstein[1], Dr Max Pickup[1], Dr Joe Kelk[1], Dr Britt Tye[1], Dr Deepika Rajesh[1]

[1]Roslin Technologies, Midlothian, United Kingdom

PS2-182 **Unlocking the Power of Antibodies: The Impact of a sugar analogue on Core-Fucosylation**

Dr Martina Grabner[1], Ms. Melanie Nguyen[1], Mrs. Katherine Hellman[2], Dr. Aline Zimmer[1]

[1]Merck Life Science KGaA, Darmstadt, Germany, [2]Millipore Sigma, Lenexa, USA

PS3-183 **Dial-A-Sugar: Characterisation of Inducible Genetic Circuits to Control mAb Glycosylation**

Ms Sheryl Li Yan Lim[1], Dr Apostolos Tsopanoglou[1], Dr Rajinder Kaur[1], Dr Alfonso Blanco[2], Dr Ioscani Jiménez del Val[1]

[1]School of Chemical & Bioprocess Engineering, University College Dublin, Dublin, Ireland, [2]Flow Cytometry Core Technologies, Conway Institute, University College Dublin, Dublin, Ireland

PS1-184 **Well-Characterised Porcine iPSCs and c-Myc quantification for cultivated meat applications.**

Dr Max Pickup[1], Ms Niamh Hyland[1], Ms Sarah Ho[1], Dr Jorge Santoyo Garcia[1], Dr Madeleine Carter[1], Dr Pritika Singh[1], Dr Britt Tye[1], Dr Sheena Fraser[1], Dr Joe Mee[1], Dr Deepika Rajesh[1]

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PS2-185 **SialMAX: maximising biopharmaceutical α-2,6-sialylation in CHO Cells**

Miss Cristina Abascal Ruiz[1], Dr Mina Ghahremanzamaneh[1], Dr Alfonso Blanco[2], Prof. Ioscani Jimenez del Val[1]
[1]School of Chemical & Bioprocess Engineering, University College Dublin, Dublin, Ireland, [2]Flow Cytometry Core Facilities, Conway Institute, University College Dublin, Dublin, Ireland

PS3-186 **Development of innovative orthogonal analytical tools for in-depth size determination and separation of AAVs**

Ms Sabrina Leigheb[1], Catarina Maia[2], Verena Buchacher[1], Maral Rahimzadeh[1], Patricia Pereia Aguilar[3], Astrid Dürauer[1]
[1]University of Natural Resources and Life Sciences (BOKU), Vienna, Austria, [2]Instituto Superior Técnico, Lisbon, Portugal, [3]Austrian Center of Industrial Biotechnology (ACIB), Vienna, Austria

PS1-187 **Tailoring Critical Protein Quality Attributes with Feeds**

Mrs Kate Hellman[1], Martina Grabner
[1]Milliporesigma, Lenexa, United States

PS2-188 **AAV2 capsid fusion of large protein domains: multivariable insertion sites breakdown**

Miss Mariana Valentim Ferreira[1,2], Miss Marina Curto[1,2], Dr Ana Sofia Coroadinha[1,2]
[1]iBET-Instituto de Biologia Experimental e Tecnológica, Lisbon, Portugal, [2]ITQB- Instituto de Tecnologia Química e Biológica António Xavier, Lisbon, Portugal

PS3-189 **TheraPRO® CHO Media System: Streamlining Protein Production for Accelerated Antibody Therapeutics**

Dr. Jyoti Rawat[1], Dr Josi Buerger[1], Ms Ioanna Zormpa[1], Dr Ivan Carubelli[1], Mr Dipankar Borgayari[1], Mr Jacob McCowen-Smith[1], Ms Lucy Tate[1], Ms Aymaan Rahman[1], Mr Harinath Makanaboina[1], Dr Kenneth Low[2]
[1]Lonza Bioscience, Slough, United Kingdom, [2]Lonza Bioscience, Walkersville, USA

PS1-190 **Know your AAV - Quality Control starts during Process Development**

Ms Maren Lehmkuhl[1], Dr. Mareike Schulz[1], Julia Engel[1], Dr. Tim Steffens[1]
[1]Sartorius Xell GmbH, Schloß Holte-Stukenbrock, Germany

PS2-191 **Impact of carbon dioxide ingress in DS on Gene Therapy Drug Substance's pH and Quality**

Dr Marie Haufroid[1]
[1]Ucb, Leuven, Belgium

PS1-193 **Novel Continuous Production System for Standardized Extracellular Vesicles from immortalized human Mesenchymal Stromal Cells**

Dr Klaus Graumann[1], Ms. Melanie Reininger, Dr. Roland Prielhofer[1], Ms. Claudia Lindner[1], Dr. Ingrid Hartl[1]
[1]Phoenestra Gmbh, Linz, Österreich

PS3-195 **Characterization of Antibody N-glycosylation from a Freely Available Producer CHO Cell Line: NISTCHO**

Mr Thomas Berger[1], Dr. Veronika Schäpertöns[1], Ms. Larissa Hofer[2], Ms Jerneja Štor[2], Prof. Nicole Borth[2], Prof. Christian Huber[1]
[1]Paris Lodron University Salzburg, Salzburg, Austria, [2]University of Natural Resources and Life Sciences Vienna, Vienna, Austria

PS1-196 **Evaluating Intracellular Protein Expression Levels of Antibody Chains in CHO Cells to Identify Productivity Bottlenecks**

Ms Maja Semanjski[1], Ms Urša Šipec[1], Ms Petra Sečnik[1], Ms Nina Pirher[1], Mr Lovro Kramer[1]
[1]Novartis, Menges, Slovenia

PS2-197 **Mesenchymal Stromal Cells retain their hematopoietic support capacity post cryopreservation without the need for revitalization**

Miss. Ana Lúcia Tiago[1,2,3], Miss. Maria Catarina Carreira[1,2,3], Prof. Cláudia Lobato da Silva[1,2,3], Dr. Ana Fernandes-Platzgummer[1,2,3]
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PS3-198 **Technical insight into product testing for AAV: Advancing quality assessments**

Mr Stuart Wright[1], Dr Lisa Blackwood[1], Mr Lorenzo Tudini[1]
[1]Sartorius Stedim Biooutsource, Glasgow, United Kingdom

PS1-199 **Characterization of cell lines with enhanced antibody dependent cell cytotoxicity**

Dr Tiffany Mclamarrah[1], Dr. Zach Goldblatt[1], Jennifer Tedstone[1], Victor Cairns[1], Dr. Jack Scarcelli[1]
[1]Sanofi, Framingham, United States

PS2-200 **Elucidating the impact of host cell protein populations on monoclonal antibody production**

Ms Jodie McAvinue[1], Dr Stanislas Helle[1], Dr Cillian McCabe[2], Dr Kevin Turner[2], Dr Edel Durack[3], Prof Sarah Hudson[1]
[1]Department of Chemical Sciences, Bernal Institute, SSPC the SFI Research Centre for Pharmaceuticals, University of Limerick, Limerick, Ireland, [2]Eli Lilly, Kinsale, Ireland, [3]Department of Biological Sciences, University of Limerick, Limerick, Ireland

PS3-201 **Contactless Biomass Monitoring for Bioprocessing Using bio-reflectance Based Sensors**

Dr Lindsey Male[1]
[1]Aber Instruments, Aberystwyth, United Kingdom

PS1-202 **Can IgG glycosylation be controlled through process parameters? A systematic analysis**

Mr Javier Bravo-Venegas[1], Mr Jose Rodriguez-Siza[1], Prof Maria Molina Sampayo[2], Prof Marcela Hermoso[2,3], Prof Julio Berrios[1], Prof Claudia Altamirano[1,4]
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PS2-203 **High throughput screening for product quality attributes early during mammalian cell line generation**

Dr Katharina Köther[1], Dr. Michaela Strotbek[1], Dr. Anne Sydow[1], Dr. Simon Fischer[1], Mr Sebastian Püngel[1], Dr. Chi-Ting Ho[1], Mr Jürgen Fieder[2], Ms Annika Held[1], Dr. Benjamin Renner[2], Ms Corinna Ruedi[1], Ms Katja Lameli[1], Ms Rebecca Krieg[2], Ms Birgit Sonntag[1], Dr. Patrick Schulz[2], Dr. Joachim Bär[1], Dr. Dennis Blank[1]
[1]Launch & Innovation, Boehringer Ingelheim, Biberach, Deutschland, [2]Development Biologicals, Boehringer Ingelheim, Biberach, Deutschland

PS3-207 **Screening of excipients as potential stabilizers for oncolytic vesicular stomatitis virus (VSV) drug product**

Dr Mareike Elvert[1], Julia Jo Casanovas[1], Dr Jorge Soza Ried[2], Dr Ingo Gorr[2], Dr Martin Dass[2]
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Theme 03. Data, Cells and Processes

Poster Session 1, June 24, 2024, 2:15 PM - 3:45 PM
Poster Session 2, June 24, 2024, 7:30 PM - 9:00 PM
Poster Session 3, June 25, 2024, 2:30 PM - 4:00 PM

PS1-208 **Fast Raman spectroscopy model generation for bio-pharmaceutical process monitoring and control.**
Mrs Selina Spiesschaert[1]
[1]Novartis, Anbergerg, Austria

PS2-209 **Soft-sensor for monitoring CHO cell pools producing SARS-CoV-2 spike protein in a fed-batch process**
Mr Juan Sebastian Reyes Davila[1], Dr Lan Pham Phuong[2], Dr Olivier Henry[1], Mr Raul Molina[3]
[1]Polytechnique Montreal, Montreal, Canada, [2]National Research Council Canada, Montreal, Canada, [3]Proelium, Bogota, Colombia

PS3-210 **Comprehensive modeling of cell culture profile using Raman spectroscopy and machine learning**
Dr Hiroki Tanemura[1], Dr Ryunosuke Kitamura[1], Ms Yasuko Yamada[1], Dr Masato Hoshino[1], Mr Hirofumi Kakihara[1], Dr Koichi Nonaka[1]
[1]Daiichi Sankyo Co., Ltd., , Japan

PS1-211 **Towards the automated analysis of protein N-linked glycosylation pathways via an open-source computational framework**
Mr Konstantinos Flevaris[1], Dr. Pavlos Kotidis[1], Prof. Kiyoko Aoki-Kinoshita[2], Prof. Cleo Kontoravdi[1]
[1]Imperial College London, London, United Kingdom, [2]Glycan & Life Systems Integration Center (GaLSIC), Soka University, Tokyo, Japan

PS2-212 **CHO Cell Culture with Digital Twins: A Practical Roadmap for Implementation**
Mr Jannik Richter[1], Mr Qimin Wang[2], Mr Phil Thiel[1], Mr Ferdinand Lange[1], Prof. Dr. Xiaoying Zhuang[2], Dr. Dörte Solle[1], Prof. Dr. Sascha Beutel[1]
[1]Institute of Technical Chemistry, Leibniz University, Hanover, Germany, [2]Institute of Photonics, Leibniz University, Hanover, Germany

PS3-213 **Leveraging prior knowledge to validate a bioreactor model across scales and cell lines**
Dr Joana Saldida[1], Dr Viktoria Gkoutzioupa[2], Prof Alexandros Kiparissides[2], Dr Edward Close[1], Dr Sarah Fadda[1]
[1]Siemens Industry Software Limited, London, United Kingdom, [2]Department of Biochemical Engineering, University College London, London, United Kingdom

PS1-214 **Integrated culture system automatically collects data and controls cultivation in digital twin optimized condition.**

Dr Hiroaki Yamanaka[1], Mr. Natsuki Fukui[1], Mr. Souichirou Shimoda[1]

[1]Yokogawa Electric Corporation, Musashino-shi, Tokyo, Japan

PS2-215 **Genome-scale modeling of CHO cells unravel the critical role of asparagine in feed media**

Dr Kuin Tian Pang[1,2,3], Mr Yi Fan Hong[1], Dr Fumi Shouzi[4], Shunpei Furomitsu[4], Mr Matthew Myint[1], A/Prof Ying Swan Ho[1], Dr Yaron Sibelberg[5], Dr Ian Walsh[1], Dr Meiyappan Lakshmanan[1,6]

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PS3-216 **Demonstrating Key Processes of the T Cell Therapy Workflow in Chemically Defined Media.**

Anastassia Tselikova, Shahram Shahabi, Chandana Sharma

[1]FUJIFILM Irvine Scientific, Santa Ana, United States

PS1-217 **EEM coupled with second-order data for monitoring SARS-CoV-2 Spike protein in mammalian cell cultures**

Mr Javier Villarraza[1,2], Ms Kimey Denise Mendoza[1], Dr Agustina Gugliotta[1,2], Dr Ernesto Garay[1,2], Dr Marina Etcheverrugaray[1,2], Dr Claudio Prieto[1,3], Dr María Celeste Rodríguez[1,2,4]

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PS3-219 **Blending of chemically-defined liquid media for efficient screening of medium components in antibody production**

Mr Hirotaka Kuroda[1,2,3], Mr Kazuya Sorada[1], Dr. Noriko Yamano-Adachi[1], Dr. Junko Iida[2,3], Prof. Takeshi Omasa[1]

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PS1-220 **Beyond the Bench: Revolutionizing Cell Line Development with Data Driven Digital Solutions**

Ms Paloma Diaz-Fernandez[1], Mr Vara Prasada Rao Sankarasetty[1]

[1]Biopharm Process Research, Drug Substance Development, GSK, Stevenage, United Kingdom

PS2-221 **Quantitative influenza A virus proteomics: impact of host cell line and virus seed**

Mr Jan Küchler[1]
[1]*Mpi Magdeburg, Magdeburg, Germany*

PS1-223 **Developing new host reporter cell line for rapid screening of targets for increasing mAb productivity**

Dr Katarzyna Sobkowiak[1], Dr Julie Frentzel[1], Ms Marie-Noelle Vesin[1], Dr Julien Douet[1]
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PS2-224 **Lifecycle DOE - Leveraging Cell Culture Development Data for Late Stage Success**

Dr Thomas Wucherpfennig[1], Marco Kunzelmann, Philipp Brosig, Dr. Sabine Arnold
[1]*Boehringer Ingelheim Pharma GmbH & Co. KG, Biberach an der Riss, Germany*

PS3-225 **Harnessing HTP Automation Technologies and Modelling Approaches to Uplift mAbs/BsAbs Production through HID Process**

Dr Deniz Demirhan[1], Dr Viswanathgouda Maraligannavar[1], Ms Anita Dabek[1], Ms Gheorghe Alexandra Gabriela[1], Dr Andrew Dean[1], Dr Sandeep Ranpura[1]
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PS1-226 **Integrating industry leading datasets with genome scale metabolic models to direct CHO cell metabolic engineering.**

Mr Benjamin Strain[1], Dr Pavlos Kotidis[2], Dr Holly Corrigall[2], Prof. Cleo Kontoravdi[1]
[1]*Department of Chemical Engineering, Imperial College London, London, United Kingdom,* [2]*BioPharm Process Research, GSK, Stevenage, United Kingdom*

PS2-227 **Unveiling secrets: Pathway analysis provides molecular insights into stable lentiviral packaging and producer cell lines**

Mr Jona Röscheise[1], Ms., Prof., Dr., Kerstin Otte[1], Mr, Dr. Holger Laux[2]
[1]*Iab Hochschule Biberach (AG Otte), Biberach an der Riß, Germany,* [2]*CSL Behring, Marburg, Deutschland*

PS3-228 **Assessing genetic plasticity – Comparative analysis of HEK293 cells in response to evolutionary pressures**

Mr Georg Peter Smesnik[1], PhD Nikolaus Virgolini[1], Dr. Astrid Dürauer[1], Prof. Dr. Nicole Borth[1]
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PS1-229 **Biacore™ 8K+ surface plasmon resonance system as a tool in cell line development**

Dr Johanna Rodhe[1], Bahareh Motaghi Moghaddam Shahri[1], Albin Larsson[1], Malin Kruukka[1], Dr Prajakta Khalkar[1], Dr Ann Lövgren[1], Daniel Ivansson[1]
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PS2-230 **From Cells to Culture: Modelling the Dynamic Behaviour of CHO Cell Culture for Biotherapeutic Production**

Mr Alejandro Avilan Garzon[1,2], Dr Bruno Ebel[1], Dr David Pfister[2], Prof Eric Olmos[1]
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PS3-231 **Integrating metabolomics and proteomics for CHO cell bioprocess improvement**

Mr. Luke Johnston[1], Miss Darina Stoyanova[1], Dr Mark Rendall[2], Dr Jeff Keen[2], Dr Karl Burgess[1]
[1]University Of Edinburgh, Edinburgh, United Kingdom, [2]FUJIFILM Diosynth Biotechnologies, Billingham, United Kingdom

PS1-232 **Advancing Downstream Processing of AAVs: From Mechanistic to Hybrid Modelling in Anion Exchange Chromatography**

Ms Martina Winter[1], Dr. Theresa Scharl[2], Dr. Astrid Dürauer[1]
[1]Institute of Bioprocess Science and Engineering, University of Natural Resources and Life Sciencess (BOKU) , Vienna, [119]0, [2]Institute of Statistics, University of Natural Resources and Life Sciencess (BOKU) , Vienna, [119]0

PS2-233 **Genome-Scale Modelling to Identify Lactate Reduction Strategies in CHO Cell Cultures**

Mr James Morrissey[1], Dr. Ayca Cankorur-Cetinkaya[2], Dr. Jonathan Welsh[2], Dr. Annie J. Harwood-Stamper[2], Prof. Cleo Kontoravdi[1]
[1]Imperial College London, London, United Kingdom, [2]AstraZeneca, Cambridge, United Kingdom

PS2-236 **Accelerated Development of Novel Cell and Gene Therapies through Automated Production of Viral Vectors**

Mr. Maxime Rantz[1], Dr. Wen Clifford[2], Dr. Jana Hersch[3], Dr. Chris Smith[3], Dr. Jessy Sheng[4], Dr. Christoph Freiberg[1]
[1]Genedata AG, Basel, Switzerland, [2]Genedata Inc., London, UK, *[3]Genedata Inc., Boston, USA, [4]Genedata Inc., San Francisco, USA*

PS3-237 **Structured Knowledge Management Platform for Bioprocess Development**

Dr Eric Abellan[1], Dr. Wen Clifford[2], Dr. Maxime Rantz[1], Dr. Jana Hersch[3], Dr. Jessy Sheng[4], Dr. Christoph Freiberg[1]
[1]Genedata AG, Basel, Switzerland, [2]Genedata Inc., London, UK, [3]Genedata Inc., Boston, USA, [4]Genedata Inc., San Francisco, USA

PS1-238 **Accelerating Upstream Process Development Through Automated Data Processing, Analysis, and Dynamic Model Assembly**

Mr Kallum Doyle[1,2], Prof. Brian Glennon[1,2], Dr. Ioscani Jiménez del Val[2]
[1]Applied Process Company (APC), Cherrywood, Ireland, [2]University College Dublin (UCD), Belfield, Ireland

PS3-240 **Time-Resolved Mass Spectrometry-Based Multi-Omics Characterisation of NISTCHO Cellular Function In Response To Nutrient Influx**

Mr. Dominik Hofreither[1], Ms. Larissa Hofer[2], Ms. Laura Liesinger[1], Dr. Veronika Schäpertöns[3], Ms. Jerneja Štor[2], Ao.Univ.Prof. Dr. Nicole Borth[2], Univ.Prof. Dr. Ruth Birner-Grünberger[1]
[1]Technical University of Vienna, Vienna, Austria, [2]University of Natural Resources and Life Sciences, Vienna, Austria, [3]University of Salzburg, Salzburg, Austria

PS1-241 **Rapid and high-throughput cell count & viability assessment from label-free images using CellAi software.**

Dr Alessandra Prinelli[1]
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PS2-242 **Digital twin – a tool for improving mAb productivity in continuous CHO cell culture**

Dr Seongkyu Yoon[1], Mr Zhao Wang[1], Prof Yannis Kevrekidis[2]
[1]University Of Massachusetts Lowell, Lowell, United States, [2]Johns Hopkins University, Baltimore, United State

PS3-243 **Simulation of the cryopreservation process and its effects on CHO-K1 cells by a hybrid model**

Mr Maycou Soares Zamprognio[1], Prof. Jessica Whelan[1]
[1]School of Chemical and Bioprocess Engineering, University College Dublin, Dublin, Ireland

PS2-245 **Generate Data, Use Data – Advanced Spent Media Analytics and Data Analysis**

Dr Tim Steffens[1], Dr Mareike Schulz[1], Julia Engel[1], Maren Lehmkuhl[1], Dr Vera Ortseifen[1], Dr Sandra Klausing[1]
[1]Sartorius Xell GmbH, Schloß Holte Stukenbrock, Germany, Germany

PS3-246 **Development of a dissolved CO2 sensor in true single-use format**

Dr Stefan Bardeck[1], Dr Sebastian Schmidt[1]
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PS1-247 **Comprehensive meta-analysis of the CHO coding transcriptome**

Mr Markus Riedl[1], Ms. Caterina Ruggeri[1,2], Dr. Nicolas Marx[1], Dr. Nicole Borth[1]
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PS2-248 **Integrating Kinetic Modelling with Process Measurements through Bayesian Filtering**

Ms Luxi Yu[1], Dr. Ehecatl Antonio del Rio Chanona[1], Prof Cleo Kontoravdi[1]
[1]Sargent Centre for Process Systems Engineering, Department of Chemical Engineering, Imperial College London, London, United Kingdom

PS3-249 **The Leap-In Transposase Platform: Past, Present and Future**

Dr Mario Pereira[1], Dr Ferenc Boldog[1], Dr Claes Gustafsson[1], Dr Jeremy Minshull[1]
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PS1-250 **Effect of critical process parameter on site specific N-linked glycosylation of VRC0[1] produced in CHO**

Mr Jayanth Venkatarama Reddy[1], Dr. Arjun Valiya Parambathu[1], Dr. Sumit Kumar Singh[2], Mr. Thomas Leibiger[1], Prof Eleftherios Papoutsakis[1], Prof Marianthi Ierapetritou[1]
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PS2-251 **Impact of Mesenchymal Stromal Cells Expansion Conditions on their Hematopoietic Support Capacity: A Transcriptomic Analysis**

Miss Maria Catarina Carreira[1,2,3], Dr. André Branco[1,2,3], Dr. Miguel Casanova[1,2,3], MD. Carolina Smet[4], Prof. Cláudia Lobato da Silva[1,2,3], Dr. Ana Fernandes-Platzgummer[1,2,3]
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PS3-252 **Unlocking Multiomics Potential with a High-Throughput Data Generation Protocol**

Mr David Catalán-Tatjer[1], Dr Nicholas Cowie[1], Mr Kristian Jensen[1], Dr Jesús Lavado-García[1], Prof Lars Nielsen[1,2]
[1]Technical University Of Denmark, Kgs. Lyngby, Denmark, [2]University of Queensland, Brisbane, Australia

PS1-253 **In-depth metabolic characterisation at different phases of cell culture with a turnkey CE-ESI-HRMS workflow**

Dr Milla Neffling[1], Dr. Erin Redman[2], Dr. Will Thompson[2], Dr. Kenion Blakeman[2], Dr. Stephanie Klaubert[1], Awab Nehela[1], Dr. Scott Mellors[2]
[1]908 Devices, Boston, United States, [2]908 Devices, Morrisville, United States

PS2-254 **A mechanistical understanding of Producer Cell Line (PCL) approaches for AAV production using Metabolomics**

Dr Swetha Kumar[1], Dr Adhvait M Shah[1], Dr. Laura Parisi[2], Dr. Bailin Zhang[2], Dr. Lilu Guo[2], Dr. Darrick Yu[1], Dr. Madhuresh Sumit[1], Dr. Jeong Lee[1]
[1]Sanofi US Services Inc., Waltham, USA, [2]Sanofi US Services Inc., Cambridge, USA

PS3-255 **Driving by CHO genome-scale metabolic models (GEMs) towards digital bioprocessing**

Assoc. Prof. Dong-Yup Lee[1], Dr. Seo-Young Park[1], Mr. Dong-Hyuk Choi[1], Mr. Jinsung Song[1], Mr. Sun-Jong Kim[1]
[1]Sungkyunkwan University, Suwon, South Korea

PS1-256 **RAMAN spectroscopy and off gas analysis data - the foundation for smart bioprocess development**

Dr Wolfgang Paul[1], Thomas Dahomais[1], Quentin Demeyere[1], Damien Legros[1], Bassem Ben Yahia[1]
[1]UCB Pharma S.A., Braine L'alleud, Belgium

PS2-257 **Accelerating high-performance and customizable media development through multivariate data analysis and in silico modeling**

Dr Seo-Young Park[1], Dr. Dong-Yup Lee[1], Mr. Jisung Song[1], Mr. Dong-Hyuk Choi[1], Mr. Sun-Jong Kim[1], Mr. Chul-Hwan Park[1]
[1]Sungkyunkwan University, Suwon-si, South Korea

PS3-258 **Optimizing CD4+ T Cells Long-term Expansion Process in Stirred-tank Bioreactors: Impact of the Dissolved Oxygen**

Mr David Solbach[1], Dr. Francoise de Longueville[2], Dr. Silvia Vargas[2], Dr. Vincent Duffey[2]
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PS1-262 **Experimental design with Bayesian statistics to improve stem cell differentiation in small bioreactors**

Dr Iben Veland Halberg[1], Dr Søren Bertelsen[2]
[1]*Cell Therapy R&D, Novo Nordisk A/S, Maalov, Denmark,* [2]*Automation & Process Optimisation, Novo Nordisk A/S, Måløv, Denmark*

PS3-264 **Model-based optimisation of glycosylation control in antibody-producing CHO cells**

Ms Sofia Gialamoidou[1], Dr. Ioscani Jimenez Del Val[1]
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PS1-265 **Antibody Humanization with Predictive Design**

Dr Mario Pereira[1], Dr Sridhar Govindarajan[1], Dr Mark Welch[1], Dr Jeremy Minshull[1], Dr Claes Gustafsson[1]
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PS2-266 **METHODS FOR CLONE GENERATION USING FLOW-BASED REPORTER SYSTEM AND HIGH THRUOGHPUT BEACON PLATFORM.**

Mr Victor Cairns[1]
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PS3-267 **Digital bioprocessing enables fed-batch design for intensification of rAAV production in insect cells**

Cristina Rosa[1], Nikolaus Virgolini[1,2], Miguel Graça[1,2], Ricardo Correia[1,2], Dr Ines Isidro[1,2]
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Theme 04. Transitioning from Development to Manufacture

Poster Session 1, June 24, 2024, 2:15 PM - 3:45 PM
Poster Session 2, June 24, 2024, 7:30 PM - 9:00 PM
Poster Session 3, June 25, 2024, 2:30 PM - 4:00 PM

ESACT

PS1-268 **Addressing the question of cellular heterogeneity - Microfluidic single-cell cultivation for mammalian bioprocesses**

Dr Julian Schmitz[1], Mr. Boris Yermakov[2], Dr. Oliver Hertel[1], Dr. Nadiya Romanova[1], Prof. Dr. Thomas Noll[1], Prof. Dr.-Ing. Alexander Grünberger[2]
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ESACT

PS2-269 **Advantages of CHO cell process intensification in state-of-the-art single-use bioreactors**

Dr. Markus Schulze[1], Husemann Ute[1], Dr Gerhard Greller[1], Dr Naomi de Almeida[1]
[1]Sartorius, Göttingen, Germany

ESACT

PS3-270 **In-situ Monitoring of Dissolved Carbon Dioxide in Bioprocessing: Two Years of Research and Application Insights**

Mr Giovanni Campolongo[1]
[1]Hamilton Bonaduz Ag, Domat/Ems, Switzerland

ESACT

PS1-271 **PAT to Optimize the Cost, Consistency and Yield of Cultivated Meat Production**

Dr Charlotte Hughes[1], Mr Aniekan Esenam[1]
[1]Hamilton, Bonaduz, Switzerland

PS2-272 **Single-Use Centrifugation – Aiming at Sustainable and Scalable Harvest Procedures**

Mr Johannes Wirth[1], Dr. Verena Vanessa Fischer[1]
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PS1-274 **Mechanistic and hybrid modelling in bioreactor digital twins**

Dr Sarah Fadda[1], Dr Sarwat Khattak[2]
[1]Siemens DI PA SW, London, United Kingdom, [2]Biogen, Durham, United States

ESACT

PS2-275 **Integrated clone selection and process development approaches for early TOX material production**

Mr Jeremie Kerbrat[1]
[1]UCB, Slough, United Kingdom

PS3-276 **Towards Computational Fluid Dynamics based methodology to accelerate bioprocess optimisation**

Mr Vishal Kumar Singh[1], Dr. Ioscani Jimenez Del Val[2], Prof. Jarka Glassey[3], Dr. Fatemeh Kavousi[1]
[1]University College Cork, Cork, Ireland, [2]University College Dublin, Dublin, Ireland, [3]Newcastle University, Newcastle upon Tyne, UK

PS1-277 **Generalizing cell culture models from fed-batch to continuous using metabolic knowledge**

Miss Mariana Monteiro[1], Stacy Bediako[3], Gregory Nierode[3], Pavlos Kotidis[2], Cleo Kontoravdi[1]
[1]Sargent Centre for Process Systems Engineering, Department of Chemical Engineering, Imperial College London, South Kensington Campus, London, SW7 [2]AZ, United Kingdom, [2]BioPharm Process Research, BioPharm Product Development & Supply, R&D Medicinal Science & Technology, GlaxoSmithKline, Stevenage SG1 [2]NY, United Kingdom, [3]Biopharmaceutical Drug Substance Development (BDSD), GSK, Upper Merion, USA

PS2-278 **Scale-Down Model Qualification for the Commercial Production of a Fusion Protein**

Dr Aoife Keogh[1], Mr Ciarán Mauerhofer[1], Dr Raymond Donnelly[1], Ms Anne-Marie Molloy[1]
[1]Bristol-Myers Squibb, Dublin, Ireland

PS3-279 **Cell culture media optimization to achieve high AAV productivity**

Dr Benben Song[1]
[1]Cytiva, Marlborough, United States

PS1-280 **Tackling The Blue: Modifications in Culture Media To Reduce Formation Of Blue Coloration in Bioprocesses**

Mr Andreas Unsoeld[1], Ms. Elena Bollgoenn[1], Ms. Dr. Amandine Calvet[1], Mr. Dr. Michael Loeffler[1], Ms. Dr. Lisa Junghans[1], Mr. Sebastian Puengel[1], Mr. Dr. Erik Arrango Gutierrez[1], Mr. Dr. Daniel Lakatos[1]
[1]Boehringer Ingelheim Bioprocess Development Biologics, Biberach, Deutschland

PS2-281 **FOLI-REC: Recombinant equine chorionic gonadotropin hormone for veterinary use**

Mr Sebastián Antuña[1], Ms María Belén Tardivo[1], Mr. Carlos Javier Villarraza[2,4], Dra. María Celeste Rodríguez[2,4], Mr. Pablo Mussio[2,4], Dr. Diego Fontana[1,2,4], Mr. David Saucedo[1], Dr. Luciano Cattáneo[3], Dra. Natalia Ceaglio[2,4], Dr. Claudio Prieto Claudio Prieto[1,2]

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PS3-282 **Scalable, serum-free viral vector production in a high cell density bioreactor**

Mrs Laura Siedler[1]

[1]Univercells Technologies, Nivelles, Belgium

PS2-284 **Dissolved Carbon Dioxide in Addition to Dissolved Oxygen for In-situ Monitoring of Hybridoma Cell Culture**

R. Ph. Veronika Gassenmeier[1], Prof. Dr.-Ing. Björn Frahm[1], Mr Giovanni Campolongo[2]

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PS3-285 **Optimized CHO cell Feed Medium without Copper Precipitation**

Dr Pranjal Gohad[1], Ms Renee Vu[1], Dr. Ishamel Ordonez[1], Mr Xianyu Ju[2], Ms Yingying Ly[2], Mr Yinshan Tan[2]

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PS1-286 **Effects of cell residence time on IgG1 production in small-scale perfusion cultures of CHL-YN cells**

Mr Shohei Sakai[1], Ms. Sayaka Nagae[1], Mr. Hiromu Kunita[1], Dr. Noriko Yamano-Adachi[1,2,3], Prof. Takeshi Omasa[1,2,3]

[1]Graduate School of Engineering, Osaka University, Osaka, Japan, [2]Institute for Open and Transdisciplinary Research Initiatives, Japan, [3]Manufacturing Technology Association of Biologics, Japan

PS2-287 **Minimal clone to clone variation removes need for clone screening and clone specific bioprocess optimizations.**

Ms. Laura Salse Guiu[1], Prof. Steffen Goletz[1], Dr. Lasse Ebdrup Pedersen[1]

[1]Technical University Of Denmark, Kongens Lyngby, Denmark

PS3-288 **Shortening the cell line development (CLD) timeline with an improved clone stability assay**

Dr. Seungjo Park[1], Dr. Christopher Tsiros[1], Dr. Sheffali Dash[1], Dr. Zhou Jiang[1]
[1]Cytiva, Marlborough, United States

PS1-289 **Developing a platform for single cell cloning of the Pro10™ cell line for AAV manufacture**

Ms Weijia Liu[1], Ms Cristina Rigau Granes[1], Dr Conrad Vink[1]
[1]Askbio, Edinburgh, United Kingdom

PS2-290 **Implementation of Quality by Design Principles for Influenza A Virus Production**

Ms Tilia Zinnecker[1], Ms Kristin Thiele[2], Prof. Udo Reichl[1,3], Prof. Yvonne Genzel[1]
[1]Max Planck Institute For Dynamics Of Complex Technical Systems, Magdeburg, Germany, [2]Sartorius Stedim Biotech GmbH, Ulm, Germany, [3]Otto-von-Guericke-University , Magdeburg, Germany

PS3-291 **Optimizing Recombinant Adeno-Associated Virus (rAAV) Production: Unraveling the Impact of the N-1 Seed Train**

Dr Johanna Wagner[1], Dr Sinisa Petrik[1], Mr Matthias Boscher[1], Mr Jared Babic[1], Ms Beatriz Larena Carnio[1], Ms Dila Bitnel[1], Ms Anita Heinlein[1], Ms Christine Zach[1], Mr Sebastian Ritter[1], Mr Matthias Gora[1], Mr Tobias Klötzler[1], Dr Alexandra Schoberth[1], Mr Karl Heller[1], Mr Ahmed Youssef[1]
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PS1-292 **Condensing the Cell Line Development Processes – Nimble Strategies for Increasing Efficiency**

Dr Clare Lovelady[1], Dr Jie Zhu[1], Dr John Patrick Mpindi[1], Dr Kerensa Klottrup-Rees[1], Dr Sarah Dunn[1], Dr Diane Hatton[1]
[1]Astrazeneca, Cambridge, United Kingdom

PS2-293 **Detecting Microbial Cell Culture Contamination by Measuring Nicotinic Acid to Nicotinamide Ratio At-Line**

Dr Kenion Blakeman[1], Ji Young Anderson[2], Scott Miller[2], Alice Ng[3], Jiayi Huang[3], Meenubharathi Natarajan[3], Yie Hou Lee[3], Rohan Williams[3], Paul Barone[4], Jacqueline Wolfrum[4], Stacy Springs[4]
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PS3-294 **Development of a robust process for pilot scale AAV production using a transient transfection system**

Dr Jianfa Ou[1], Dr. Yawen Tang[1], Mr. Alexander Williams[1], Ms. Roseanna Shimansky[1], Mr. Gregory Keil[1], Dr. Jongchan Lee[1], Mr. Michael Borys[1], Dr. Anurag Khetan[1]
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PS1-295 **Accelerating Clinical Readiness in Gene Therapy**

Dr Marie Clincke[1], Dr Richard Liu[1], Dr Claudia Paindelli[1], Ms Priyanka Gupta[1], Ms Zeynep Bor Tekdemir[1], Ms Marie Jubault[1], Mr Douglas Blanton[2], Mr Alexandre Valancin[1], Dr Kyle Zingaro[1]
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PS3-297 **Microfluidic perfusion reactors used for cell line stability evaluation**

Dr Jean-Marc Bielser[1], Mr. Loïc Chappuis[1]
[1]Merck Serono SA (an affiliate of Merck KGaA, Darmstadt, Germany), Fenil-sur-Corsier, Switzerland

PS1-298 **Advancing Intensified Process Development for rAAV production through Ambr250**

Ms Paula Mateus Semedo[1], Ms. Zeynep Bor Tekdemir[1], Mr. Daniel Sanchez[1], Mr. Douglas Blanton[1], Ms. Priyanka Amba Gupta[1], Dr. Kyle Zingaro[1], Dr. Nic Preyat[1]
[1]UCB Pharma, Belgium

PS2-299 **Intensified, Integrated, and Connected Processing for mAbs Purification: From Robust Process Development to Agile Biomanufacturing**

Dr Sanket Jadhav[1], Mr. Abijar Bhori[2], Ms. Priyanka Gupta[1], Mr. Himanshu Gadgil[2]
[1]Sartorius, Netherlands, [2]Enzene Biosciences Ltd, India

PS3-300 **Combinatorial Effects of Temperature and Osmolality on Cell Culture Performance**

Mrs Syazana Mohamad Pauzi[1], Professor Cleo Kontoravdi[1]
[1]Imperial College London, London, United Kingdom

PS1-301 **Accelerating process transfer into a new large-scale cell culture facility through CFD and DoE**

Mr Chandrahas Sampelli[1], Dr Christoph Hold[1], Dr Michael Thiele[1]
[1]Teva Biotech, Ulm, Germany

PS2-302 **Development of a universal Raman spectroscopy model for real-time monitoring of cell culture production parameters**

Dr Laetitia Macon[1], Dr Sylvain TRIGUEROS[1], Ms Gaelle BORDES[1]
[1]Sanofi, Vitry sur Seine, France

PS3-303 **TheraPRO® CHO Expansion Media accelerates antibody production with user-friendly design for streamlined protein production.**

Miss. Ioanna Zormpa, Dr Ivan Carubelli[1], Aymaan Rahman[1], Harinath Makanaboina[1], Kenneth Low[2]
[1]Lonza R&D Bioscience, Slough, United Kingdom, [2]Lonza R&D Bioscience, Walkersville, United States

PS1-304 **Transcriptomic Features Reveal Molecular Signatures Associated with Recombinant Adeno-associated Virus Production in HEK293 Cells**

Dr Seongkyu Yoon[1], Ms Yongdan Wang[1]
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PS2-305 **Need for Speed AND Quality: Smart Automation Selects Better Producer Clones Faster**

Dr Karsten Winkler[1], Ms. Berit Brosemann[1], Ms. Andrea Franke[1], Ms. Anika Bauer[1], Ms. Lisa Schneid[1], Ms. Denise Resch[1], Mr. Daniel Rehm[1], Dr. Susanne Seitz[1], Dr. Annett Hillemann[1], Dr. Thomas Rose[1], Dr. Volker Sandig[1]
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PS3-306 **From lab automation towards model-based process control and effective process development**

Dr. Wolfgang Sommeregger[1], Mrs Nataša Gutmann[1], Mr. Marcus Kirschner[1], Mrs. Angélique Schmid[2]
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PS1-307 **Economic modelling of magnetic bead-based mAb manufacturing**

Dr Nils Brechmann[1], Dr. Kristofer Eriksson[1], Mr. Torbjörn Pettersson[1]
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PS2-308 **Enhancing Downstream AAV Processing: Advancements in Robust Filtration and Chromatographic Operations**

Dr Rute Castro, Dr André Nascimento[1,2], Dr. Sónia Mendes[1,2], Dr. Tiago Faria[1,2], Dr. Ricardo Silva[1,2], Dr. Franziska Bollmann[3], Dr. Axel Thiefes[3], Dr. Marc Noverraz[4], Dr. Piergiuseppe Nestola[4], Mr. Ažbe Žnidaršič[5], Dr. Cristina Peixoto[1,2]
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PS3-309 **Enhancing Protein Titer in CHO Cells with a Novel Protein-Free Two-Part Feed System**

Mrs Sarya Mansour[1], Dr. Gino Stolfa[1], Dr. Anna Barbara-Hachmann[1], Mr. Alex Fox[1], Mr. Nick Drury[1], Mr. Ryan Boniface[1]
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PS1-310 **Generation of High-Throughput N-1 Perfusion**

Dr Stefan Wieschalka[1], Lisa Stepper[1], Sarah Kallemeier[1], Sophie Moormann[1]
[1]*Boehringer Ingelheim Pharma GmbH & Co. KG, Biberach, Deutschland*

PS2-311 **Further Accelerating Biologics Development from DNA to IND: Journey from COVID-19 to All Biologics Programs**

Dr Sam Zhang[1], Dr. Kee Wee Tan[1], Mr. Pengfei Ji[1], Dr. Hang Zhou[1], Dr. Weichang Zhou[1]
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PS3-312 **Downstream process development of Adenovirus-like particles (ADDomer) for snakebite therapy**

Dr Rute Castro[1], Dr Raquel Arinto-Garcia[1,2], Ms Cláudia Paiva[1,2], Mr Emerson Dilla[3], Mr Justin Sargunas[4], Dr Mafalda Moleirinho[1,2], Prof. Paula Alves[1,2], Dr Cristina Peixoto[1,2], Dr António Roldão[1,2]
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PS1-313 **Reaching Cell Culture Process Productivity Edge and Pushing it Further**

Mr Bassem Ben Yahia[1], Mr Antoine PIEDNOIR[1], Mr Thomas Dahomais[1], Ms Laetitia Morel[1], Mr Neil Kearney[1], Mr Arnaldo de Souza[1], Mr Wolfgang Paul[1]
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PS2-314 **Data-driven feed strategy optimisation and scale-up of mAb-expressing CHO cell line bioprocess.**

Mr Jeremie Barbau[1], Ms Milla Neffling[1], Dr Christopher Schultz[2], Ms Bethany Kerr[2], Dr William Morgan-Evans[2], Ms Samantha Colbeck[2], Ms Ji Young Anderson-Czajkowski[1], Dr Michael Hartlep[3], Dr Wolfgang Kuennecke[3], Dr Graziella Piras[1]
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PS3-315 **PAT-Enhanced Perfusion Process by In-line Raman Probe and On-line Nanoplasmonic Sensor.**

Mr Maxime Hervé[1,3], Ms. Michaela Dölle[1,3], Dr. Meeri Mäkinen[1,3], Dr. Thuy Tran[2,3], Prof. Véronique Chotteau[1,3]
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PS1-316 **Case study: Improvement of powder media robustness for CHO perfusion cell culture**

Mrs Nandita Vishwanathan[1], Mr Thomas Vuillemin, Dr Martin Jordan, Mr Raphael Guillot, Ms Prudence Bourlier, Ms Sandrine Richard, Dr Jean-Marc Bielser, Arnaud Perilleux, Jonathan Souquet
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PS2-317 **Achieving High Productivities Through Bioreactor Optimization at Lower Peak Cell Densities**

Dr Luis Rodriguez[1], Ociel Ferreyra[1], Ericka Agredano[1], Joshua Yokoo[1], Kristi Wong[1], Catherine Nguyen[1], Isabelle Jones[1], Raul Tholley[1]

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PS3-318 **Advancements in Microcarrier based stem cell culture process and effortless transition to 10L single-use bioreactors**

Ms Namitha Haridas[1]

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PS1-319 **Delivering CMC Initiatives using Design for Manufacturing, Modern Design of Experiments, Prediction, and Machine Learning**

Dr. Tiffany Rau[1,2], Dr. Philip Ramsey[3]

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PS2-320 **Reduction of LMW species during upstream process**

Mr Thomas Vuillemin[1], Dr Martin Jordan[1], Dr Nandita Vishwanathan[1], Dr Jean-Marc Bielser[1], Mr Arnaud Perilleux[1], Dr Jonathan Souquet[1]

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PS3-321 **Adeno-associated Virus Production in Suspension Cell Culture Using Bioprocess Control Systems and BioBLU® Single-Use Bioreactors**

Mr David Solbach[1], Mr Jorge Escobar[2]

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PS1-322 **Influence of animal origin free (AOF) peptone supplementation on CHO productivity and glycosylation profiles**

Maren Grün[1], Ashwin Gurunathan[2], PhD Anna-Barbara Hachmann[3], Bilal Mughal[2], Saranya Chitturi[2], Meagan Haynes[2], Alexander Fox[3], Megan Pajak-Lee[3], Stacy Holdread[2], PhD James Brooks[2]

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PS2-323 **Seed Train Intensification and Production Process Automation for Pilot-Scale Fed-Batch and Perfusion Processes**

Mr Jan Ott[1], Vivian Ott[1], Christopher Brau[2], Sandra Beyer[3], Prof. Dr. Dieter Eibl[1], Prof. Dr. Regine Eibl[1]
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PS3-324 **Development of a high-titer Bi-paratopic tetravalent diabody-Fc-Fab: IcoCell Line, Design for Manufacturability and Modern DOE**

Dr. Eva-maria Tombak[1], Evaliisa Sejev[1], Jelizaveta Geimanen[1], Katrin Orro[1], Andres Männik[1], Mihhail Kurašin[1], Kristo Kuus[1], Kiira Gildemann[1], Nele Tamberg[1], Evelin Väljaots[1], Shane Miersch[2], Sachdev Sidhu[2]
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PS1-325 **Chicken Feather Follicle Cells as a source of fat for cultivated meat**

Mr Hélder Bandarra-Tavares[1,2,3], Prof. Pedro Fonte[3], Dr. Ana Fernandes-Platzgummer[1,2]
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PS2-326 **Development of a scalable platform for the production of bovine fat for cultivated meat**

Mr Hélder Bandarra-Tavares[1,2,3], Mr. Pedro Agostinho[1,2], Prof. Pedro Fonte[3], Dr. Ana Fernandes-Platzgummer[1,2]
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PS3-327 **Scale-up or Scale-down? - Biomanufacturing Process Intensification by Converting Fed-batch Into High-density Perfusion Processes**

Ms Caroline Noack[1], Mr. Lukas Hostettler[1], Mr Frederic Houioua[1]
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PS1-328 Continuous Production of Influenza VLPs Using IC-BEVS: a Multi-Stage Bioreactor Approach

Dr Ricardo Correia[1,2], Ms Taja Zotler[3], Mr Miguel Graça[1,2], Dr Bárbara Fernandes[1,2], Dr Gorben Pijlman[3], Dr António Roldão[1,2]
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PS2-329 Massive hiPSC-derived Cardiomyocyte Production for Regenerative Medicine: combining WNT Activation and Oxygen Modulation in Bioreactors

Miss Lara Inocêncio[1,2], Mr Pedro Vicente[1,2], Miss Beatriz Gamelas[1,2], Mr. Asier Ullate-Agote[3], Mr Olalla Iglesias García[3], Mr Patxi Martin-Uriz[3], Mr Felipe Prósper[3], Mr Manuel M Mazo Vega[3], Prof. Paula Alves[1,2], Dr Margarida Serra[1,2]
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PS1-331 Optimizing Mammalian Cell Culture Strategies: Validation of a Model-Based Platform for Medium and Feeding Design

Dr Ivan Paredes[1,3], Mr. Temístocles Molina[1,3], Mr. Aarón Canales[2,3], Ms. Francisca Pizarro[2,3], Mr. Bastian Herrera[2,3], Ms Isidora Prat[1,3], Dr J. Cristian Salgado[2,3], Dr. Ziomara Gerdtzen[1,3]
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PS2-332 Advancing Manufacture of hiPSC-Hepatocytes with improved functionality: a nature-inspired bioprocess

Dr Margarida Serra[1,2], Dr Joana Almeida[1,2], Mr Pedro Vicente[1,2], Ms Inês Crespo[1,2], Dr Nikolaus Virgolini[1,2], Dr Inês Isidro[1,2], Dr Juan R. Rodriguez-Madoz[3], Dr Felipe Prosper[3], Dr Pedro Baptista[4], Prof Paula Alves[1,2]
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PS3-333 **Single-Use Bioreactors designed according to traditional bioreactor principles facilitate transition from development to production scale.**

Dr Alicja Zimmer[1], Mr. Dai Quach[2], Mr. Jorg Bolder[1], Dr. Sufia Karim[2]

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PS1-334 **Structural identifiability and parameter estimation of dynamic metabolic models used for cell culture media optimization**

Aaron Canales[1,3], Francisca Pizarro[1,3], Bastian Herrera[1,3], Ivan Paredes[2,3], Isidora Prat[2,3], Temístocles Molina[2,3], Dr. J. Cristian Salgado[1,3], Dr. Ziomara P. Gerdtzen[2,3]

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PS2-335 **Advancing Biomanufacturing Excellence: Harnessing Model Predictive Control for Optimal Process Efficiency and High-Quality Product Outputs**

Francisca Pizarro[1,3], Aaron Canales[1,3], Bastian Herrera[1,3], Dr. Ziomara P. Gerdtzen[2,3,4,5], Dr. J. Cristian Salgado[1,3]

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PS3-336 **Lot To Lot Consistency of AOF Peptones and Application of Key Driver Identification Service (KDI)**

Mr Ashwin Gurunathan[1], Neelanjan Sengupta[1], Juliet Macharia[1], Nathan Cordell[1], Stacy Holdread[1], James Brooks[1]

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PS1-337 **Accelerating CHO Bulk Harvest Testing: A Complete Set of Rapid Methods for Adventitious Agent Detection**

Dr Anna Woodward[1], Ms Melisa Wilson[2], Dr Manjula Aysola[2], Dr Pamela Hamill[1], Dr Alison Armstrong[1]

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PS2-338 **Impact of ICH Q5A revision on quality control testing and virus safety strategies**

Dr Anna Woodward[1], Dr Manjula Aysola[2], Mr Steven McDade[1], Dr Alison Armstrong[1]
[1]Merck, Glasgow, United Kingdom, [2]Merck, Rockville, USA

PS3-339 **Novel vector system for one-step generation of diverse vector assemblies, enhancing titres of multispecific antibodies**

Dr Stephen Jaffé[1], Miss Changhavi Ragurajan[1], Dr Alice Seleiro[1], Miss Tejal Bhure[1], Dr Michael Anbar[1], Dr Bernie Sweeney[1]
[1]Lonza, Cambridge, United Kingdom

PS1-340 **Cell culture-based bioprocess development and simplification for Influenza A virus**

Mrs Wiebke Holste[1], Dr.-Ing. Claudius Seitz[1], Prof. Dr. Holger Ziehr[1]
[1]Fraunhofer Institute for Toxicology and Experimental Medicine, Braunschweig, Germany

PS2-341 **Vision, Planning, and Implementation of a Fully Automated, Bench-Scale Bioreactor Platform**

Dr Frank Ritacco[1], John Czukkerman[1], Kyle Doce[1], Evelyn Schleicher[1], Brandon Veres[1], Dr. Hanne Bak[1], Dr. Shawn Lawrence[1]
[1]Regeneron Pharmaceuticals, Tarrytown, United States

Theme 05. Innovate or Die - Technology Innovation

Poster Session 1, June 24, 2024, 2:15 PM - 3:45 PM
Poster Session 2, June 24, 2024, 7:30 PM - 9:00 PM
Poster Session 3, June 25, 2024, 2:30 PM - 4:00 PM

PS3-342 **Innovate or Die: A Business Methodology for Biomanufacturing Innovation Strategy and Deployment**

Mr Martijn Wapenaar[1]
[1]Johnson & Johnson, Leiden, Netherlands

PS1-343 **Dielectric spectroscopy as PAT tool to monitor specific growth rate and increase monoclonal antibodies production**

Miss Adèle Schini[1], Dr. Bruno Ebel[2], Dr. Emmanuel Guedon[2], Dr. Laurent Jourdainne[1]
[1]Millipore S.A.S., an affiliate of Merck KGaA, Darmstadt, Germany, [2]Laboratoire Réactions et Génie des Procédés (LRGP), Vandœuvre-lès-Nancy, France

PS2-344 **Hollow fiber-based cell retention: Recent advancements to reduce product retention in perfusion cell culture**

Dr Patrick Romann[1], Dr Jean-Marc Bielser[2], Prof. Dr. Thomas K. Villiger[3], Prof. Dr. Andrew L. Zydney[4], Mr. Philip Giller[3], Dr Antony Sibilia[1]
[1]Levitronix GmbH, Zürich, Switzerland, [2]Merck Serono SA, Corsier-sur-Vevey, Switzerland, [3]University of Applied Sciences and Arts Northwestern Switzerland, Muttenz, Switzerland, [4]Pennsylvania State University, Pennsylvania, USA

PS3-345 **Tailoring an intensified fed-batch process to large scale manufacturing needs**

Dr Christian Kaisermayer[1], Dominik Schieman[2], Nuno Buxo Carinhas[2], Kristina Kliche[1]
[1]Novartis, Langkampfen, Austria, [2]Novartis, Basel, Switzerland

PS1-346 **Unlocking Process Insights: High-Throughput Miniaturized Cell Culture System for Data-Rich Process Modelling**

Dr Vishwanathgouda Maralingannavar[1], Ms Alexandra Gheorghe[1], Dr Sandeep Ranpura[1], Dr Colin Jaques[1], Dr Deniz Demirhan[1]
[1]Lonza Biologics Plc, Slough, United Kingdom

PS3-348 **Automation of perfusion process for high cell densities: Maintaining constant cell specific perfusion rate (CSPR)**

Mr Niklas Welzenbach[1], Mr Lisa Wolowczyk[1], Ms Mona Bausch[1], Mr Luis Ayala[1], Dr Jochen Sieck[1]
[1]Merck Life Science KGaA, Darmstadt, Germany

PS2-350 **Assessment of cloning efficiency and error rates of various single-cell dispensing technologies**
Ms Olga Rimkevich[1], Mr. Sven Loebrich[1]
[1]*Mural Oncology, Waltham, United States*

PS3-351 **Process Intensification Strategies to Improve Process Economics in Biologics Development and Manufacturing**
Mr Madhava Ram Paranandi[1], Mr Jagadeesh Kanagala[1]
[1]*Kemwell Biopharma, Bengaluru, India*

PS1-352 **Intensified production of recombinant vesicular stomatitis virus-based vectors by tangential flow depth filtration**
Mr Sven Göbel[1], Mr. Lars Pelz[1], Ms. Rachel Legmann[2], Dr Jennifer Altomonte[3], Prof. Amine Kamen[4], Prof. Udo Reichl[1], Dr. Yvonne Genzel[1]
[1]*Max-Planck Institute, Magdeburg, Germany,* [2]*Repligen, Waltham, United States,* [3]*Department of Internal Medicine II, Klinikum rechts der Isar, Technische Universität München, Munich, Germany,* [4]*Department of Bioengineering, McGill University, Montréal, Canada*

PS2-353 **Automated Cell Line Development: Identifying Top Candidate Clones More Efficiently**
Dr Michael Hoffman[1], Zach Goldblatt[1], Jason Vitko[2], Thomas King[2], Tiffany Mclamarrah[2], Jen Tedstone[2], Hope Divello[1], Steve McLellan[1], Victor Cairns[2], Jack Scarcelli[2], Christine DeMaria[1]
[1]*Sanofi - Cell Line & Cell Bank Development , Framingham, United States,* [2]*Sanofi - Cell Science & Technology, Framingham, United States*

PS3-354 **Pilot Scale Bioreactor Design for Dynamic Perfusion with Tangential Flow Filtration**
Dr Nicholas Guros[1], Alex Gadberry[1], Elise Woodall[1], Michael Mollet[1]
[1]*AstraZeneca, Gaithersburg, United States*

PS1-355 **Promises and pitfalls of process intensification implementation**
Dr Patrick Mayrhofer[1]
[1]*Novartis, Schaftenau, Austria*

PS2-356 **The Future of Making Cell Culture Media**
Ms. Kaitlynn Bayne[1], Mr. Tom Fletcher[1], Mr. Bryan Tamashiro[1], Miss Brooke West[1]
[1]*Fujifilm Irvine Scientific, Santa Ana, United States*

PS3-357 **Advancing Cell Culture Media Preparation in CDMOs**

Ms. Kaitlynn Bayne[1], Mr. Chris Cline[2], Mr. Mark Patton[2], Mr. Scotty Bailey[2], Miss Sharyn Farnsworth[2]
[1]Fujifilm Irvine Scientific, Santa Ana, United States, [2]Fujifilm Diosynth Biotechnologies, Morrisville, United States

PS1-358 **Raman-based Lactate Feeding Impact on Culture Characteristics and Product Quality in Mammalian Cell Cultures**

Dr Stephanie Klaubert[1], Mr. Awab Nehela[1]
[1]908 Devices, Boston, United States

PS3-360 **Off-Gas based Soft-Sensor for Real-Time Monitoring of Biomass and Metabolism in CHO Continuous Fermentation Processes**

Mr Tobias Wallocha[1], Dr. Oliver Popp[1]
[1]Roche Diagnostics GmbH, Pharma Research and Early Development, Penzberg, Germany

PS1-361 **Modular approaches to integrated and continuous biomanufacturing improve supply chain agility**

John Raven[1], Graeme Burton[1], Robyn Hoare[1], Sam Whitwam[1], Richard Lugg[1], Charlie Heise[1], Terri Dover[1], Tibor Nagy[1], Michelle Lyons[1], Benjamin Hastings[1], Caitlin Morter[1], Chathumi Maduwage[1], Fay Saunders[1], Leon Pybus[1]
[1]FUJIFILM Diosynth Biotechnologies, Stockton-on-Tees, United Kingdom

PS2-362 **Major increase of the expression level of a hard-to-express bispecific biparatopic BEAT® antibody**

Mr Romain Mette[1], Dr. Martin Bertschinger[2], Dr. Roberto Giovannini[3]
[1]Ichnos Sciences SA, La Chaux De Fonds, Switzerland, [2]Ichnos Sciences SA, La Chaux De Fonds, Switzerland, [3]Ichnos Sciences SA, La Chaux De Fonds, Switzerland

PS3-363 **Implementing multi-modal non-destructive online monitoring to qualify 3D tissues**

Mrs Emma Petiot[1,2], Dr Laura Chastagnier[1,2], Dr Yilbert Gimenez[1,3], Dr Sarah Pragnere[1], Dr Celine Loubière[4], Kleanthis Mazarakis[5], Timo Schmidberger[5], Dr. Christophe Marquette[1], Dr. Simon Lambert[3]
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PS1-364 **Process analytical toolkit for optimizing continuous bioprocess modelling for manufacturing**

Mr Sandeep Ranpura[1], Mr Mauran Mahendar[1], Ms Natalia Papalamprou[1], Ms Hatwan Galali[1], Ms Sana Shaikh[1], Mr Anthony Beaney[1], Ms Anita Dabek[1], Ms Deniz Demirhan[1]
[1]Lonza, Slough, United Kingdom

PS2-365 **Dielectric spectroscopy as PAT tool to monitor the viable cell concentration (VCC) of CHO cells**

Miss Adèle Schini[1], Dr. Bruno Ebel[2], Dr Karine Elise Voltz[1], Dr. Emmanuel Guedon[2], Dr. Laurent Jourdainne[1]
[1]Millipore S.A.S., an affiliate of Merck KGaA, Darmstadt, Germany, [2]Laboratoire Réactions et Génie des Procédés (LRGP), Vandœuvre-lès-Nancy, France

PS3-366 **High-throughput Biacore™ assays for screening and characterization of bispecific antibodies**

Dr Johanna Rodhe[1], Bahareh Motaghi Moghaddam Shahri[1], Gustav Johnson[1], Narasimha Murthy Bandaru[1], Linnéa Nygren Babol[1], Albin Larsson[1], Malin Kruukka[1], Dr Prajakta Khalkar[1], Dr Ann Lövgren[1], Daniel Ivansson[1]
[1]Cytiva, Uppsala, Sweden

PS1-367 **Overcoming Challenges in a Novel Coagulation Factor Production: Fed-batch versus Perfusion**

Dr Iván Martínez-Monge[1]
[1]AGC Biologics, Søborg, Denmark

PS2-368 **Technical approach of a concept for the closed-loop recycling of a small-scale plastic-based bioreactor**

Ms. Alena Roßkamp[1], Dr. Magali Barbaroux[2], Dr. Bernd Garska[3]
[1]Sartorius Stedim Biotech GmbH, Goettingen, Germany, [2]Sartorius Stedim FMT S.A.S., Aubagne, France, [3]Covestro Deutschland AG, Leverkusen, Germany

PS3-369 **Transposon system for stable non-coding RNA overexpression in CHO production cells**

Ms Sonja Lochmüller[1], Mr Linus Weiß[1], Mr Patrick Schlossbauer[1], Mr Florian Klingler[1], Prof. Dr. Kerstin Otte[1]
[1]Institute for Applied Biotechnology, University of Applied Sciences Biberach, Biberach, Germany

PS1-370 **Inline viscometer as process analytical technology to measure real-time protein concentration in TFF operation**

Dr Patrick Romann[1], Ms. Zsofia Bencze[2], Mr. Philipp Campos[1], Mr. Antony Sibilia[1], Dr. Daniel Steinert[1], Dr. Thomas Nussbaumer[1]
[1]Levitronix GmbH, Zurich, Switzerland, [2]Ferring Pharmaceuticals, Epalinges, Switzerland

PS1-373 **A novel hybrid bioprocess strategy addressing key challenges of advanced biomanufacturing**

Mr Lucas Nik Reger[1], Dr. Martin Saballus[1], Mrs Annika Kappes[1], Dr. Markus Kampmann[1], Prof. Dr. Rene H. Wijffels[2], Dr. Dirk E. Martens[2], Dr. Julia Niemann[1]

[1]Corporate Research, Sartorius, Göttingen, Germany, [2]Bioprocess Engineering, Wageningen University, Wageningen, Netherlands

PS2-374 **CHO upstream platform development: Lower cost-of-goods and improved quality**

Miss Amy Mcmann[1]

[1]Fujifilm Diosynth Biotechnologies, Billingham , United Kingdom

PS3-375 **End-to-end model-based continuous bioprocessing with central data management**

Dr. Wolfgang Sommeregger[1], Dr. Katrin Illner[1]

[1]QUBICON AG, Vienna, Austria

PS1-376 **A novel cell retention strategy introducing scalable sorting of viable cells by fluidized bed centrifugation**

Dr Martin Saballus[1], Mr Lucas Nik Reger[1], Dr Julia Niemann[1], Dr Markus Kampmann[1]

[1]Sartorius, Corporate Research, Goettingen, Germany

PS2-377 **Scale-down model of the future: Ambr250 ® 's Innovation sparks a bioprocess revolution**

Ms Vanessa Henriques[1], PhD Bassem Ben Yahia[1], PhD Wolfgang Paul[1]

[1]Biologics DS Process Sciences, UCB Pharma S.A., Braine L'alleud, Belgium

PS3-378 **Nanoparticle-based vaccines for COVID-19: Click chemistry functionalization of HIV-1 virus-like particles and extracellular vesicles**

Mr Marc García-Trujillo[1], Dr. Jesús Lavado-García[2], Dr. Arnau Boix-Besora[3], Prof. Laura Cervera[1], Prof. Francesc Gòdia[1]

[1]Universitat Autònoma de Barcelona, Cerdanyola Del Vallès, Spain, [2]Novo Nordisk Foundation Center for Biosustainability, Lyngby, Denmark, [3]Institut d'Investigació Biomèdica de Bellvitge - IDIBELL, Barcelona, Spain

PS1-379 **Evaluation of cell growth and AAV production in a fixed-bed bioreactor to streamline process development**

Anne MacIntyre[1], Nathan Hazi[1], Andrew Laskowski[1], Michelle Olson Peabody[1]

[1]Cytiva, Westborough, United States

PS2-380 **Advanced Shaken BioReactor (ASBR): Novel small-scale mammalian continuous cultivation platform**

Mr Claes Nymand Nilsson[1], Dr Lars Poulsen[1], Dr Bjarne Rask Poulsen[1]
[1]Novo Nordisk A/S, Måløv, Denmark

PS3-381 **microRNA technology for optimized antibody galactosylation**

Dr René Handrick[1], Florian Klingler[1], Patrick Schlossbauer[1], Lukas Naumann[2], Prof. Friedemann Hesse[1], Prof. Christian Neusüß[2], Prof. Kerstin Otte[1]
[1]Institute of Applied Biotechnologie, Biberach University of Applied Sciences, Biberach, Germany, [2]Department of Chemistry, Aalen University, Aalen, Germany

PS3-384 **Fluorescence sensor development for online monitoring of critical process parameters in Tumour-infiltrating lymphocyte cultivations**

Ms Sandra Dienemann[1], Dr. Ole Jacob Wohlenberg[1], Dr. Nicola Goddard[2], Dr. Lucia Teixeira[2], Dr. Mariana Werner Sunderland[2], Dr. John Churchwell[3], Dr. Vincenco Di Cerbo[3], Dr. Patrick Statham[3], Dr. Dörte Solle[1], Prof. Dr. Sascha Beutel[1]
[1]Institute Of Technical Chemistry, Leibniz University Hanover, Hanover, Germany, [2]Achilles Therapeutics UK Ltd., London, United Kingdom, [3]Cell Therapy Catapult, London, United Kingdom

PS2-386 **A 3D-printed microfluidic system for automated transient transfection of suspension cells at high-cell density**

Mrs Michaela Dehne[1,2], Mrs Katharina Meyer[1,3], Dr. Anton Enders[2], Prof. Dr. Janina Bahnemann[1,4]
[1]Technical Biology, Institute of Physics, University of Augsburg, Augsburg, Germany, [2]Institute of Technical Chemistry, Leibniz University Hannover, Hannover, Germany, [3]Physiology, Institute of Theoretical Medicine, University of Augsburg, Augsburg, Germany, [4]Centre for Advanced Analytics and Predictive Sciences (CAAPS), University of Augsburg, Augsburg, Germany

PS3-387 **Ambient intelligence for the quantification of cell culture operations**

Mr Kengo Momose[1], Mr Takeru Shiina[1], Dr. Yuto Takemoto[1], Mr. Kenjiro Tanaka[1], Dr. Kei Kanie[2], Dr. Ryuji Kato[1,3]
[1]Graduate School of Pharmaceutical Sciences, Nagoya University, Nagoya, Japan, [2]Graduate school of Systems engineering, Kindai University, Hiroshima, Japan, [3]Institute of Nano-Life-Systems, Institutes of Innovation for Future Society, Nagoya University, Nagoya, Japan

PS1-388 **Incorporation of a click-chemistry-reactive tetrazine amino acid for the production of site-specific antibody-drug conjugates**

Dr Nicolas Marx[1], Lea Leitner[1,2], Dr. David Peña[2], Dr. Michael Lukesch[2], Prof. Nicole Borth[1]
[1]University Of Natural Resources And Life Sciences Vienna (BOKU), Vienna, Austria, [2]Valanx GmbH, Vienna, Austria

PS2-389 **Disrupting Cell Therapy Storage and Distribution with Hypothermic Preservation of Adipose-Derived Mesenchymal Stromal Cells (MSC)**

Dr. André Branco[1,2,3], Miss Ana Lúcia Tiago[1,2,3], Dr Paula Laranjeira[4,5,6,7], Miss Maria Catarina Carreira[1,2,3], MD João C. Milhano8, Dr Francisco Dos Santos9, Dr Joaquim Sampaio Cabral[1,2,3], Prof Artur Paiva[4,5,6,7,10], Prof Cláudia Lobato da Silva[1,2,3], Dr Ana Fernandes-Platzgummer[1,2,3]
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PS3-390 **New Era of Real-time Bioprocess Monitoring and Control – Raman-based Direct Measurements with De Novo Model**

Dr Stephen Driscoll[1], Dr Chris Brown[1], Mr Colin Gavin[1], Dr Milla Neffling[1], Dr Graziella Piras[1], Ms Alison Siegmann[1], Mr Morgan Siegmann[1]
[1]908 Devices, Boston, United States of America

PS1-391 **De Novo Approaches for Bioprocess Parameter Estimation using Raman Spectroscopy**

Dr Stephen Driscoll[1], Dr Chris Brown[1], Mr Colin Gavin[1], Dr Milla Neffling[1], Dr Graziella Piras[1], Ms Alison Siegmann[1], Mr Morgan Siegmann[1]
[1]908 Devices, Boston, United States of America

PS2-392 **"Maximisation" of IgG Galactosylation: Model-led Cell Engineering Strategy for Quality Assurance in CHO mAb Products**

Dr Aoife Harbison[1], Dr. Mina Ghahremanzamaneh[1], Mr. Itzcoatl Gómez-Aquino[1], Dr. Alfonso Blanco[2], Dr. Sara Carillo[3], Dr. Jonathan Bones[1,3], Dr. Ioscani Jiménez Del Val[1]

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PS3-393 **Bispecific antibodies production by mRNA transfected CHO cells**

Mr. Thornwit Chavalparit[1], Dr. Marianne Gillard[1], Associate Prof. Timothy Mercer[1,3], Prof. Esteban Marcellin[1,2], Dr Veronica Martínez[1]

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PS1-394 **Implementation of Novel Single-use Technique for Clearance of Associated Host Cell Proteins**

Mrs Anindita Das[1], Mr Suraj Sharma[2], Mr Abhishek Bhatt[3], Mr Madhava Paranandi[4]

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PS2-395 **High-throughput media optimization strategy for CHO Cell lines**

Dr. Jaeho Shin[1], Dr. Swapnil Chaudhari[1], Dr. Ing Ali Safari[1], Dr. Dirk Müller[1]

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PS3-396 **Faster cell line development by using targeted integration combined with a new automation device setting**

Dr Anke Mayer-Bartschmid[1]

[1]Bayer AG-Pharmaceuticals, Wuppertal, Germany

PS1-397 **2nd gen UP.SIGHT : Generation of monoclonal cell lines, from cloning to clone selection**

Lucia Gordillo-Perez, Ms. Julia Scherzinger[1], Mr. Daniel Türk[1], Mr. Harrison Garner[1], Dr. Fernando Aprile Garcia[1]

[1]CYTENA GmbH, Freiburg im Breisgau, Germany

PS2-398 **Self-Organizing Murine Cardiac Organoids Towards Heart-On-Chip and Modeling of Congenital Defects**

Dr Sebastien Sart[1]
[1]*Insitut Pasteur, Paris, France*

PS3-399 **Scale-down of a continuous centrifuge for the harvest of mammalian cell culture**

Mrs Michaela Dölle[1,2], Mr Maxime Hervé[1,2], Prof. Veronique Chotteau[1,2]
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PS1-400 **Accelerating cell line development through efficient single-cell isolation with DISPENCELL**

Mrs Marie Vingerhoets[1], Dr. Audrey Berger[1], Dr. Arnaud Gelb[1], Mr. Loïc Pierson[1], Dr. Georges Muller[1], Dr. David Bonzon[1]
[1]*SEED Biosciences SA, Epalinges, Switzerland*

PS2-401 **Omics to support mathematical modelling of CHO Cell processes**

Dr Meeri Mäkinen[1,2], Dr Kevin Colin[1,2], Ms Markella Zacharouli[1,2], Prof Hakan Hjalmarsson[2,3], Prof. Veronique Chotteau[1,2]
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PS3-402 **Unlocking the future of Process Analytical Technologies for adaptive process control through revolutionary dielectric spectroscopy**

Dr Fernanda Masri[1], Dr Lindsay Fraser[1]
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PS1-403 **Intensified clarification and capture strategy by synchronization of fluidized bed centrifugation and membrane-based multi-column chromatography**

Mr Fabian Schmitz[1,2], Dr. Martin Saballus[1], Dr. Thomas Kruse[1], Prof. Mirjana Minceva[2], Dr. Markus Kampmann[1]
[1]*Sartorius Stedim Biotech GmbH, Goettingen, Germany,* [2]*Biothermodynamics, TUM School of Life Sciences, Technical University of Munich, Freising, Germany*

PS2-404 **Benefits of animal origin free peptones on mammalian cell-based vaccine manufacturing**

James Brooks[1], Wen-Yang Tsai[1], Ashwin Gurunathan[1], Matt Rosecrans[1], Aaron Robinson[1], Anna-Barbara Hachmann[2], Stacy Holdread[1], James Brooks[1]

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PS3-405 **Simple and High-Throughput Analytics for Proteins and Cells in Bioprocessing**

Dr Eligio Iannetti[1]

[1]Beckman Coulter Life Sciences, Amsterdam, Netherlands

PS1-406 **Rapid and In-depth Proteomic Analysis of Chinese Hamster Ovary Cells Bioprocesses**

Miss Darina Stoyanova[1], Dr Karl Burgess[1], Dr Mark Rendall[2], Dr Jeff Keen[2], Dr Leon Pybus[2], Mr Luke Johnston[1], Ms Lisa Imrie[1], Dr David Mentlak[3]

[1]University Of Edinburgh, Edinburgh, United Kingdom, [2]Fujifilm Diosynth Biotechnologies, Billingham, United Kingdom, [3]University of York, York, United Kingdom

PS2-407 **Novel application of next generation sequencing to characterise recombinant cell lines and determine genetic stability**

Dr. Pamela Hamill[1], Dr Leyla Diaz[2], Dr Danielle Hickman[2], Dr Alexei Slesarev[2]

[1]Merck , Glasgow, United Kingdom, [2]Merck, Rockville, USA

Theme 05. Innovate or Die - Technology Innovation

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PS3-408 **Antiviral Activity of Influenza A Defective Interfering Particles against Multiple Viruses In Vitro**

Ms Patricia Opitz[1], Mr Lars Pelz[2], Ms Elena Piagnani[2], Mr Patrick Marsall[2], Ms Nancy Wynserski[2], Mr Marc Dominique Hein[1], Mr Pavel Marichal-Gallardo[2], Dr Sascha Young Kupke[2], Prof Udo Reichl[1,2]
[1]Otto von Guericke Univerity, Magdeburg, Germany, [2]Max Planck Institute , Magdeburg , Germany

PS2-410 **Tiny Trouble?: Long-Term Effects of Microplastics on Murine Macrophages**

Ms Johanna Fritsche[1], Dr. Valérie Jérôme[1], Prof. Dr. Ruth Freitag[1]
[1]University Of Bayreuth, Bayreuth, Germany

PS3-411 **An Economic and Controlled Bioprocess for Manufacturing Red Blood Cells from Stem Cells**

Prof. Robert Thomas[1,2], Dr Katie Glen[1,2], Dr Polina Vickhreva[1], Dr Mela Twist[1], Mrs Laura Erdos[1], Dr Vincent Ho[3,6], Dr Kenneth Church[4], Dr Janice Moser[4], Dr Michael Mansour[5], Mr Doug McConnell[1]
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PS1-412 **Cationic flocculants assisted clarification**

Ms Anna-Carina Frank[1], Mr Daniel Komuczki[1], Ms Clara Hofmann[2], Ms Natalie Deiringer[2], Ms Felicitas Guth[2], Ms Elisabeth Grünstein[2], Mr Rainer Hahn[1], Mr Peter Satzer[1]
[1]Boku - University Of Natural Resources And Life Sciences, Vienna, Austria, [2]BASF SE, Ludwigshafen am Rhein, Germany

PS2-413 **Exploring NutriStor as a novel Chemically Defined Solution for Short-Term Cold Storage of Cells**

Mrs Mira Genser Nir[1], Ms Anat Vishlitsky[1], Ms Meital Gury Ben-Ari[1], Mr David Fiorentini[1]
[1]Research and development, Advanced Therapy Solution (ATS) Unit, Sartorius, Beit Haemek, Israel, Kibbutz Beit Haemek, Israel

PS3-414 **Catching the perfect sweetness: Critical parameters in CLD and USP to gain best-fitting protein N-glycosylation**

Dr Lena Tholen[1]
[1]Fyonibio Gmbh, Berlin, Germany

PS1-415 **Bioprocess Intensification with Peptide-Based Cell Culture Media Optimization Using Tyrosine and/or Cystine (Di-) Peptides**

Dr Stephan Brinkmann[1], Ms Christina Jost[1], Ms Tamara Heinze[1], Mr Tomislav Trescec[1], Dr Anne Benedikt[1], Dr Martin Schilling[1]
[1]Evonik Operations GmbH, Darmstadt, Germany

PS2-416 **First ever animal-free, cell line-derived human S9 fraction for in vitro drug metabolisation**

Dr Beat Thalmann[1]
[1]Scinora GmbH, Rafz, Switzerland

PS1-418 **Getting Fat: Adipogenesis of Pluripotent Stem Cells in Livestock Species for Cultivated Meat**

Miss Sarah Ho[1], Dr Joe Mee[1], Dr Ana Almeida[1], Dr Pritika Singh[1], Miss Marta Esquiva Diaz[1], Miss Niamh Hyland[1]
[1]Roslin Technologies, Edinburgh, United Kingdom

PS2-419 **Upskilling the cell therapy manufacturing workforce**

Flora J Keumurian[1], Paul W. Barone[1], John Duguid[2], Caleb Neufeld[1], Betsy Skrip[1], Stacy Springs[1], Humberto Vega Mercado[3], Krystyn Van Vliet[4], Jacqueline Wolfrum[1], Mingyu Yang[1]
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PS3-420 **A 3D-printed microfluidic cultivation system for parallel monitoring of perfused 3D cell cultures**

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PS1-421 **CRISPRing up CHO: Unveiling the blueprint for a dual-guide mediated genome-wide CRISPR/Cas9 screen in CHO**

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PS2-422 **Trial for cell preparation for Cellular food**

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PS3-423 **Development of an edible and food-grade microcarrier for cultured meat production**

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PS1-424 **Process intensification opportunities in early phase development and large-scale production**

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PS2-428 **Convergence of Population Growth, Affluence, and Sustainable Meat Production: Insights from the Cultivated Meat Industry**

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PS3-429 **GS Effex, a new Lonza host cell line for the production of antibodies with Enhanced ADCC activity**

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PS1-430 **Study of the role of chronokine X35 in the spinal cord and peripheral nerve injuries**

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PS2-431 **Mechanistic modelling of bioreactors: development of a digital twin**

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