ELRIG
The Drug Discovery Community

Advances in Cell-Based Screening in Drug Discovery 2026

6-7 May 2026
Gothenburg, Sweden

#ELRIGCBS26

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Welcome to Advances in Cell-Based Screening in Drug Discovery 2026

We are at a defining moment for drug discovery. Advances in cell biology, automation, data science, and artificial intelligence are converging to challenge long-standing paradigms and open a credible path toward human-first decision making - earlier, more predictive, and less reliant on animal models. This conference is convened around a single, urgent question: **what is needed to engineer the post-animal drug discovery pipeline?**

Across the pharmaceutical ecosystem, there is growing recognition that achieving this future state requires more than incremental improvement. It demands a fundamental re-thinking of how we generate and use biological data - testing compounds earlier, in more biologically relevant cell systems, and at scales sufficient to power robust prediction. It also requires us to confront hard questions: which models truly translate, how we redesign workflows for automation and reproducibility, and how we prepare our data - and our people - for AI-driven discovery.

Over two days, this meeting brings together leaders from industry, academia, and technology to explore these challenges through four tightly structured sessions. We will examine how *relevant biology at scale* is already reshaping early discovery, and where innovation in complex, high-throughput cell models is delivering real impact. We will then turn to the *redesign of assay and data pipelines*, addressing how we capture, manage, and extract value from increasingly rich, multi-dimensional readouts. From there, we will explore *AI and machine learning in cell-based screening*, from image-based phenotyping to multi-omics integration. Finally, we will look ahead to *AI and prediction readiness:* data integrity, fair workflows, metadata, and the skills and operating models required to make these approaches routine rather than exceptional.

This conference is intentionally forward-looking and practical. It is designed for scientists, technologists, and leaders who are actively shaping early R&D - from target validation and lead generation through safety screening - and for academics and emerging AI-cell leaders pushing the boundaries of what is possible. Together, we aim to move the conversation beyond aspiration toward a shared blueprint for change.

By fostering open, cross-sector dialogue, we hope this meeting will accelerate the transition to scalable, automated, and intelligent cell-based discovery - and, ultimately, help deliver more predictive science and better medicines for patients.

We are delighted to welcome you to the conversation.

Conference Directors

Fredrik Edfeldt
AstraZeneca

Sapna Desai
GSK

Sam Barichievy
AstraZeneca

James Robinson
AstraZeneca

Brinton Seashore-Ludlow
Karolinska Institutet

Louise Zeuthen
Novo Nordisk

ECP Conference Directors

Alicia Overall
Domainex

Keynote Speakers

Dr Dave Powell
President of Drug Discovery,
Relation Therapeutics

Dave Powell, PhD, is President of Drug Discovery at Relation, an end-to-end biotech developing transformational medicines, with technology at its core. At Relation, Dave leads experimental drug discovery efforts, including functional genomics, tissue profiling, and target validation, and plays a key role in shaping the company's early pipeline and future modalities.

Dave is a seasoned R&D leader with more than 25 years of experience across GSK, Summit Therapeutics, and LifeArc, where he served as CSO and led a 150+ person team spanning biologics discovery, small molecule chemistry, diagnostics development, and data sciences. His career spans discovery through Phase 3 clinical trials, with particular strength in preclinical asset progression.

Prof Hazel Screen
Professor of Biomedical Engineering,
Queen Mary University of London

Hazel Screen is a Professor of Biomedical Engineering working with organ-chip technology to explore the aetiology of health and disease, with a particular focus on mechanically functional tissues such as those in the musculoskeletal or cardiovascular systems. She focuses on healthy and pathological tissue structure-function relationships and their impact on cell metabolism, developing new models within which to explore fundamental tissue mechanics and biology questions as well as routes to new treatments and drug development.

She co-directed the Centre for Predictive in vitro Models at Queen Mary University of London, bringing together over 50 academics working in the field and leads the EPSRC Centre for Doctoral Training in Next Generation Organ-on-a-Chip Technology (COaCT), a multi-million pound investment from UKRI and our industry partners to train the next generation of research leaders in organ-chip technologies.

She plays an active role in helping to shape the field and associated policy and regulation, as well as driving her own research group, funded from a range of UKRI and charity sources.

Scientific track overviews

Relevant biology at scale

Wednesday morning

Advanced cell models are redefining what “disease relevance” looks like in screening paradigms - but only if we can run them at scale. This session explores how next generation patient and iPSC-derived systems are being paired with automation and high-content readouts to deliver actionable biology for therapeutic development. We’ll highlight practical workflows that improve translatibility and support the industry shift toward a more human-first, less animal-dependent discovery pipeline.

Track Chair

Bilada Bilican
AstraZeneca

Redesigning our assay & data pipelines

Wednesday afternoon

Cell-based screening is undergoing a fundamental shift. Increasing biological complexity (3D models, co-cultures, patient-derived systems), assay miniaturization, longitudinal measurements, and AI-driven analytics are challenging traditional single-endpoint, plate-based screening pipelines. This track focuses on how assay design and data analysis must be re-engineered together to extract robust, reproducible, and decision-grade insight from modern screening experiments.

Track Chair

Brinton Seashore-Ludlow
Karolinska Institutet

AI & ML in cell-based screening

Thursday morning

This session will highlight how deep learning algorithms are revolutionising cell-based assays, enabling automated and precise analysis of cellular characteristics. This includes recognising, profiling, and predicting visual phenotypes to uncover previously unexplored cellular details as imaging complexity increases. The session will also explore the crucial integration of multi-omics data—such as genomics, proteomics, and metabolomics—with cellular assays. AI’s ability to process vast, complex cellular datasets helps uncover hidden patterns, identify novel biomarkers, and transform raw data into actionable insights, accelerating drug discovery.

Track Chair

Sapna Desai
GSK

AI and prediction: how do we best prepare?

Thursday afternoon

As AI-driven approaches rapidly transform life sciences, the promise of predictive, interpretable, and generalizable models hinges on how well teams organize, prepare, and validate biological data. This conference track brings together operational and technical perspectives to share actionable best practices, real-world lessons learned, and common pitfalls to avoid when building AI models with biological datasets.
This track will surface trade-offs encountered and highlight approaches that led to measurable improvements for teams embarking on biological AI data sets.

Track Chair

Yolanda Chong
Novo Nordisk

Wednesday 6 May – Scientific Tracks

Morning: Relevant biology at scale

Afternoon: Redesigning our assay & data pipelines

Track Sponsor

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Conference Partner

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Time	Title
08:15 - 09:00	Registration
09:00 - 09:05	ELRIG Welcome
09:05 - 09:15	Conference Director Welcome & Keynote Introduction
09:15 - 10:00	Keynote Presentation - Predictive in vitro models: Addressing the challenges and harnessing the opportunities in pre-clinical testing - Hazel Screen (Queen Mary University of London)
10:00 - 10:40	Refreshment Break
10:40 - 10:45	Track Chair Welcome -Relevant biology at scale - Bilada Bilican (AstraZeneca)
10:45 - 11:15	O-Predict: Integrating organoid screening and clinical variables through machine learning for cancer trial outcome prediction - Gustave Ronteix (Orakl Oncology)
11:15 - 11:20	Flash Poster Presentation
11:20 - 11:50	From hiPS cells to screening: Automating long-term assays for neurodegenerative diseases - Lamiaa Bahnassawy (AbbVie Deutschland GmbH & Co. KG)
11:50 - 11:55	Technology Spotlight - CYTOSURGE
11:55 - 12:00	Technology Spotlight - SPT Laptech
12:00 - 12:30	Advanced human translatable cellular models: An integrated platform for target discovery and therapeutic development - Mirko Messa (AstraZeneca)
12:30 - 13:45	Refreshment Break - Poster Session 13:00 - 13:30
13:45 -13:50	Track Chair Welcome - Redesigning our assay & data pipelines - Brinton Seashore-Ludlow (Karolinska Institutet)
13:50 - 14:20	Screening hundred thousands of antibodies in one go and facilitating personalized cancer therapy - the magic of microfluidics - Christoph Merten (EPFL)
14:20 - 14:25	Technology Spotlight - Optics11
14:25 - 14:30	Flash Poster Presentation
14:30 - 14:45	Industry Insider - Promega
14:45 - 15:30	Refreshment Break
15:30 - 16:00	High-throughput transcriptomic profiling as an unbiased multidimensional platform for metabolic diseases drug discovery - Timur Samatov (Evotec International GmbH)
16:00 - 16:30	Conference Partner - Sartorius UK Ltd - Cell line development: Pitfalls, challenges and solutions - Darius Wilson
16:30 - 17:00	Cancer patient-derived explants in pre-clinical drug discovery: new insights come with new analytical and statistical challenges - Alex Kalinka (Cancer Research Horizons)
17:00 - 17:45	Amazing Journey - a tour of AstraZeneca R&D facility
18:00 - 18:45	Amazing Journey - a tour of AstraZeneca R&D facility
17:00 - 19:00	Networking

Thursday 7 May – Scientific Tracks

Track Sponsor

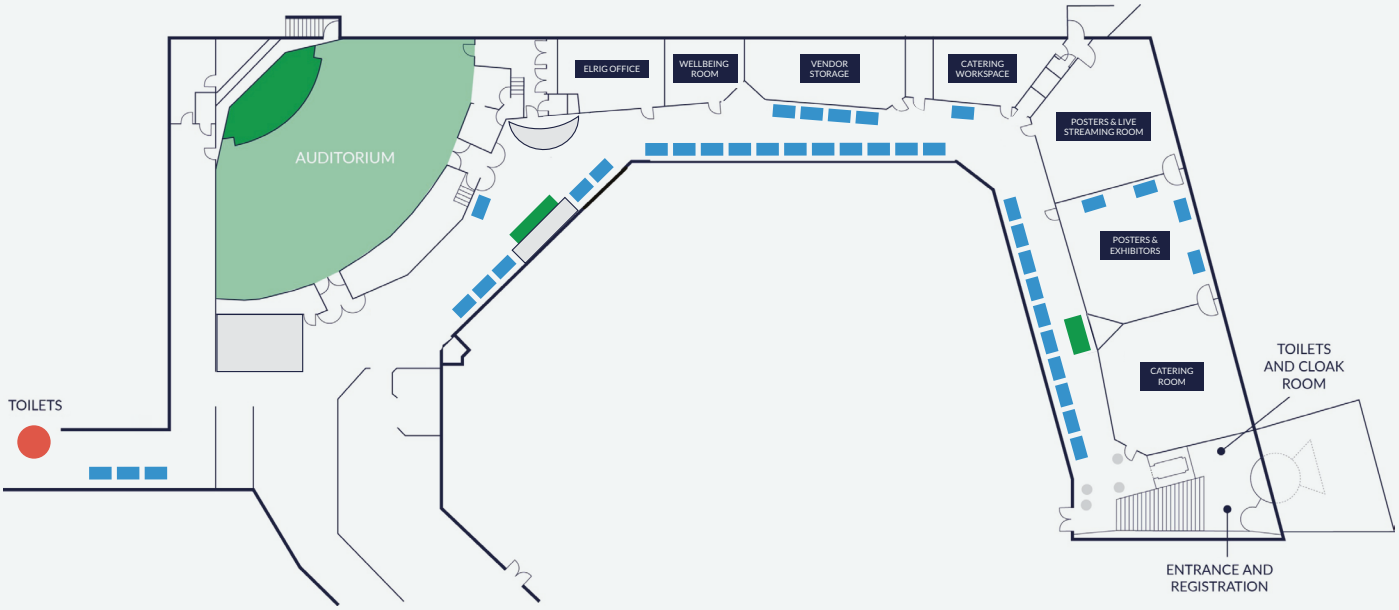
Cell Signaling TECHNOLOGY®

Morning: AI & ML in cell-based screening

Afternoon: AI and prediction: how do we best prepare?

Time	Title
08:15 - 09:00	Registration
09:00 - 09:10	Conference Director Welcome, Poster Prize & Keynote Introduction
09:10 - 09:55	Keynote Presentation - Transforming target discovery through a DNA foundation model and multi-omics approach -Dave Powell (Relation)
09:55 - 10:10	Industry Insider - bit.bio
10:10 - 10:25	Industry Insider - Olink
10:25 - 11:00	Refreshment Break
11:00 - 11:05	Track Chair Welcome - AI & ML in cell-based screening - Sapna Desai (GSK)
11:05 - 11:35	Integrating deep proteomics and AI/ML for phenotypic screening in the HBEC ALI airway model - Rachel Peltier-heap (GSK)
11:35 - 11:40	Flash Poster Presentation
11:40 - 11:55	Industry Insider - Single Cell Discoveries
11:55 - 12:25	From high-throughput to high-insight: Integrating AI into cellular screenings at Roche - Laura Benito-Zarza & Anne-Laure Ong (Roche)
12:25 - 12:30	Technology Spotlight - Revvity
12:30 - 13:00	AI, automation, and phenomics for mechanistic insights: From data generation to intelligent agents - Ola Spjuth (Uppsala University)
13:00 - 14:00	Refreshment Break - Poster Session 13.15 - 13.45
14:00 - 14:05	Track Chair Welcome - AI and prediction: how do we best prepare? - Yolanda Chong (Novo Nordisk)
14:05 - 14:35	From predictive biology to predictive AI: Building the data foundation for drug discovery - Tim Ahfeldt (VALID Inc.)
14:35 - 14:40	Technology Spotlight -Araceli
14:40 - 14:45	Flash Poster Presentation
14:45 - 14:50	Technology Spotlight - BergmanLabora
14:50 - 15:20	Refreshment Break
15:20 - 15:50	Perturb-MARS: In Silico Humanization - Michela Meister (Noetik)
15:50 - 16:20	Virtual cells in the era of AI - Berton Earnshaw (University Of Utah)

Floorplan



Exhibitors

- 3Brain AG
- Agilent
- Analytik Jena
- Araceli Biosciences
- Beckman Coulter
- Beijing Challen Biotechnology
- Bio-Rad
- Bit.Bio
- ZEISS
- Dotmatics
- FORMULATRIX
- Grenova Inc.
- Hamilton
- INNOPROT
- I&L Biosystems,
- MedChem Express
- Merck
- Montana Molecular
- Nordic Biosite
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Information for Participants

ELRIG Mobile App

Download the free ELRIG app and access all our conference information, programme and more from your phone or tablet.

- View the event programme
- View presentation and poster abstracts
- View speaker profiles
- View the exhibitor guide
- View the delegate and exhibitor list
- Organise your day with your own favourites list
- Share your profile as vCard and QR Code and scan exhibitor QR code information tags
- Network – contact delegates, other exhibitors and speakers easily through opt-in directories and integration with LinkedIn, X and Facebook.

Download our App… search for and install The Event App by EventsAir onto your mobile device, then use the Event App Code: CBS2026. For convenience, you can add the app to your device's home screen.

Wi-Fi

Please use the guest WiFi.

Wellbeing Room

Signed room in the corridor.

Accessibility

Please ask a member of the ELRIG team or security for directions to the disabled and changing facilities Cloakroom Room Beta2 located in the Conference Centre entrance by the security team.

Conference Code of Conduct

To help keep a safe space, we require the following from all attendees:

Pre-registration for the meeting is essential. At ELRIG we want all our meeting participants to enjoy, participate in and contribute to the event.

ELRIG does not accept harassment or intimidation of ELRIG participants in any form whether verbal, physical, or written (including on social media or by email).

Harassment includes, but is not limited to:

1. Offensive or unwanted conduct on the basis of age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex or sexual orientation which has the purpose or effect of violating dignity or creating an intimidating, hostile or degrading environment.
2. Use of sexualised or other inappropriate images or unwelcome sexualised content, inappropriate physical contact, unwelcome sexual attention or stalking.
3. Sustained interruption of speakers or those asking questions.
4. Unwanted photography or filming.

Intimidation includes, but is not limited to:

1. Making threats.
2. Bullying.
3. Personal attacks.

Participants who do not adhere to these rules will be asked to stop and expected to comply immediately. Participants may be removed from any meeting at the discretion of ELRIG's management. If you are being harassed/ intimidated, notice that someone else is being harassed/ intimidated, or have any other concerns, please contact any of the ELRIG management team immediately. They will be able to step in to remove you or others from a chain of communication, if this is the preferred action, and can also facilitate a discussion or mediation. If you wish, you may also nominate someone else to support facilitating any mediation or as an observer to this process.

About ELRIG

Who we are

ELRIG is a world-leading, not-for-profit organisation dedicated to advancing the drug discovery community. Our mission is to promote open access to cutting-edge research and innovation by connecting life science professionals through inclusive, free-to-attend scientific conferences and networking events.

With a dynamic community of over 25,000 members, we provide a platform for learning, collaboration, and progress on the most pressing challenges in life sciences. We are passionate about fostering diversity, inclusion, and accessibility—ensuring our events reflect a wide range of global perspectives and experiences that inspire scientific discovery and drive the industry forward.

ELRIG's Vision

To be the premier champion and enabler of an open, connected, diverse, and sustainable drug discovery and life science community.

Strategic Pillars

Enable drug discovery by improved connections between stakeholders, through an extended, sustainable, and ongoing program of best-in-class, open-access, science-based events and digital products.

Amplify scientific innovation, sector impact, and professional development by championing great science and people through platforms, recognition, and awards.

Demonstrate sector leadership in best practice for sustainability, inclusivity, representation, equality, and diversity for our teams, delegates, and target patient cohorts.

Corporate Sponsors

AstraZeneca

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2026 Events

JUNE

Target Innovation & Novel Screening Technologies
ELRIG Forum#
15 June | Berlin, Germany

Drug Discovery USA 2026
ELRIG Conference
16-17 June | Boston, USA

JULY

ELRIG Summer Social: The 2027 Launch
1 July | Cambridge, UK

SEPTEMBER

Discovering Precision Medicines
ELRIG's Irish Forum
3 Sept | Belfast, UK

Beyond the Gap: Advancing Drug Discovery in Women's Health Research
ELRIG Forum
15 Sept | Edinburgh, UK

OCTOBER

Drug Discovery 2026
ELRIG Conference
14-15 Oct | London, UK

NOVEMBER

Next Gen Omics & Imaging: Single Cell And Spatial Biology
ELRIG Forum
3 Nov | Paris, France

Protein Sciences In Drug Discovery 2026
ELRIG Conference
10-11 Nov | Stevenage, UK

DECEMBER

Meet Up
ELRIG SLAS Networking
9 Dec | London, UK

For exhibition options visit oxfordglobal.com/discovery-development/events/discovery-development-europe/why-sponsor

Join our LinkedIn Group

ELRIG: The Drug Discovery Community

Our community consists of scientists, researchers, engineers, thought-leaders, and commercial people across drug discovery.