



Protein Sciences in Drug Discovery 2024

18-19 November 2024
Hinxton Hall Conference Centre,
Cambridgeshire

#elrig
#proteinsciences24
#drugdiscovery



**Protein
Sciences**
IN DRUG DISCOVERY
2024

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Welcome to Protein Sciences in Drug Discovery

A joint meeting between ELRIG and The Protein Society

Leading scientists from industry and academia focus on emerging areas of protein science and their application to the challenges of modern drug discovery. The meeting will cover high throughput methods for protein expression, approaches for prosecuting challenging target space, analytical techniques to interrogate protein quality, the use of cryo-EM reveal and exploit druggability and sequence-based predictive methods.

Generation of antigens for drug discovery

Antigen production is a critical but often overlooked area of antibody and vaccine drug discovery. In a landscape where therapeutic antibody and vaccine targets grow increasingly complicated, exceptional antigen production has never been more vital. This session will explore approaches for designing and optimising antigens and how the optimal antigen can shape antibody and vaccine discovery pipelines leading to the best candidate drugs.

Protein biophysics at different stages of drug discovery

Protein biophysics has pushed forward the boundaries of drug discovery. In this session we will hear how researchers are expanding the biophysics arsenal to enable us to tackle challenging targets, understand mechanisms of action, and develop biologics and other drugs better and faster.

About ELRIG

Who we are

ELRIG, a market-leading UK-based not-for-profit volunteer-led organisation, is dedicated to delivering inspiring events to the dynamic life science community.

Our roots were originally in the application of automation, robotics, and instrumentation in laboratories, although we continuously evolve to meet the sector's shifting needs.

With a global community of over 22,000 life science professionals across all levels, ELRIG remains committed to accessible and inclusive events. Participation at our conferences, forums and networking events is free and unrestricted, reflecting the rich diversity of our community, and enabling learning and collaboration across disciplines, academia, and biopharmaceutical organisations.

Strategic Pillars



Events

- Best in class events
- Curated topical content
- Free to attend



Presence & Awareness

- Trusted brand
- Cross-community collaboration
- Growing digital presence



Equality, Diversity & Inclusivity

- Accessible to all
- Promoting engagement and collaboration
- Celebrating diversity



Sustainability

- Ethical and transparent
- Operational excellence
- Environmentally and economically sustainable events

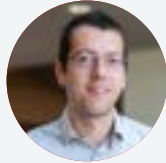
High-throughput in silico and experimental approaches to accelerate protein generation

Protein generation is a key for successful drug discovery. In this session we will focus on in silico design approaches, automated high-throughput experimental approaches and the interface between the two, with the aim to identify conditions for well behaving constructs and proteins to accelerate drug discovery.

Cryo-EM in drug discovery: From protein to structure to dynamics

The structure and motion of proteins at the atomic level are key elements of target druggability. In this session, we will explore how major advances in the field of cryo- electron microscopy have opened a window to understanding and harnessing protein structure & dynamics to develop superior drugs.

Conference and Track Chairs



Radoslav Enchev
The Francis Crick Institute



Lovisa Holmberg-Schiavone
AstraZeneca



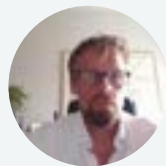
Laura Itzhaki
University of Cambridge



Ben Kemp
Agenus



Shane Chandler
GSK



James Love
Novo Nordisk



Theresia Schaedler
AstraZeneca



Kate Smith
GSK



Vanita Sood
Fable Therapeutics



2025 Event Diary

FEBRUARY

Target innovation and novel screening technologies
ELRIG's German Forum
Berlin, DE

WORD+ 2025 – 3rd Annual World Organoid and Organ-on-a-chip Research Day+
11 - 13 February 2025
Cambridge, UK

MARCH

Research & Innovation 2025 – Big molecules to big data
10 - 11 March 2025
London, UK

Advances in cell and gene therapy
ELRIG's UK Forum
20 March 2025
Cambridge, UK

MAY

Therapeutic Oligos 2025 – Drugging the undruggable
14 - 15 May 2025
Gothenburg, SE

JUNE

Neuroimmunology in drug discovery
ELRIG's USA Forum
24 June 2025
Boston, USA

SEPTEMBER

Functional genomics and CRISPR technologies
ELRIG's Scottish Forum
17 September 2025
Glasgow, UK

OCTOBER

Drug Discovery 2025 – A festival of life science
21 - 22 October 2025
Liverpool, UK

NOVEMBER

High-content imaging and flow cytometry in drug discovery 2025
19 - 20 November 2025
Stevenage, UK

DECEMBER

AI in automation
ELRIG and SLAS Joint Meeting
London, UK

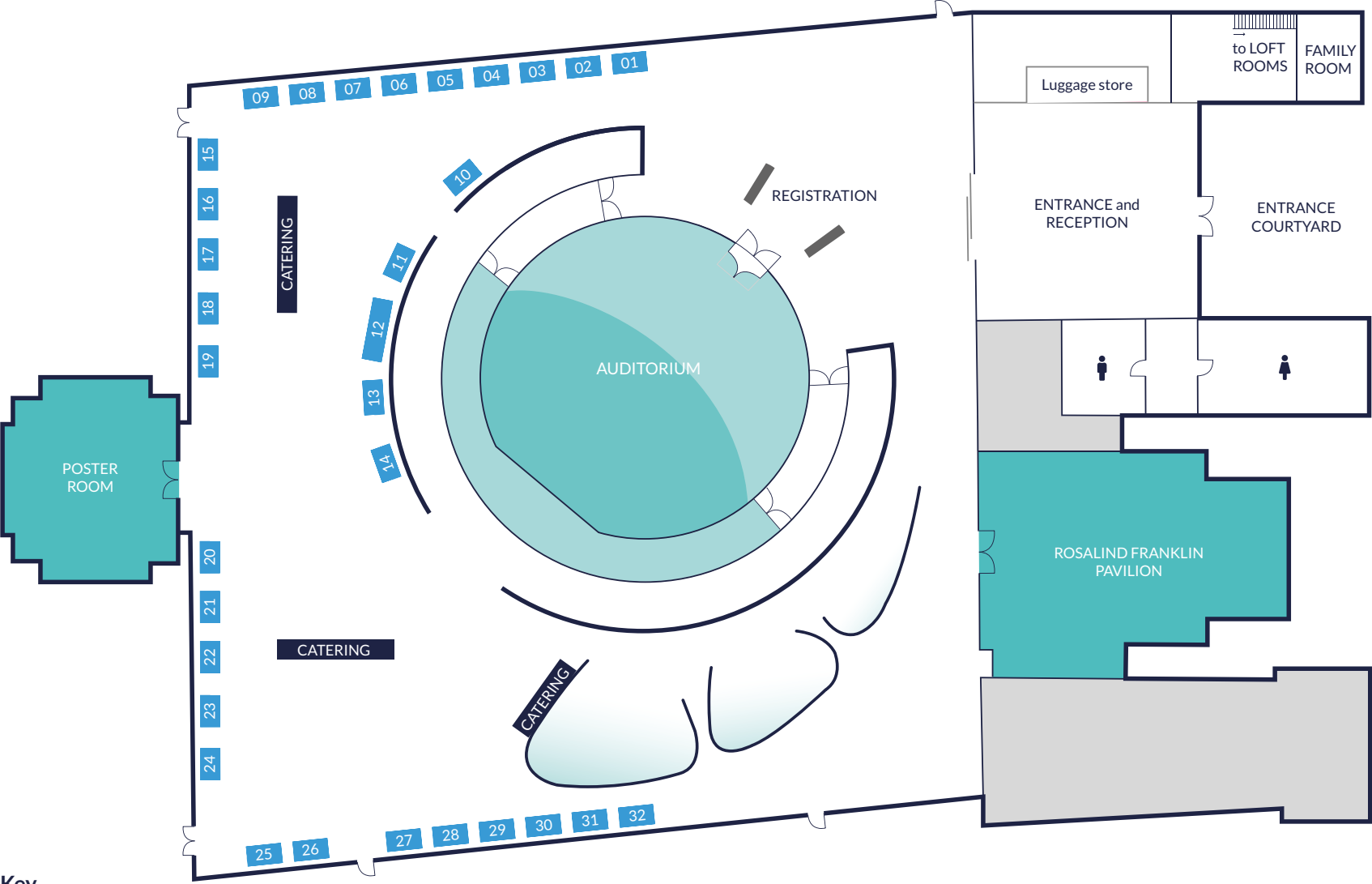
Day 1 - Monday 18th November

| Time - GMT | Title |
|---------------|---|
| 08:30 – 09:30 | Registration |
| 09:30 – 09:40 | Welcome – Del Trezise, ELRIG and Elizabeth Meirering, The Protein Society |
| 09:40 – 09:45 | Conference Director Welcome and Keynote Introduction |
| 09:45 – 10:30 | Keynote – Pharmacological kinetic stabilisation of amyloidogenic proteins reveals that protein aggregation causes neurodegeneration – Jeffery Kelly, The Scripps Research Institute |
| 10:30 – 10:45 | Industry Insider – Nuclera |
| 10:45 – 11:30 | Refreshment break |
| 11:30 – 11:35 | Track Introduction: Generation of antigens for drug discovery – Ben Kemp, Agenus and Kate Smith, GSK |
| 11:35 – 12:05 | Antigen generation for biologics drug discovery – Marcin Wolny, AstraZeneca |
| 12:05 – 12:10 | Technology Spotlight Partner – Abselion |
| 12:10 – 12:40 | Systematic reverse vaccinology screening for novel Plasmodium vivax blood-stage vaccine antigens – Prasun Kundu, Cambridge Institute for Medical Research |
| 12:40 – 12:45 | Flash Poster Presentation – Leveraging bioinformatics and language learning for nanobody discovery using naïve libraries – Lauren Eyssen, Rosalind Franklin Institute |
| 12:45 – 13:15 | Antigen discovery and design for vaccine development – Gerard Huysmans, GSK and Marta Vila Rico, GSK Vaccines |
| 13:15 – 14:30 | Refreshment break |
| 14:30 – 14:35 | Track introduction: Protein biophysics at different stages of drug discovery – Shane Chandler, GSK and Laura Itzhaki, University of Cambridge |
| 14:35 – 15:05 | Working with proteins in drug discovery – Geoff Holdgate, AstraZeneca |
| 15:05 – 15:10 | Flash Poster Presentation - Biophysical analysis of SMA-solubilised AQP4 for brain edema drug discovery – Philip Kitchen, Aston University |
| 15:10 – 15:15 | Technology Spotlight Partner – Fida Biosystems |
| 15:15 – 15:45 | Refreshment break |
| 15:45 – 16:15 | Advanced structural mass spectrometry in vaccinology research – Nathalie Norais, GSK |
| 16:15 – 16:20 | Technology Spotlight Partner – Sygnature Discovery |
| 16:20 – 16:50 | De novo design of miniprotein-based natural killer cell engagers – Chris Bahl, AI Proteins |
| 16:50 – 19:00 | Networking in The Exhibition Hall - Poster session 17:30 - 18:00 |

Day 2 - Tuesday 19th November

| Time - GMT | Title |
|---------------|---|
| 08:30 - 09:00 | Registration |
| 09:00 - 09:05 | Conference Director Welcome and Keynote Introduction |
| 09:05 - 09:50 | Keynote - Probing the Human proteome for therapeutic opportunities - Cheryl Arrowsmith, University of Toronto |
| 09:50 - 10:20 | Conference Partner - Beckman Coulter - Covalent drug discovery at AstraZeneca: How we prosecute challenging targets - Marcus Ladds, AstraZeneca |
| 10:20 - 10:25 | Poster Award Presentation |
| 10:25 - 11:00 | Refreshment break |
| 11:00 - 11:05 | Track introduction: High-throughput in silico and experimental approaches to accelerate protein generation - Lovisa Holmberg-Schiavone, AstraZeneca and James Love, Novo Nordisk |
| 11:05 - 11:35 | High-throughput protein production within the Swedish Human Protein Atlas project, Hannah Tegel, KTH Royal Institute of Technology |
| 11:35 - 11:50 | Industry Insider Partner - WuXi AppTec |
| 11:50 - 12:20 | Harnessing machine learning and heterogeneous datasets for predicting recombinant protein expression - Bradley Peter, AstraZeneca and Evgeny Tankhilevich, EBI |
| 12:20 - 12:25 | Technology Spotlight Partner - Analytik Jena |
| 12:25 - 12:30 | Flash Poster Presentation - Discovering cell surface receptor binding interactions through a specialized recombinant protein screening platform - Jarrod Shilts, ExpressionEdits |
| 12:30 - 12:35 | Flash Poster Presentation - Cryo-EM for structurally enabled development of small molecule drugs and therapeutic antibodies against GPCRs - Riccardo Cavalieri, Peak proteins part of Sygnature Discovery |
| 12:35 - 13:05 | Understanding the functional role of the intrinsically disordered proteome - Norman Davey, Institute of Cancer Research |
| 13:05 - 14:15 | Refreshment break - including poster session 13:30 - 14:00 |
| 14:15 - 14:20 | Track introduction: Cryo-EM in drug discovery: From protein to structure to dynamics - Radoslav Enchev, The Francis Crick Institute and Vanita Sood, Fable Therapeutics |
| 14:20 - 14:50 | Cryo-EM in industry - a revolution in progress - Chun-wa, GSK |
| 14:50 - 15:20 | Understanding the mechanisms of DNA crosslink repair - Lori Passmore, MRC Laboratory of Molecular Biology |
| 15:20 - 15:50 | Cryo-EM as a tool for vaccine design and antibody discovery - Andrew Ward, The Scripps Research Institute |
| 15:50 - 16:00 | Conference Close |

Floorplan



Key

X Vendor Booths

Corporate Sponsors

AstraZeneca

GSK

MSD

SRG

Sponsors

Conference Partner



Beckman Coulter Life Sciences

12

Exhibitors



Abselion

06



Agilent Technologies

08



Analytik Jena UK

25



Bio-Rad Laboratories Ltd

09



BLUE CAT BIO

BlueCatBio GmbH

11



BMG LABTECH

13



Fida Biosystems

22



Fintiede Solutions Ltd

20



Fluidic Sciences Ltd

10



HAMILTON UK

24



Immuto Scientific

28



Integra BioSciences

19



MedChemExpress

17



Nicoya Lifesciences

27



Nuclera

18



Protein Stable

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Proteome Sciences Plc

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Quantum-Si

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REFEYN

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Selvita

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SPT Labtech

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Sygnature Discovery

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WuXi AppTec

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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 found in your email. For convenience, you can add the app to your device's home screen.

Wi-Fi

Wi-Fi is freely available throughout the venue and may be found by following the below instructions:

1. Join the 'ConferenceGuest' network.
2. Enter your name and email address to register.
3. Click continue to send a registration confirmation email to that email address.
4. Open the registration email, follow the 'click here' link, and confirm the address is valid. (If you don't do this you will only get 10 minutes of free Wi-Fi).

Accessible toilets

Available in the Conference Centre

Family / Wellbeing room

Please ask at main reception

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:

5. 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.
6. Use of sexualised or other inappropriate images or unwelcome sexualised content, inappropriate physical contact, unwelcome sexual attention or stalking.
7. Sustained interruption of speakers or those asking questions.
8. 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.