



ELRIG THERAPEUTIC OLIGO AND EUROPEAN CHEMICAL BIOLOGY SYMPOSIUM 2023

9TH - 11TH MAY 2023
ASTRAZENECA,
GOTHENBURG

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#THERAPEUTICOLIGOS

#OLIGOS

#ECBS2023

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WELCOME TO ELRIG'S THERAPEUTIC OLIGOS & EUROPEAN CHEMICAL BIOLOGY SYMPOSIUM 2023

Välkommen and Welcome to Therapeutic Oligos and European Chemical Biology Symposium here at the AstraZeneca R&D site in Gothenburg.

ELRIG, the EuChemS and EU-OPENSOURCE have prepared this programme of speakers, poster sessions and scientific vendors to address all aspects of oligonucleotides therapeutics from design to safety, from targeting to assessment of efficacy. There is something for everyone!

“Combining multiple strands of exciting science in a single location for unrestricted knowledge-sharing is what this is all about,” said Dr Thomas Lundbäck, Senior Director, Mechanistic and Structural Biology, Discovery Sciences, AstraZeneca. “We’re all deeply committed to open access science, and firmly believe the symbiosis of academia and industry — across a smörgåsbord of therapeutic areas and tools — is how we can catapult drug discovery forward. We’re delighted to offer up our facilities to make this event possible.”

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 **EuChemS**
European Chemical Society

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AstraZeneca 

GSK

POSTER AWARDS

Best Early Career Professional Poster



Best General Poster



Best Oral Presentation



CONFERENCE DIRECTORS

Thomas Lundbäck
AstraZeneca

Linda Sundström
AstraZeneca

Karin Angelin Krefting
AstraZeneca

Fredrik Edfeldt
AstraZeneca

Pär Matsson
University of Gothenburg

Bagmi Pattanaik
Dentsply Sirona

Anna-Lena Gutavsson
Karolinska Institutet SciLifeLab

Katja Herzog
EU-OPENSOURCE ERIC

Sonsoles Martin Santamaria
CSIC

Bahne Stechmann
EU-OPENSOURCE ERIC

Wolfgang Fecke
EU-OPENSOURCE ERIC

Mads Hartvig Clausen
EU-OPENSOURCE ERIC

Marko Mihovilovic
Institute of Applied Synthetic
Chemistry

Francesco Peri
University of Milano-Bicocca

#ELRIG

#therapeuticoligos

#Oligos

#ecbs2023

TRACK SUMMARY

THERAPEUTIC OLIGO PROFILING AND ADVANCEMENTS IN OLIGO DESIGN AND SYNTHESIS

SESSION CHAIRS

Pär Matsson
University of Gothenburg

9th May 2023
The Auditorium

08.15-09.00	Registration
09.00-09.10	Conference Welcome - Linda Sundström, AstraZeneca & Fredrik Edfeldt, AstraZeneca
09.10-09.15	Session Introduction - Therapeutic OLIGO profiling - Pär Matsson, University of Gothenburg
09.15-10.00	Keynote Presentation - Antisense based therapeutics for the treatment of neurological diseases - Frank Bennett, Ionis Pharmaceuticals, US
10.00-10.40	Refreshment Break
10.40-11.10	In vitro safety assessment of antisense oligonucleotide drugs - Sabine Sewing, Hoffmann-La Roche
11.10-11.40	Harnessing RNA-protein binding for nucleic acids therapeutics design improvement - Alice Ghidini, Sixfold
11.40-11.45	Technology Spotlight Partner - Tecan
11.45-11.50	Technology Spotlight Partner - ThermoFisher
11.50-12.20	Revealing the intracellular concentration of nucleic-acid based therapeutics using NanoSIMS - Michael Kurczyk, AstraZeneca
12.20-13.30	Refreshment Break - Poster Session 13.00-13.30
13.30-13.35	Session Introduction - Advancements in OLIGO design and synthesis - Shalini Andersson, AstraZeneca
13.35-14.20	Keynote Presentation - Therapeutic siRNAs: how do we find the “best” ones? - Marie Wikström Lindholm, Silence Therapeutics GmbH
14.20-14.25	Technology Spotlight Partner - Beckman
14.25-14.55	Charge neutral modifications to enhance the cell uptake and activity of exon-skipping oligonucleotides - Tom Brown, Oxford University
14.55-15.10	Industry Insider Spotlight - Lijuan Pang, WuXi App Tec UK Ltd
15.10-15.20	Flash Presentation - Poster #6 - Multiomics analysis of naturally efficacious lipid nanoparticle coronas reveals high-density lipoprotein is necessary for function - Kai Liu, AstraZeneca
15.20-16.00	Refreshment Break
16.00-16.30	Tricyclo-DNA: promising antisense oligonucleotides for the treatment of neuromuscular diseases - Aurélie Goyenvallé, Inserm - University of Versailles
16.30-17.00	Conference Partner - Choosing the right GMP partner for your CRISPR-enabled cell and gene therapy - Tal Shamia, Synthego
17.00-17.30	Thermodynamic nearest-neighbor parameters for LNA/DNA PS-ASOs binding to RNA - Peter Hagedorn, Roche
17.30-19.00	Networking - Poster Session 18.00-18.30

TRACK SUMMARY

NOVEL FORMULATIONS AND BIOMARKER ANALYSIS AND CHEMICAL PROBE-INDUCED PROTEIN INTERACTION AND DEGRADATION

10th May 2023
The Auditorium

SESSION CHAIRS

Anna Backmark
AstraZeneca
Francesco Peri
University of Milano-Bicocca
Anna-Lena Gutavsson
Karolinska Institutet SciLifeLab

08.15-09.00	Registration
09.00-09.10	Conference Welcome - Linda Sundström, AstraZeneca & Fredrik Edfeldt, AstraZeneca
09.10-09.15	Session Introduction - Novel formulations and biomarker analysis - Anna Backmark, AstraZeneca
09.15-10.00	Keynote Presentation - Delivery of RNA therapeutics: how do we pull off the great endosomal escape? - Steven Dowdy, UCSD School of Medicine
10.00-10.40	Refreshment Break
10.40-11.10	Targeting antisense oligonucleotides via GLP1R specifically reduces gene expression in human pancreatic islets - Chiara Saponaro, Inserm U1190 & Emma Kay, AstraZeneca
11.10-11.40	Bioengineering extracellular vesicles for drug delivery - Samir Andaloussi, Karolinska Institutet
11.40-11.50	Technology Spotlight Partner - FIDA Technology: Applying first principle measurement to sizing and quantification of large particles - Juanitta Vibeke Julsgart, FidaBio
11.50-12.20	Optical control of mRNA Translation - Andrea Rentmeister, University of Münster
12.20-13.30	Refreshment Break - Poster Session 13.00-13.30
13.30-13.35	Session Introduction - Chemical probe-induced protein interaction and degradation - Anna-Lena Gutavsson, Karolinska Institutet SciLifeLab
13.35-13.40	EuChemS Presentation - Francesco Peri, University of Milano-Bicocca
13.40-13.45	EU-OPENSREEN Presentation - Bahne Stechmann, EU-OPENSREEN & Katja Herzog, EU-OPENSREEN
13.45-14.30	Keynote Presentation - Chemoproteomic profiling surveys the degradable proteome - Katherine Donovan, Dana-Farber Cancer Institute
14.30-15.00	Targeted protein degradation: drug discovery opportunities & resistance mechanisms - Cristina Mayor-Ruiz, IRB Barcelona
15.00-15.15	Industry Insider Spotlight - Effective solutions for therapeutic data management - Susana Tomásio, Collaborative Drug Discovery
15.15-16.00	Refreshment Break
16.00-16.30	Protein – macrocycle recognition and assembly - Peter Crowley, University of Galway
16.30-16.40	Flash Presentation - Poster #1 - From Fragments to Oligonucleotides: Two-Step Validation of Metal-Binding Groups for Targeting the DNA Damage Repair Enzyme SNM1A - Ellen Fay, Trinity College Dublin
16.40-16.50	Flash Presentation - Poster #9 - DNA Binding of a Cucurbit[8]uril-Mediated 4,4'-Bipyridinium–Peptide Dimer - Paula Novo Valencia, Universidade da Coruña
16.50-17.00	Flash Presentation - Poster #15 - Binding Site piRNA Clusters as Possible Regulators of Protein-Coding - Aizhan Rakhmetullina, Institute of Biochemistry and Biophysics
17.00-17.05	Early Career Professional Introduction - Bagmi Pattanaik, Dentsply Sirona
17.05-17.45	Early Career Professional Event - Niclas Lindqvist, Svensk Medicin AB
17.10-17.55	Amazing Journey - a tour of AstraZeneca R&D facility
17.55-18.40	Amazing Journey - a tour of AstraZeneca R&D facility

TRACK SUMMARY

NEW WAYS TO SHAPE AND INTERROGATE BIOLOGY THROUGH CHEMISTRY AND NEW WAYS TO SHAPE AND INTERROGATE BIOLOGY THROUGH CHEMISTRY

SESSION CHAIRS

Sonsoles Martin Santamaria
CSIC
Mads Clausen
DTU Chemistry
Bahne Stechmann
EU-OPENSSCREEN

11th May 2023
The Auditorium

08.15-09.00	Registration
09.00-09.10	Conference Welcome - Mads H Clausen, DTU, EU-OPENSSCREEN ERIC Director
09.10-09.15	Session Introduction - New ways to shape and interrogate biology through chemistry - Sonsoles Martin Santamaria, CSIC & Mads Clausen, DTU Chemistry
09.15-10.00	Keynote Presentation - Chemical control of subcellular protein localization - Stefan Kubicek, CeMM Vienna
10.00-10.30	Refreshment Break
10.30-11.00	Towards the development of computational protocols for the design of efficient enzymes - Silvia Osuna, Universitat de Girona
11.00-11.30	Exploring new chemistries to finetune the selectivity of activity-base probes targeting serine hydrolases - Rui Moreira, iMed, Faculty of Pharmacy, University of Lisbon
11.30-12.00	Highly multiplexed quantitative epigenome profiling for drug screening and biomarker discovery - Simon Elsässer, Karolinska Institutet
12.00-13.10	Refreshment Break - Poster Session 12.30-13.00
13.10-13.15	Session Introduction - Innovative tools and methods for advanced cell profiling - Bahne Stechmann, EU-OPENSSCREEN & Katja Herzog, EU-OPENSSCREEN
13.15-14.00	Keynote Presentation - Finding disease phenotypes and candidate therapeutics using images: Cell Painting - Shantanu Singh, Broad Institute of Harvard/MIT
14.00-14.30	Identification of novel inducers of erythropoiesis by high-content screening - Petr Bartunek, CZ-OPENSSCREEN
14.30-14.40	Comfort Break
14.40-14.50	Flash Presentation - Poster #18 - Computational approaches to modulate innate immunity: Toll-like receptors 2 and 4 - Marina Mínguez-Toral, Centro de Investigaciones Biológicas Margarita Salas (CIB-CSIC)
14.50-15.00	Flash Presentation - Poster #19 - Optimization of N-Piperidinyl-Benzimidazolone Derivatives as Potent and Selective Inhibitors of 8-Oxo Guanine DNA Glycosylase 1 - Adam Dickey, SciLifeLab
15.00-15.10	Flash Presentation - Poster #4 - Small-molecule activation of OGG1 increases oxidative DNA damage repair by gaining a new function - Heather Gildie, Helleday Laboratory
15.10-15.40	TBC
15.40-15.50	Conference Close & Poster Awards - Thomas Lundbäck, AstraZeneca & Katja Herzog, EU-OPENSSCREEN ERIC

INFORMATION FOR PARTICIPANTS

REGISTRATION

To help keep ELRIG's Therapeutic OLIGOs & European Chemical Biology Symposium 2023 a safe space, we require the following from all attendees:

1. Pre-registration for the meeting is essential. Please register at elrig.org and enter our EventFlo registration system (*if you wish to, you may choose a pro-noun, which will be printed on your badge*).
2. Please observe our safe space guidelines: At ELRIG we want all our meeting participants, whether the meeting is face-to-face or on-line, to enjoy, participate in and contribute to the event. We are therefore dedicated to providing a harassment-free experience for all event participants involved in its activities and meetings. 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 or communications at the discretion of ELRIG's management if this behaviour continues. 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.

SITE INFORMATION

- Available toilets, including a disabled toilet, can be found inside the conference centre building.
- A Family room and prayer room/quiet room are available upon request from the ELRIG team.

WIFI

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

1. Enable the wireless function on your device.
2. Select Guest Wi-Fi (no code or password required).

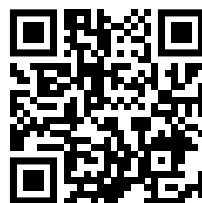
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The European Laboratory Research & Innovation Group (ELRIG) is a leading European not-for-profit organization that exists to provide outstanding scientific content to the life science community.

ELRIG provides high quality content that will be made readily accessible to all, and we will always be an inclusive organisation, serving a diverse scientific network. In addition, ELRIG will always be a volunteer led organisation, run by and for the life sciences community, on a not-for-profit basis.

We will promote equality by welcoming all to all our events and will be inclusive, by removing barriers to access and our events will represent the diversity of the ELRIG community.

STRATEGIC PILLARS



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Deliver UK leading events, showcasing cutting edge science and technology, that are accessible to all.



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Promote inclusivity, engagement and collaboration, in our diverse community.



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Expand and enhance our digital presence.



SUSTAINABILITY

Drive an open and transparent organisation, with a focus on delivery excellence and financial sustainability.



2023 CONFERENCES

DRUG DISCOVERY 2023

ACC Liverpool
October 18th - 19th

HIGH CONTENT IMAGING AND FLOW CYTOMETRY IN DRUG DISCOVERY 2023

GSK, Stevenage
November 21st - 22nd

2023 NETWORKING EVENTS

PINT OF SCIENCE

Cambridge
May 23rd

ELRIG - SUMMER PARTY

London
June 28th

2023 FORUMS

DISCOVERY TECHNOLOGIES 2023: COMPLEX MEDICINES FORUM

Liverpool
June 20th

ADVANCEMENTS IN CELL & GENE THERAPY: NEW THERAPEUTIC HORIZONS

Basel
September 15th