

Program

Delivery of Nucleic Acid Therapeutics III: Biology, Engineering and Development

April 8 - 12, 2026

Dubrovnik, Croatia

Conference Co-Chairs

Steven F. Dowdy
UCSD School of Medicine, USA

Laura Sepp-Lorenzino
Intellia Therapeutics, USA

Matt Stanton
RA Ventures, USA



Engineering Conferences International

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Engineering Conferences International (ECI) is a not-for-profit global engineering conferences program, originally established in 1962, that provides opportunities for the exploration of problems and issues of concern to engineers and scientists from many disciplines.

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Previous conferences in this series:

Oligonucleotide Delivery: Biology, Engineering and Development

October 7-11, 2012

Hernstein, Austria

Conference Chairs:

Laura Sepp-Lorenzino, Merck & Co., Inc., USA

Steve Dowdy, UCSD School of Medicine, USA

Delivery of Nucleic Acid Therapeutics II: Biology, Engineering and Development

April 4 – 8, 2024

Siracusa, Sicily, Italy

Conference Chairs:

Laura Sepp-Lorenzino, Intellia Therapeutics., USA

Steve Dowdy, UCSD School of Medicine, USA

Matt Stanton, Generation Bio, USA

Conference Sponsors

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Wednesday, April 8, 2026

15:00 – 16:30	Conference check-in (Soderini Foyer)
16:30 – 16:40	Welcome and General Announcements (Soderini Foyer)
16:40 – 17:30	<u>Keynote Talk 1</u> Modulating siRNA chemistry for extra-hepatic delivery Anastasia Khvorova, University of Massachusetts, USA
17:30 – 19:00	Welcome Reception (Soderini Foyer) <i>Croatian wine tasting (with bites of fruit/cheese)</i>
19:00 – 21:00	Dinner
21:00 – 22:00	Social Hour (Maraska Lounge Bar - drinks for purchase)

Locations and Notes

- *Technical sessions will be in the Solderini Ballroom.*
- *Poster Sessions will be in the Pre-function area*
- *Breakfasts and lunches will be in the Origano Restaurant.*
- *Dinner locations will be announced on site.*
- *The ECI on site office is Wind Roses East.*
- *Audio, still photo and video recording by any device (e.g., cameras, cell phones, laptops, PDAs, watches) is strictly prohibited during the technical sessions, unless the author and ECI have granted prior permission.*
- *Speakers – Please have your presentation loaded onto the conference computer prior to the session start (preferably the day before).*
- *Speakers – Please leave at least 3 minutes for questions and discussion.*
- *Please do not smoke at any conference functions.*
- *Turn your mobile telephones to vibrate or off during technical sessions.*
- *After the conference, ECI will send an updated participant list to all participants. Please check your listing now and if it needs updating, you may correct it at any time by logging into your ECI account.*
- *Emergency Contact Information: Because of privacy concerns, ECI does not collect or maintain emergency contact information for conference participants. If you would like to have this information available in case of emergency, please use the reverse side of your name badge.*

Thursday, April 9, 2026

- 07:30 – 09:00 Breakfast Buffet
- 09:00 – 12:05 **Session 1: LNP Delivery**
Chair: Matt Stanton, RA Ventures
- 09:00 – 09:25 **In vivo endosomal escape assay identifies mechanisms for efficient hepatic LNP Delivery**
Gaurav Sahay, Oregon State University, USA
- 09:25 – 09:50 **Targeting T Cells with LNPs**
Matt Stanton, Generation Bio, USA
- 09:50 – 10:15 **TBA**
Yogev Debbi, Mana Bio, Israel (Virtual Talk)
- 10:15 – 10:45 Coffee break
- 10:45 – 11:10 **Targeted lipid nanoparticle-mediated in vivo delivery of anti-CD19 and anti-CD20 surrogate-CAR mRNA drives potent B cell depletion in mice and primates**
William (Bill) Querbes, Aera Therapeutics, USA
- 11:10 – 11:35 **Writing DNA with RNA: In vivo T cell engineering by target primed reverse transcription**
Cecilia Cotta-Ramusino, Tessera Therapeutics, USA
- 11:35 – 11:50 **In vivo generation of CAR-T cells for the treatment of B-cell mediated autoimmunity with mRNA CARs delivery**
Daniel Getts, CREATE Medicines, USA
- 11:50 – 12:05 **Virome screening for development of next-generation viral-like particle delivery vectors**
Dmitry Ter-Ovanesyan, Wyss Institute, Harvard University, USA
- 12:05 – 14:00 Lunch
- 14:00 – 16:55 **Session 2: Conjugate Approaches**
Chair: Laura Sepp-Lorenzino, Intellia Therapeutics
- 14:00 – 14:25 **SSOs targeting the AURKA 5'UTR collapse an oncogenic circuit in pancreatic cancer**
Adrian Krainer, Cold Spring Harbor Labs, USA
- 14:25 – 14:50 **Gene silencing by siRNAs and ASOs in the eye**
David Corey, UT Southwestern, USA
- 14:50 – 15:15 **Facile screening of receptor-ligand Pairs via LNP delivery and expression of human receptor mRNA in hepatocytes**
Mark Schlegel, Alnylam Pharmaceuticals, USA
- 15:15 – 15:40 **Advancing blood-brain barrier delivery of oligonucleotide therapeutics**
Ian Huggins, Ionis, USA
- 15:40 – 16:10 Coffee break
- 16:10 – 16:35 **Zorevunersen: An investigational ASO for Dravet syndrome**
Isabel Aznarez, Stoke Therapeutics, USA

Thursday, April 9, 2026 (continued)

- 16:35 – 16:50 **Rational design of antibody–oligonucleotide conjugates for efficient delivery of nucleic acid therapeutics**
Soham Mandal, Axolabs GmbH, Germany
- 16:50 – 17:05 **Multiplexed screening of RNA conjugates: Direct in vivo assessment of cellular entry and endosomal escape**
Anna Perdrix Rosell, Sixfold Bioscience, UK
- 17:05 – 19:00 **Poster Session**
- 19:00 – 21:00 Dinner
- 21:00 – 22:00 Social Hour

Friday, April 10, 2026

- 07:30 – 09:00 Breakfast Buffet
- 09:00 – 12:00 **Session 3: Endosomal Trafficking, Escape and Chemistry**
Chair: Steve Dowdy, UCSD School of Medicine
- 09:00 – 09:25 **Imaging cellular barriers to RNA delivery – From internalization to site-of-action**
Anders Wittrup, Lund University, Sweden
- 09:25 – 09:50 **Learning from endosomal mechanisms to advance macromolecule delivery**
Marino Zerial, Human Technopole, Italy
- 09:50 – 10:15 **How do we pull off the great endosomal escape?**
Steve Dowdy, UCSD School of Medicine, USA
- 10:15 – 10:45 Coffee break
- 10:45 – 11:10 **Optimizing AS1411 aptamer as a delivery scaffold through 2'F-ANA modifications**
Masad J. Damha, McGill University, Canada
- 11:10 – 11:35 **Improving oligonucleotide tissue exposure and target enzyme engagement through rational base, sugar and backbone design**
Michael Bryne, Wave Life Sciences, USA
- 11:35 – 11:50 **Rapid and reliable quantification of mRNA escape (RNASCAPE)**
Frank H. Schulz, University of Copenhagen, Denmark
- 12:00 – 13:15 Lunch
- 13:30 Meet in the lobby to depart for excursion – Boat trip and Dubrovnik sightseeing

Dinner on your own in Dubrovnik

Saturday, April 11, 2026

- 07:30 – 09:00 Breakfast Buffet
- 09:00 – 12:00 **Session 4: New Approaches**
Chair: David Corey, UT Southwestern Medical Center
- 09:00 – 09:25 **DNA-loaded lipid nanoparticles (DNA-LNPs): Bringing gene therapy to common chronic diseases**
Jake Brenner, University of Pennsylvania, USA
- 09:25 – 09:50 **Expanding the reach of RNAi: Novel RNAi triggers and targeted extrahepatic delivery**
Tracy Zimmermann, City Therapeutics, USA
- 09:50 – 10:15 **In vivo generation of functional CD8⁺ CAR T-cells and renal gene editing driven by distinct and selective LNP tropism**
Kalina Paunovska, Nava Therapeutics, USA
- 10:15 – 10:45 Coffee break
- 10:45 – 11:00 **Editing**
Jane Wang, Tessera Therapeutics, USA
- 11:00 – 11:15 **Mechanistic insights into lipid nanoparticle-mediated RNA translocation across endosomal barriers**
Alice Spadea, MPI-CBG, Germany
- 11:15 – 11:30 **Engineered lipid nanoparticles enable thermostable delivery of synthetic DNA payloads for vaccines and DNA-encoded therapeutics**
Emily Young, 4basebio, UK
- 11:30 – 11:45 **Tuning siRNA packing order in lipid nanoparticles modulates oligonucleotide functional delivery**
Georgios Kyriakakis, University of Copenhagen, Denmark
- 12:00 – 14:00 Lunch
- 14:00 – 16:45 **Session 5: Delivery Strategies**
Chair: Marino Zerial, Human Technopole
- 14:00 – 14:25 **Delivering Oligos with Oligos**
Matt Levy, Creyon, USA
- 14:25 – 14:50 **Architects of the Code: The past and future of genomic medicine**
Laura Sepp-Lorenzino, Intellia Therapeutics, USA
- 14:50 – 15:15 **The journey from unbiased in-vivo evolution to multi-tissue, multi-RNAi delivery**
Lavi Erisson, Gensaic, USA
- 15:15 – 15:40 **Issues in the delivery of immune stimulatory nucleic acids In VLP or LNP**
Art Krieg, Zola Therapeutics, USA
- 15:40 – 16:10 Coffee break
- 16:10 – 16:25 **TTX-MC138, a first-in-class nanoparticle-antagomir conjugate against advanced solid tumors - Phase 1 clinical trial results**
Zdravka (Z) Medarova, TransCode Therapeutics, USA

Saturday, April 11, 2026 (continued)

- 16:25 – 16:40 **A chemistry-driven ferritin platform for multifunctional nucleic acid delivery**
Deborah Quaglio, Sapienza University of Rome, Italy
- 16:40 – 16:50 **Poster Awards and Joy Cappel Investigator Award**
- 16:50 – 17:00 Short Break
- 17:00 – 17:50 **Keynote Talk 2**
35 Years of delivering oligonucleotides
Frank Bennett, Ionis Pharmaceuticals, USA
- 17:50 – 18:00 Closing
- 18:00 – 19:00 Reception (Giardino Restaurant Foyer)
- 19:00 – 21:30 Gala Dinner with live music (Giardino Restaurant)

Sunday, April 12, 2026

- 07:30 – 10:00 Breakfast Buffet
- Departures

List of Posters

- 1. An integrated discovery platform for accelerating oligonucleotide therapeutics via advanced conjugate delivery systems**
Andy Ng, WuXi AppTec, China
- 2. Superior Immunogenicity of Ionizable Lipid APL-143 in saRNA-LNP Formulations Targeting Avian Flu**
Amy Druschitz, Avanti Research, USA
- 3. CPI RNA Training academy - Skills development for RNA therapeutics and lipid nanoparticles through specialised training programmes**
Joseph Nelson, CPI, UK
- 4. Decoding LNP packing states using single-particle and machine learning analytics improves functional RNA delivery**
Nikos Hatzakis, University of Copenhagen, Denmark
- 5. Antibody-based analytical assays for the localization, quantification, and trafficking of oligonucleotide therapeutic drugs in serum, cells and tissues**
Jim Fendrick, Rockland Immunochemicals, Inc., USA
- 6. Tuning siRNA packing order in lipid nanoparticles modulates oligonucleotide functional delivery**
Georgios Kyriakakis, University of Copenhagen, Denmark

Upcoming ECI Conferences

2026

DELIVERY OF NUCLEIC ACID THERAPEUTICS III: BIOLOGY, ENGINEERING AND DEVELOPMENT

April 8 – 12, 2026

L. Sepp-Lorenzino, Intellia Therapeutics; S. F. Dowdy, University of California San Diego School of Medicine; M. Stanton, Generational Bio
Croatia

VACCINE TECHNOLOGY X

April 12-17, 2026

T. Tagmyer, PATH; N. Alteras, Moderna; S. Frank, UCL; D. Cowley, AstraZeneca
Porto, Portugal

NANOTECHNOLOGY IN MEDICINE V: PHYSICAL TRIGGERS AND ADVANCED MATERIALS

April 19-23, 2026

R. Fernandes, George Washington University; J. Nguyen, University of North Carolina at Chapel Hill; A. Schroeder, Technion
Giardini Naxos, Messina, Sicily, Italy

WASTELCA 5: NEW TOOLS FOR LIFE CYCLE SUSTAINABILITY ASSESSMENT OF MUNICIPAL AND CHALLENGING WASTE MANAGEMENT

June 7 – 12, 2026

U. Arena, University of Campania “Luigi Vanvitelli”, Italy; A. Damgaard, DTU, Denmark; M. Materazzi, UCL, UK; F. Ardolino, University of Campania “Luigi Vanvitelli”, Italy
Cetraro (Calabria), Italy

BIOCHEMICAL AND MOLECULAR ENGINEERING XXIV

July 19 – 23, 2026

D. Tullman-Ercek, Northwestern University; M. Blenner, University of Delaware; A. Lewis, Moderna
Puerto Rico

CHEMREC II – THERMOCHEMICAL RECYCLING OF PLASTICS

September 13 – 17, 2026

M. Pilar Ruiz, Maastricht University; S/ Kersten, University of Twente; E. Heeres, University of Groningen
Porto, Portugal

NANOMECHANICAL TESTING IN MATERIALS RESEARCH AND DEVELOPMENT X

October 4 – 9, 2026

Verena Maier-Kiener, Montan Universität Leoben, Austria
Rhodes, Greece

SINGLE USE TECHNOLOGIES VIII

October 12 – 15, 2026

N. Montenay, Sartorius; G. Gillespie, North Carolina State University; P. Smith, GSK
Montreal, P.Q., Canada

BIOLOGICAL, PHARMACEUTICAL AND COSMETIC COMPLEX FLUIDS IV

October 25 – 30, 2026

S. Amin, University of Miami
Calabria, Italy

Upcoming ECI Conferences

2027

MICROBIAL ENGINEERING IV

February 14 – 18, 2027

E. Keshavarz-Moore, University College London; T. Sauer, Sanofi; D. Dikicioglu, University College London
Malta

CELL CULTURE ENGINEERING XX

May 1-7, 2027

Inn Yuk, Genentech/Roche; M. Antoniewicz, University of Michigan; N. Abu-Absi, Abbvie
Quebec City, Canada

BIO-CHAR V

May TBA, 2027

J. Lehmann, Cornell University; M.R. Acocella, University of Salerno; O. Masek, University of Edinburgh;
N. Klinghoffer, Western University
Giardini Naxos, Sicily, Italy

INNOVATIVE MATERIALS & METHODS FOR ADDITIVE MANUFACTURING IV (IM2AM)

June 6-11, 2027

B. Compton; University of Tennessee, Knoxville
Espoo, Finland

ADVANCES IN OPTICS FOR BIOTECHNOLOGY, MEDICINE AND SURGERY IX

June 13-17, 2027

T. Durduran, IFCO; B. Choi, University of California Irvine; J. Ramella-Roman, Florida International University
Castelldefels, Spain

MICRO- AND NANOPLASTICS IN WATER: CHARACTERIZATION, CURE AND PREVENTION II

July TBA, 2027

D. Hunkeler, Aqua+Tech
Davos, Switzerland

PYROLIQ IV – 2027: PYROLYSIS AND LIQUEFACTION OF BIOMASS AND WASTES

September TBA, 2027

P. Biller, Aarhus University; B. DeCaprariis, Spaienza University of Rome; M. Garcia-Perez, Washington State University

INTEGRATED CONTINUOUS BIOMANUFACTURING VIII

TBA 2027

M. Brower, Merck; E. Gefroh, JustBio-Evotec; T. Villiger, University of Applied Sciences and Arts Northwestern Switzerland

INTERNATIONAL HYDROGEN CONFERENCE: UNDERSTANDING HYDROGEN-MATERIALS INTERACTIONS

October 3 – 7, 2027

M. Martin, NIST; J. Burns, University of Virginia
Whitefish, MT

ENZYME ENGINEERING XXIX

October TBA, 2027

J. Lewis, Indiana University; E. Master, University of Toronto; M. Kerr, Eli Lilly
Eastern Canada

Engineering Conferences International

Engineering Conferences International (ECI) is a not-for-profit global engineering conferences program that has served the engineering/scientific community since 1962 as successor program to Engineering Foundation Conferences. ECI has received recognition as a 501(c)3 organization by the U.S. Internal Revenue Service and is incorporated in the State of New York as a not-for-profit corporation.

The program has been developed and is overseen by volunteers both on the international Board of Directors and international Conferences Committee. More than 1,900 conferences have taken place to date. The conferences program is administered by a professional staff and the conferences are designed to be self-supporting.

ECI Mission

To serve the engineering/scientific community with international, interdisciplinary, leading edge engineering research conferences

ECI Purposes

The advancement of engineering arts and sciences by providing a forum for the discussion of advances in the field of science and engineering for the good of mankind by identification and administration of international interdisciplinary conferences

To work with engineering, scientific and social science societies and the interested general public to jointly sponsor conferences and to take other actions that will foster complementary programming.

To initiate conferences that will have a significant impact on engineering education, research practice and/or development.

ECI Encouragement of New Conference Topics

The ECI Conferences Committee invites you to suggest topics and leaders for additional conferences and encourages you to submit a proposal for an ECI conference.

Ideally, proposals should be submitted from 18 to 24 months in advance of the conference although the staff can work on a shorter timeline.

The traditional format for an ECI conference is registration Sunday afternoon with technical sessions held each morning and evening through Thursday or Friday noon. Afternoons are used for informal gatherings, poster sessions, field trips, subgroup meetings and relaxation. This format has served well to build important professional networks in many areas.

ECI welcomes proposals for shorter conferences and for conferences which span weekends in order to reduce the number of working days participants are away from their offices.

ECI Works With You

ECI works with conference chairs in two complementary ways. First, an experienced member of the Conferences Committee acts as your technical liaison from the proposal stage through the conference itself. He or she is always available to consult with you on any conference issue.

Second, after your proposal has been approved by the Conferences Committee, the ECI staff will assume responsibility for the administration of the conference.

Your primary responsibilities will be recruiting the organizing committee, developing the technical program and securing third-party funding necessary to support the travel of key speakers.

The responsibilities of ECI's "full service" staff include -- but are not limited to -- the following:

- Recommend, negotiate, contract and make substantial deposits for housing, meals, meeting space, A/V equipment and tours.
- Maintain web sites for the conference and for submission of abstracts.
- Publicize via electronic and print media.
- Administer all finances including grants, contributions and purchase orders. (ECI makes grant funds available as soon as a grant is approved.) There is no need for chairs to set up a conference bank account or file tax returns for their conference.
- Process all applications and registrations.
- Produce bound program/abstracts book.
- Contract for the publication of print or electronic proceedings, if any.
- Provide on-site staff during the conference.

For more information, please contact the ECI Director at Barbara@engconfintl.org