Thursday, April 4, 2024

15:00 – 16:30  Conference check-in (Hotel Lobby)
16:30 – 16:40  Welcome and General Announcements
16:40 – 17:30  **Keynote Talk 1:**
   **Living in the world of Nucleic Acid Medicine, the Cinderella Molecules**
   Mano Manoharan, Alnylam Pharmaceuticals, USA
17:30 – 19:00  Welcome Reception on Titanic Terrace with Ortigia Sea View with Local Sicilian Wine Tasting
19:00 – 20:30  Dinner (Neos Restaurant)
20:30          Social Hour
**Friday, April 5, 2024**

07:30 – 09:00  Breakfast Buffet (Neos Restaurant)

09:00 – 09:25  **Setting the Delivery Stage**
Steve Dowdy, UCSD, USA

**Session 1: Clinical Stage Delivery**
Chair: Art Krieg, USA

09:25 – 09:50  **TfR Ab conjugated oligos for muscle delivery**
Art Levin, Avidity Biosciences, USA

09:50 – 10:15  **TfR-Fab conjugated oligos for muscle delivery**
Oxana Beskrovnaya, Dyne Therapeutics, USA

10:15 – 10:45  Coffee Break

10:45 – 11:10  **CRISPR LNPs**
Kristy Wood, Intellia Therapeutics, USA

11:10 – 11:35  **Design and Evaluation of Novel ionizable Lipids for RNA Delivery**
Pad Chivukula, Arcturus Therapeutics, USA

11:35 – 11:50  **Delivery of a First-in-Class miR-10b Antagomir to Treat Metastatic Cancer: The Long Winding Road from Pre-Clinical Development to Initial Clinical Experience**
Zdravka Medarova, Transcode Therapeutics, USA (Short Talk)

11:50 – 12:05  **Splice-switching oligo conjugates for the treatment of Erythropoietic Protoporphyria**
Phil Becker, ETH, Switzerland. (Short Talk)

12:05 – 14:00  Lunch (Latomie Terrace or Nesos Restaurant, depending on weather)

**Session 2: Endosomal Trafficking and Escape**
Chair: Steve Dowdy, UCSD, USA

14:00 – 14:25  **LNP Endosomal Escape**
Anders Wittrup, Lund University, Sweden

14:25 – 14:50  **Harnessing endocytosis to improve the delivery of oligonucleotide-based drugs**
Marino Zerial, Max Plank Institute, Germany

14:50 – 15:15  **ENDOSCAPE: Triterpene glycoside conjugates allow efficient endosomal escape of diverse targeted payloads**
Guy Hermans, Supreme Technologies B.V., the Netherlands

15:15 – 15:40  **In vitro systems for prediction of in vivo performance of LNPs**
Dwight Morrow, Moderna

15:40 – 16:00  Coffee Break

16:00 – 16:25  **GalAhead and PNP, double targeting the way forward!**
Jim Weterings, Simaomics, China and USA

16:25 – 16:50  **Exploring cellular uptake and trafficking of lipid conjugated antisense oligonucleotides**
Emma Kay (AstraZeneca) (Short Talk)

16:50 – 17:05  **Deep learning-enhanced single particle tracking reveals intracellular delivery and escape of oligonucleotides**
Nikos Hatzakis, University of Copenhagen, Denmark (Short Talk)

17:05 – 17:30  **Round Table on Today’s Lessons Learned**

17:30 – 19:00  Poster Session 1 (Conference Center - with beverages)

19:00 – 21:00  Dinner (Sicilian Buffet on Titanic Terrace with Ortigia Sea View)

21:00  Social Hour
Saturday, April 6, 2024

07:30 – 09:00 Breakfast Buffet (Nesos Restaurant)

**Session 3: Delivery Chemistry, Immunity and Escape**
Chair: Masad Damha, McGill University, Canada

09:00 – 09:25 **Lipidated conjugates for CNS delivery**
Anastasia Khvorova, University of Massachusetts, USA

09:25 – 09:50 **Chemical evolution of artificial peptide carriers for nucleic acid delivery**
Ernst Wagner, Ludwig-Maximilian-University of Munich, Germany

09:50 – 10:15 **Selective Organ Targeted (SORT) LNPs: focus on lung delivery and PCD program**
Dan Siegwart, UT Southwestern/ReCode, USA

10:15 – 10:45 Coffee Break

10:45 – 11:10 **Nucleic acid immunity: the key to successful nucleic acid therapeutics**
Gunther Hartmann, University of Bonn Hospital, Germany

11:10 – 11:25 **Designing Thermostable Hermes lipopolyplex nanoparticles for mRNA and synthetic hpDNA delivery**
Amy Walker, 4BaseBio, UK (Short Talk)

11:25 – 11:40 **Visualization of lipid nanoparticle disintegration and localized endosomal membrane damage**
Johanna M. Johansson, Lund University, Sweden (Short Talk)

11:40 – 11:55 **Molecular Nano-Motors (MNMs): A novel delivery modality for oligonucleotides**
Hamutal Ben Dov, Aposense, Israel (Short Talk)

11:55 – 14:00 Lunch (Latomie Terrace or Nesos Restaurant, depending on weather)

**Session 4: New Delivery Strategies**
Chairs: Ernst Wagner, Ludwig-Maximilians-Universität, Germany

14:00 – 14:25 **Recent Discoveries in ExtraHepatic Delivery of RNA Cargoes**
Pete Smith, ReNegade, USA

14:25 – 14:50 **Centyrin-targeted siRNA conjugates for extra-hepatic delivery: ABX1100, a CD71 Centyrin-Gys1 siRNA conjugate for treatment of pompe disease**
Sukumar Sakamuri, Aro Biotherapeutics, USA

14:50 – 15:15 **Engineering Exosomes to Enable and Create Improved Genetic Medicines**
Tony De Fougerolles, Evox Therapeutics Limited, United Kingdom

15:15 – 15:40 **LNP delivery**
Guarav Sahay, Oregon State University, USA

15:40 – 16:00 Coffee Break

16:00 – 16:15 **In Vivo Delivery of RNA Gene Writers to the Liver and Beyond**
William Salomon, Tessera, USA (Short Talk)

16:15 – 16:30 “I translate, therefore I deliver”: understanding LNP delivery capabilities on a granular scale to reveal therapeutic opportunities
Charlotte Dunne, Pantherna, Germany (Short Talk)

16:30 – 17:00 **Just a Little Delivery Reality Check**
Paul Burke, Burke Bioventures LLC, USA

17:00 – 18:30 Poster Session 2 (Conference Center with beverages)

18:30 – 21:00 Dinner (Nesos Restaurant)

21:00 Social Hour
**Sunday, April 7, 2024**

07:30 – 09:00  Breakfast Buffet (Nesos Restaurant)

**Session 5: Non-Viral and Viral Gene Therapy**
Chairs: Matt Stanton, Generation Bio, USA

09:00 – 09:25  **AAV delivery**
Dirk Grimm, Heidelberg University Hospital, Germany

09:25 – 09:50  **A Modular, Antibody-Based AAV Retargeting Platform For Efficient And Specific In Vivo Gene Delivery**
Leah Sabin, Regeneron, New York, USA

09:50 – 10:05  **Development of a human hematopoietic stem cell targeted platform through multiplexed targeting and de-targeting modifications of a common viral gene transfer vector for safe and effective editing of stem cell compartment in vivo. (Short Talk)**
Dmitry Shayakhmetov, Emory University, USA

10:05 – 10:30  Coffee Break

10:30 – 10:55  **DNA LNP delivery**
Matt Stanton, Generation Bio, USA

10:55 – 11:20  **Targeting mRNA LNPs to New Cell types**
Stefaan De Koker, Etherna, Belgium

11:20 – 11:45  **LNP Structure**
Jay Kulkarni, Nanovation Therapeutics, Canada

12:00  Pick up boxed lunch (Hotel Lobby)

12:15 – 17:30  Buses leave for sightseeing excursion to Roman ruins and Old Town Siracusa

18:00 – 18:10  Poster Awards

18:10 – 19:00  **Keynote Talk 2**
*The World of LNPs*
Pieter Cullis, University of British Columbia, Canada

19:15 – 21:30  Gala Dinner (Nesos Restaurant)

21:30  Social Hour

**Monday, April 8, 2022**

07:30 – 09:00  Breakfast Buffet (Nesos Restaurant)

09:00– 12:00  Departures