

Tuesday, June 24, 2025

10:00–5:00 pm **Exhibitor and Posterboard Set-Up** | Medical School Lobbies and Faculty Conference Room

Wednesday, June 25, 2025

10:00–2:30 pm **Registration** | Albert Sherman Center (ASC) Lobby (*Career workshop participants register by 12:45pm*)

1.00–2.30 pm **Career Workshop** (*pre-registration required*) | Paul J. Dimare Center Conference Room

2.40–2.45 pm Welcome and Introduction, **Phillip D. Zamore**, RTI, UMass Chan Medical School

2.45–3.30 pm **Regulation of exogenous RNAs: From viral RNAs to mRNA therapeutics**
Keynote: V. Narry Kim, Seoul National University

3.40–4.30 pm **Poster Flash Talks and Exhibit Hall** | ASC2.2102 Auditorium & Medical School Lobbies & Online
Session Chair: Theodore Carrigan-Broda, RTI, UMass Chan

4.30–6.00 pm **RNATx Kickoff & Happy Hour** | Paul J. Dimare Center Conference Area and Foyer

Thursday, June 26, 2025

7.45–8.45 am **Registration & Continental Breakfast** | ASC Multipurpose Room (MPR)

Session I **The Long and the Short of ncRNAs** | ASC2.2102 & Online
Session Chairs: Samantha Ho & Haoyang Cheng, RTI, UMass Chan

8.50–8.55 am Welcome and Introduction, **Phillip D. Zamore**, RTI, UMass Chan Medical School

8.55–9.20 am **MicroRNA-mediated gene regulation in animal development**
Victor Ambros, UMass Chan Medical School

9.25–9.50 am **Conserved roles of miRNAs in development**
Luisa Cochella, Johns Hopkins School of Medicine

9.55–10.20 am **Investigating the structure-function relationships of noncoding RNAs**
Alisha “Jonesy” Jones, New York University

10.25–10.35 am **Evidence for Mutator component-independent piRNA silencing in *C. elegans***
Wendy Tan, RTI, UMass Chan Medical School

ON DEMAND **Short Talks**

10.40–11.10 am **Networking & Coffee Break** | Medical School Lobbies

Session II **RNA Structure & Mechanism** | ASC2.2102 & Online
Session Chairs: William Cruz & Min Zhang RTI, UMass Chan

11.15–11.40 am **From noise to signal: studying the efficiency of mRNA splicing**
Athma Pai, RTI, UMass Chan Medical School

11.45–12.10 pm **tRNA modifications & codon-biased translation in cancer**
Richard I. Gregory, UMass Chan Medical School

12.15–12.25 pm **Cell surface glycoRNA biology**
Ryan Flynn, Boston Children's, Harvard Medical School

12.30–12.40 pm **Uncovering the postfertilization regulatory mechanisms required for intergenerational epigenetic inheritance in mice**
Grace Lee, University of Pennsylvania

12.45–1.45 pm **Lunch** | ASC Multipurpose Room (MPR)

1.45–3.30 pm **Poster Session I (Even Posters) & Exhibit Hall**
Medical School Lobbies & Online

Session III **RNA Technologies** | ASC2.2102 & Online
Session Chairs: Marina Krykbaeva & Valeria Sanabria, RTI, UMass Chan

3.30–3.55 pm **Cross-kingdom RNA communication & RNA-based innovative strategies for crop-protection**
Hailing Jin, UC Riverside

4.00–4.25 pm **Ancient RNA - Possibilities and Limitations**
Marc Friedländer, Stockholm University

4.30–4.40 pm **irCLIP-RNP and Re-CLIP reveal patterns of dynamic protein assemblies on RNA**
Luca Ducoli, Stanford University

4.45–4.55 pm	Mime-seq 2.0: Cell-specific sequencing of microRNAs from mammalian tissues and organs <i>Ariane Mandlbauer, Johns Hopkins University</i>
5.00–5.10 pm	Deep generative models generate mRNA sequences with enhanced translational capacity and stability <i>He Zhang, Raina Biosciences</i>
6.00 pm	RNATx Party Top of the Tower, ticket required

Friday, June 27, 2025

7.45–8.45 am **Registration & Continental Breakfast** | ASC MPR

Session IV **ASOs, Delivery, and Cancer Tx** | ASC2.2102 & Online *Session Chairs: Thomas Ormsby & Matt Yee, RTI, UMass Chan*

- 8.45–9.10 am **Development of SORT lipid nanoparticles (LNPs) for genome correction of disease-causing mutations**
Daniel J. Siegwart, UT Southwestern
- 9.15–9.40 am **Gain and Loss of RBP Functions a Cancer-Associated Mutation**
Daniel Dominguez, UNC School of Medicine
- 9.40–9.50 am **Mirror-image Nucleic Acids as Advanced Molecular Therapies**
Wen Zhang, Indiana University School of Medicine
- 9.55–10.20 am **The Basic and Applied Biology of Engineered Exosomes for Delivery of RNA Therapeutics and Cancer Vaccine**
Raghu Kalluri, MD Anderson Cancer Center

10.20–10.50 am **Networking & Coffee Break** | Medical School Lobbies

Session V **Editing** | ASC2.2102 & Online *Session Chairs: Anis Barati & Daniel MacVeigh-Fierro, RTI, UMass Chan*

- 10.55–11.20 am **Development and Characterization of Precision Genome Editing Tools**
Alexis Komor, University of California, Berkeley
- 11.25–11.35 am **Applying AIMER-based RNA editing technology to nonsense mutation correction in the CNS and lung**
Genliang Lu, Wave Life Sciences
- 11.40–11.50 am **Prime editing-mediated conversion of an endogenous tRNA gene into a suppressor tRNA for disease-agnostic therapeutic genome editing**
Sarah Pierce, Broad Institute
- 11.55–12.05 pm **Mechanistic insights into CRISPR-associated transposons and implications for programmable gene insertion**
Leifu Chang, Purdue University
- 12.10–12.20 pm **Developing bespoke gene editing treatments for patients with carbamoyl phosphate synthetase 1 (CPS1) deficiency in real time: successes and challenges**
Xiao Wang, University of Pennsylvania

12.25–1.15 pm **Lunch** | ASC MPR

1.15–2.45 pm **Poster Session II (Odd Posters) & Exhibit Hall**
Medical School Lobbies & Online

Session VI **Translating Discoveries** | ASC2.2102 & Online *Session Chairs: Annie Collins & Emily Knox, RTI, UMass Chan*

- 2.45–3.10 pm **Receptor Mediated Targeted Delivery to Proximal Tubules in Kidney**
Alfica Sehgal, Judo Bio
- 3.15–3.25 pm **MicroRNA-21 is a Potential Therapeutic Agent Targeting Tgfb1 and Mitigating High-Fat-Diet-Induced Liver Disease and Cancer**
Urmila Jagtap, Beth Israel Deaconess Medical Center, Harvard Medical School
- 3.30–3.55 pm **Cancer genes beyond chromosomes**
Howard Chang, Amgen
- 4.00–4.10 pm **Advancing an intrathecal divalent siRNA for prion disease as an investigator-initiated program**
Eric Vallabh Minikel, Broad Institute
- 4.15–4.25 pm **RSwitch-enabled Gene Therapy to Fine Tune Frataxin Expression for the Treatment of Friedrich's Ataxia**
Jon Dempersmier, Rgenta
- 4.30–4.40 pm **Unlocking the full potential of RNAi therapeutics with LEAD™**
Chunyang Zhang, Sanogene Bio

4.45–5.30 pm **Biomimetic Chemistry of RNA Therapeutics**
Keynote: Mano Manoharan, Alnylam Pharmaceuticals

