



## Agenda for the 12th International mRNA Health Conference

(Status of the 12th of November – Subject to change)

### Monday, November 11 - in Boston only

05:30 - 07:30 pm	Welcome Reception / Mixer at Davios Northern Italian Steakhouse: 75 Arlington St, Boston
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### Tuesday, November 12

#### Opening: Opening Remarks & Logistics

08:15 - 08:30 am, EST

08:15 am		Opening Remarks & Logistics
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#### Session 1: Introductory Session

08:30 - 09:30 am, EST

Short introductory talks on mRNA medicine history, RNA basics, mRNA delivery, mRNA vaccines, mRNA therapeutics

08:30 am	Katalin Karikó	University of Pennsylvania	History of mRNA medicines
08:50 am	Eckhard Jankowsky	Moderna	RNA biology and mRNA medicines
09:00 am	Patrick Baumhof	CureVac	Formulation and delivery of mRNA medicines
09:10 am	Galit Alter	Moderna	mRNA vaccines
09:20 am	Mathias Vormehr	BioNTech	mRNA therapeutics

09:30 - 10:00 am, EST Coffee Break

#### Session 2: RNA Basics

Chair: Eckhard Jankowsky

10:00 - 11:30 am, EST

10:00 am	Jeff Collier	Johns Hopkins University	Use of poly(A) tail mimetics to enhance mRNA expression from genes associated with haploinsufficiency disorders
10:14 am	Stephanie Ramos	Trilink / JHU	A novel RNA polymerase variant for reduced dsRNA and simple IVT integration
10:29 am	Pieter Verveake	Ghent University	Enhanced self-amplifying mRNA enables protein production up to five months while reducing cytotoxicity
10:39 am	Xiao Wang	Broad Institute of MIT and Harvard	Deconstruct and reprogram mRNA life cycle
10:53 am	Ritam Neupane	University of Michigan	Translation of human papillomavirus E6 protein from mRNAs with extremely short 5'-UTRs
11:03 am	Craig Martin	University of MA, Amherst	Continuous flow manufacturing of mRNA free of dsRNA, DNA, and protein - before purification
11:17 am	Hiroshi Abe	Nagoya University	Chemistry-based mRNA design for efficient protein production

11:30 am - 01:00 pm, EST Lunch break

#### Session 3: Keynote

01:00 - 02:00 pm, EST

01:00 pm	Drew Weissmann	Perelman School of Medicine at the University of Pennsylvania	Nucleoside-Modified mRNA-LNP Therapeutics
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#### Session 4: Vaccines and Antimicrobials

Chair: Norbert Pardi

02:00 - 03:30 pm, EST

02:00 pm	Erol Fikrig	Yale	Acquired Tick Resistance to Prevent Lyme Disease and other Tick-borne Infections
02:14 pm	María José Limeres	Johannes Gutenberg University Mainz	An mRNA-LNP vaccine against hepatitis B virus induces potent immune responses in preventive and chronic HBV mouse models
02:24 pm	Viviana Simon	Mount Sinai	Kinetics and Durability of SARS-CoV-2 mRNA Vaccine Specific Antibody Responses
02:38 pm	Moritz K. Jansson	University Medicine Rostock	mRNA-based antibacterial therapies
02:52 pm	Xiaole Cui	Ghent University	Immune responses against the RNA-dependent RNA polymerase of self-amplifying (SA) mRNA and the influence on the efficacy of repeated SA-mRNA vaccination
03:02 pm	Tim Beissert	TRON Mainz	Advancing the Trans-Amplifying RNA Vaccine Platform to Enhance Expression with Low Doses and Incorporate N1-Methylpseudouridine Modifications
03:16 pm	Ling-Ling Chen	Shanghai Institute of Biochemistry and Cell Biology	Trafficking and Turnover regulation of circular RNAs

03:30 - 04:00 pm, EST Coffee Break

**Session 5: Flash Poster Talks / New Company Introductions**

Chair: Katalin Karikó

04:00 - 05:00 pm, EST

	Daiki Matsuda	Capstan Therapeutics	
	Syed Reza	NOF Corporation	
	May Guo	Areterna LLC	
	Hamid Trimech	ARCALIS, Inc	
	Hiroto Iwai	Kyowa Kirin Co., Ltd	
	Jeremy Gillespie	ArcticZymes	
	Edo Kon	Ribox Therapeutics	
	Francis Combes	Sintef	
	Alessio Silvola	Anemocyte Srl	
	Hagen Richter	Wacker Chemie AG	
	Robin Oliveres	Inside Therapeutics	
	Yu Zheng	RiboTech LLC	
	Julien Couture-Senecal	Azane Tx	
	Sung Jun	Hanmi Fine Chemical	
	Ashish Dhir	4basebio UK Limited	
	José Castillo	Quantoom Biosciences	
	Jiangsheng Xu	General Therapeutics	
	Charles O'Donnell	Omega Therapeutics	
	Cafer Ozdemir	Kernal Biologics	
	Vella (Yiting) Liu	Vaxess Technologies	
	Jasdave Chahal	Tiba Biotech	
	Gilles Divita	AANASTRA, DIVINCELL	
	Wei Xu	Metis Pharmaceuticals	

**Session 6: Poster Session - Odd-numbered Posters**

05:00 - 06:30 pm, EST

Cash bar in the foyer and Statler room

06:30 - 07:30 pm, EST

Conference Dinner / Networking Event

in the Ballroom of the Hilton Boston Park Plaza Hotel

07:30 pm EST

Wednesday, November 13

<b>Session 7: Keynote</b> <b>09:00 - 10:00 am, EST</b>			
09:00 am	Peter Marks	Center of Biologic Evaluation and Research (CBER) U.S. Food and Drug Administration	The Expanding Promise of mRNA Technology

10:00 - 10:30 am, EST *Coffee Break*

<b>Session 8: Delivery I</b> <b>Chair: Patrick Baumhof</b> <b>10:30 am - 12:34 pm, EST</b>			
10:30 am	Daniel G. Anderson	MIT	Nucleic Acid Delivery Systems for RNA Therapy and Genome Editing
10:44 am	Nuthan Vikas Bathula	UBC	Delivery vehicle and route of administration influences self-amplifying RNA biodistribution, expression kinetics and reactogenicity
10:54 am	Yizhou Dong	Mount Sinai	Lipid nanoparticles enabled mRNA therapeutics
11:08 am	Serena Omo-Lamai	University of Pennsylvania	Lipid Nanoparticle-Associated Inflammation is Triggered by Sensing of Endosomal Damage: Engineering Endosomal Escape without Side Effects
11:22 am	Yusuke Sato	University of Hokkaido	Overcoming Thermostability Challenges in mRNA-Lipid Nanoparticle Systems with Piperidine-Based Ionizable Lipids
11:36 am	Xizhen Lian	UTSW/JHU	Bone-marrow-homing lipid nanoparticles for genome editing in diseased and malignant hematopoietic stem cells
11:46 am	Ying Tam	Acuitas Therapeutics	Innovative Strategies for RNA Therapeutics Delivery with Advanced Ionizable Lipid Technology for Specific Organ Targeting
12:01 pm	Anders Wittrup	Lund University	Live-cell imaging of endosomal escape and cytosolic RNA localization
12:15 pm	Daniel Siegwart	University of Texas Southwestern Medical Center	In vivo editing of lung stem cells for durable gene correction in mice
12:29 pm	Jing Zhu	Recipharm AB	Insights of CMC for mRNA-based gene editing program

12:34 - 01:30 pm, EST *Lunch break*

<b>Session 9: Cancer Vaccines and mRNA Therapeutics I</b> <b>Chair: Mathias Vormehr</b> <b>01:30 - 03:03 pm, EST</b>			
01:30 pm	Andy Ferguson	Gritstone	Development of Neoantigen-Directed Cancer Vaccine utilizing self-amplifying mRNA (samRNA)
01:44 pm	John Wherry	University of Pennsylvania	COVID-19 mRNA vaccine responses: lessons for cancer
01:58 pm	Woojung Jung	Sungkyunkwan University	Lipid nanoparticle-mediated dual mRNA therapy for localized and prolonged therapeutic effects in age-related macular degeneration
02:08 pm	Le Van Toan	Kanazawa University	mRNA-based in vivo generation of designer antigen-presenting cells for cancer immunotherapy
02:18 pm	Norman Drzeniek	Charité Universitätsmedizin Berlin	mRNA-based multiplex editing of CAR-T cells for autoimmune disease and solid tumors
02:28 pm	Yuichi Suzuki	Hokkaido University	Marginal zone B cell targeting - mRNA loaded lipid nanoparticles for cancer vaccine
02:38 pm	Allen Tseng	Strand Therapeutics	STX-003: mRNA-based cancer therapy for tumor-specific expression of IL-12 via programmable genetic circuits
02:48 pm	Sara Nogueira	MilliporeSigma	Unlocking mRNA delivery with a novel ionizable lipid library

03:03 - 03:30 pm, EST *Coffee Break*

<b>Session 10: Delivery and Manufacturing I</b> <b>Chair: Daniel Siegwart</b> <b>03:30 - 05:00 pm, EST</b>			
03:30 pm	Michael J. Mitchell	University of Pennsylvania	Lipid nanoparticles for overcoming biological barriers to mRNA delivery
03:44 pm	Andreas Wagner	Polymun Scientific Immunobiologische Forschung GmbH	LNP production for mRNA vaccines, therapeutics and for gene editing –proof of concept for a versatile process
03:59 pm	Moore Chen	Monash University	A versatile, receptor-targeted mRNA/LNP system for in vivo immune cell delivery
04:09 pm	Javier Gimenez Warren	Certest	Innovative Strategies for RNA Therapeutics Delivery with Advanced Ionizable Lipid Technology for Specific Organ Targeting
04:24 pm	Timothy Leaver	Cytiva	Outsourcing strategies to simplify and accelerate RNA-LNP nanomedicine development
04:39 pm	Stefaan De Koker	Etherna	LNPs based on redox-sensitive carbamate ionizable lipids enable enhanced and tunable immune responses to mRNA vaccines
04:49 pm	Bernhard Bobusch	FDX Fluid Dynamix GmbH	FDmiX - The Flow-optimized Nanoparticle Manufacturing Platform Across all Production Scales
04:54 pm	Sönke Stocker	Lonza	The importance of innovation for the development of a modular mRNA/LNP toolbox

**Session 11: Poster Session - Even-numbered Posters**  
**05:00 - 06:30 pm, EST**

**Free Evening**

Thursday, November 14

<b>Session 12: Vaccines II</b>			
<b>Chair: Galit Alter</b>			
<b>08:30 - 10:03 am, EST</b>			
08:30 am	Ali Ellebedy (virtual)	Washington University	Germinal Center B Cell Response to mRNA Vaccination in Humans
08:44 am	Francis Impens	Belgium	Immunopeptidomics for next-generation bacterial vaccine development
08:58 am	Régis Gervier	Sanofi	mRNA Vaccine Development: From Chemistry to AI-Enhanced Manufacturing
09:13 am	Adam Zuiani	BioNTech	A multivalent mRNA monkeypox virus vaccine (BNT166) protects mice and macaques from orthopoxvirus disease
09:28 am	Parinaz Aliahmad	Replicate Bioscience	Translation of an optimized self-replicating RNA platform with an expanded clinical therapeutic index
09:38 am	Paula Muresan	CureVac SE	Development and optimization of lipid nanoparticles for delivery of mRNA vaccines
09:48 am	Jing Zhu	Roche	Comprehensive Evaluation of T7 Polymerase for Enhanced Yield & Quality in mRNA Production

10:03 - 10:30 am, EST *Coffee Break*

<b>Session 13: Delivery and Manufacturing II</b>			
<b>Chair: Patrick Baumhof</b>			
<b>10:30 - 11:50 am, EST</b>			
10:30 am	Hai-Quan Mao	Johns Hopkins University	Engineering lipid nanoparticles and microgel matrix to program a local immunostimulatory niche for cancer immunotherapy
10:44 am	Elena Atochina-Vassermann	University of Pennsylvania	Targeted Delivery of TGF- $\beta$ mRNA to Lung Parenchyma Using One-Component Ionizable Amphiphilic Janus Dendrimers
10:58 am	José Castillo	Quantoom Biosciences	mRNA drugs production from very small to very large-scale capacity: when to use batch versus continuous strategies
11:13 am	Sven Even Borgos	SINTEF Industry	Quality assessment of mRNA-LNPs - the need for orthogonal methods and novel ways to measure
11:27 am	Tao Lu	Aldevron	From Template to Final Product: Innovative Strategies for mRNA manufacturing
11:42 am	Shigetomo Tsujihata	FujiFilm	Designing LNPs with Proprietary Ionizable Lipids to Expand the Possibilities for RNA Delivery

**Announcement of Poster Prize Winners**

**Scientific Committee**

**11:57 am - 12:05 pm, EST**

12:05 - 01:30 pm, EST *Lunch Break*

<b>Session 14: Cancer Vaccines / Therapeutics II</b>			
<b>Chair: Markus Zettl</b>			
<b>01:30 - 03:03 pm, EST</b>			
01:30 pm	Christian Kastrup	University of British Columbia	Genetically engineered transfusable platelets using mRNA lipid nanoparticles
01:44 pm	Regina Heidenreich	CureVac	Development of multiepitope mRNA vaccines- first results of Phase I human study in Glioblastoma patients
01:59 pm	Patrick Finn	Moderna	mRNA as a potential therapeutic for rare disease
02:14 pm	Elias J. Sayour	University of Florida	RNA lipid particle aggregates targeting glioblastoma
02:28 pm	Helen Cho	Samyang Biopharm	Tissue-selective mRNA delivery by Polymer-Lipid Nanoparticle platform, SENS (Stability Enhanced NanoShell)
02:33 pm	Keiji Itaka	Tokyo Medical and Dental University / Osaka University	mRNA medicine as a new disease-modifying osteoarthritis drug (DMOADS)
02:43 pm	Xuan Du	Tokyo Medical and Dental University	mRNA therapy for treating Duchenne muscular dystrophy
02:53 pm	Katia Lemdani	Neovacs sa	Efficacy and safety of a bivalent IL-4/IL-13 mRNA vaccine for protection against allergic asthma in humanized mice and non-human primates

**Passing of Baton and Closing Remarks**

**03:03 - 03:30 pm**

03:03 pm Moderna & CureVac