

NUCLEIC ACIDS

Development, Analysis, and Production of mRNA & DNA

VIRTUAL EDITION

JANUARY 31–FEBRUARY 2, 2022

Chaired By:



Lawrence C. Thompson, PhD
Pfizer, Inc.



James W. Brown, PhD
Agathos Biologics

MONDAY • JANUARY 31, 2022

9:30 am – 10:00 am **Overview / Intro**

10:00 am – 10:15 am **Break**

10:15 am – 10:55 am
Nucleic Acid-Based Virus-Like Particles for Vaccine & Gene Therapeutic Applications
Mark Bathe, PhD
Massachusetts Institute of Technology (MIT)

10:55 am – 11:10 am **Break**

11:10 am – 11:50 am
An Optimal, Enzymatically-Produced DNA Vector for Nucleic Acid Medicine
Tommy Duncan, PhD
Touchlight

11:50 am – 12:40 pm **Lunch**

12:40 pm – 1:20 pm
Advanced Analytical Characterization of mRNA Vaccines
Philip White, PhD
Moderna Therapeutics

1:20 pm – 1:35 pm **Break**

1:35 pm – 2:15 pm
How Standards Can Support Translating Products to Market
Samantha Maragh, PhD
National Institute of Standards & Technology (NIST)

*All of the presentations shown in the program are included with your registration fee.
Times are Eastern Standard Time (EST).*

TUESDAY • FEBRUARY 1, 2022

9:30 am – 10:00 am **Overview / Intro**

10:00 am – 10:15 am **Break**

10:15 am – 10:55 am
Real World Use of Integrated NGS Analysis in Process R&D and Manufacturing
Michael Johnson, PhD and Marcell Veidner
Genedata, Inc.

10:55 am – 11:10 am **Break**

11:10 am – 11:50 am
Manufacturing and Supply Strategies for Viral Vectors
Anthony Hitchcock
Cobra Biologics, A Charles River Company

11:50 am – 12:30 pm **Lunch**

12:30 pm – 1:10 pm
Efficient Polymer-Mediated Delivery of Gene Editing Payloads Through Combinatorial Design, Parallelized Experimentation, and Machine Learning
Theresa M. Reineke, PhD
University of Minnesota

1:10 pm – 1:25 pm **Break**

1:25 pm – 2:05 pm
Large-Scale Production of Plasmid DNA and mRNA to Support Therapeutic & Vaccine Development
Technology Workshop
Aldevron

2:05 pm – 2:20 pm **Break**

2:20 pm – 3:00 pm
Using Machine Learning and SynBio to Design Optimal Nucleic Acid Sequence Drug Modalities
Claes Gustafsson, PhD
ATUM

WEDNESDAY • FEBRUARY 2, 2022

9:30 am – 10:00 am **Overview / Intro**

10:00 am – 10:15 am **Break**

10:15 am – 10:55 am
New Tools for Nucleic Acid Manufacturing
Peter Dedon, MD, PhD
Massachusetts Institute of Technology (MIT)

10:55 am – 11:10 am **Break**

11:10 am – 11:50 am
Ubiquitous mRNA Decay Fragments in E. coli Impact the Functional Transcriptome and Its Quantification
Lydia Herzel, PhD
Massachusetts Institute of Technology (MIT)

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WEDNESDAY (continued) • FEBRUARY 2, 2022

11:50 am – 12:40 pm

Lunch

12:40 pm – 1:20 pm

USP Standards for Plasmid DNA as a Starting Material for Cell and Gene Therapy

Lili Belcastro, PhD

Bristol-Myers Squibb Company

1:20 am – 1:35 pm

Break

1:35 pm – 2:15 pm

Scaling Thermostable Formulations for RNA Vaccines

Amit Khandhar, PhD

HDT Bio

2:15 pm – 2:30 pm

Break

2:30 pm – 3:30 pm

Roundtable and Meeting Recap

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Times are Eastern Standard Time (EST).

Due to circumstances beyond the control of meeting organizers, this program is subject to change without notice.

REV 01/27/2022