MONDAY, JANUARY 22
Arrival and Registration

TUESDAY, JANUARY 23
Welcome and Keynote Address (Joint)
Jennifer A. Doudna, University of California, Berkeley, USA
Development of CRISPR/Cas: Mechanisms and Applications in Treating Disease and Detecting SARS-CoV-2

Gene Editing: Past and Future (Joint)
Laura Sepp-Lorenzino, Intellia Therapeutics, USA
Progress of CRISPR Clinical Programs
Gerald Schwank, ETH Zurich, Switzerland
In Vivo Base and Prime Editing of Pathogenic Mutations in Mice and Non-Human Primates
Daniel G. Anderson, Massachusetts Institute of Technology, USA
Nucleic Acid Delivery Systems for RNA Therapy and Genome Editing

Short Talks Chosen from Abstracts

Workshop 1: More on Tech Development (Q8)
Short Talks Chosen from Abstracts

Delivery of mRNA Therapeutics (Q7)
Pieter Cullis, University of British Columbia, Canada
A Career of Lipid Nanoparticle Development Leading to the Commercial Success of RNA Therapies
Norbert Pardi, University of Pennsylvania, USA
Delivery of mRNA Vaccines
Tatiana Novobrantseva, Moderna Therapeutics, USA
Talk Title to be Announced

Short Talks Chosen from Abstracts

Building the Toolbox: New Systems and Technology Development (Q8)
Benjamin P. Kleinstiver, Massachusetts General Hospital, USA
Gene Editing Tools and Technologies
Hiroshi Nishimasu, RCAST, The University of Tokyo, Japan
Structure and Engineering of the RNA-Guided Cas7-11-Csx29 Nuclease-Protease Complex
Samuel H. Sternberg, Columbia University, USA
Targeted DNA Integration in Mammalian Cells Using CRISPR-Associated Transposases

Short Talks Chosen from Abstracts

Poster Session 1

WEDNESDAY, JANUARY 24
Keynote Address (Joint)
Feng Zhang, Broad Institute of MIT and Harvard University, USA
Mammalian Retrovirus-Like Protein PEG10 Based Delivery Systems for mRNA Delivery and Genome Engineering

Delivery of Gene Editors (Joint)
Kathryn Whitehead, Carnegie Mellon University, USA
Lipid Nanoparticles for mRNA Delivery: The Exquisite Effects of Chemistry on Biological Function
Daniel J. Siegwart, University of Texas Southwestern Medical Center, USA
Selective Organ Targeting (SORT) Lipid Nanoparticles (LNPs) for Tissue-Specific Gene Editing
Kam W. Leong, Columbia University, USA
Nonviral Delivery Systems for Multiplex Gene Editing in vivo

Short Talks Chosen from Abstracts

Career Roundtable (Joint)

Workshop 2: Editing in the CNS (Q8)
Short Talks Chosen from Abstracts

Delivery of DNA (Q7)
Angela K. Pannier, University of Nebraska-Lincoln, USA
Nonviral DNA Delivery to Human Stem Cells
Kazunori Kataoka, University of Tokyo, Japan
Self-Assembled Polymeric Nanocarriers for Delivery of Nucleic Acid Therapeutics
Speaker to be Announced

Short Talks Chosen from Abstracts

New Therapeutic Gene Editing Approaches (Q8)
Morgan Maeder, Chroma Medicine, USA
Therapeutic Development of Epigenetic Editors
Jennifer Gori, Prime Medicine, Inc., USA
Therapeutic Development of Prime Editing
Blythe Duke Sather, Tune Therapeutics, USA
Harnessing the Power of Epi Editing for Clinical Benefit

Short Talks Chosen from Abstracts

Poster Session 2

THURSDAY, JANUARY 25
Delivery of siRNA and ASOs (Q7)
Anastasia Khvorova, University of Massachusetts Medical School, USA
A Divalent siRNA Chemical Scaffold for Potent and Sustained Modulation of Gene Expression throughout the Central Nervous System

* Session Chair † Invited but not yet accepted  Program current as of October 8, 2023. Meal formats are based on meeting venue. For the most up-to-date details, visit https://www.keystonesymposia.org.
Yoon Yeo, Purdue University, USA
*Nucleic Acid and Oligonucleotide Delivery for Activating Innate Immunity in Cancer Immunotherapy*

Marino Zerial, Max Planck Institute of Molecular Cell Biology and Genetics, Germany
*Role of Forces in Endosome Membrane Dynamics and Tissue Morphogenesis*

**Short Talks Chosen from Abstracts**

**Mechanisms of Editing (Q8)**

Raffaella Di Micco, Ospedale San Raffaele, Italy
*Cellular Responses to Gene Editing*

Jacob E. Corn, ETH Zürich, Switzerland
*Repair Mechanisms if Double Strand Breaks*

Britt Adamson, Princeton University, USA
*Highthroughput Profiling of Gene Edited Cells*

Alexis C. Komor, University of California, San Diego, USA
*The Mechanisms of Base Editing*

**Short Talks Chosen from Abstracts**

**Workshop 3: Safety/Specificity (Q8)**

**Short Talks Chosen from Abstracts**

**Applications of Nucleic Acid Delivery (Q7)**

Niren Murthy, University of California, Berkeley, USA
*Nanoparticle Delivery of CRISPR into the Brain Rescues a Mouse Model of Fragile X Syndrome from Exaggerated Repetitive Behaviors*

Hyongbum Henry Kim, Yonsei University College of Medicine, South Korea
*Application of Prime Editing to the Correction of Mutations and Phenotypes in Adult Mice with Liver and Eye Diseases*

Shehnaaz Suliman, ReCode Therapeutics, USA
*Talk Title to be Announced*

**Short Talks Chosen from Abstracts**

**Gene Editing in the Clinic (Q8)**

Kiran Musunuru, University of Pennsylvania, USA
*Using Gene Editing to Fight Heart Disease*

Waseem Qasim, University in London, UK
*CRISPR and Base Edited Therapeutic T Cells*

Janice Chen, Mammoth Biosciences, Inc., USA
*CRISPR Diagnostics and Therapeutics*

**Short Talks Chosen from Abstracts**

**Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (Q7)**

**Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (Q8)**