**MONDAY, JANUARY 22**

Arrival and Registration

**TUESDAY, JANUARY 23**

**Welcome and Keynote Session (Joint)**
Drew Weissman, University of Pennsylvania, USA

*In vivo LNP-mRNA Therapies*

Juan Carlos Izpisua-Belmonte, Altos Labs, USA

*In Vivo Reprogramming for Rejuvenation*

**Cell Engineering and Regenerative Therapies (Joint)**
Yvonne Y. Chen, University of California, Los Angeles, USA

*Programming Novel Cancer Therapeutics*

Masayo Takahashi, Vision Care Inc./Ritsumeikan University, Japan

*Cell and Gene Therapy for Retinal Regeneration*

Vardhman Kumar, Massachusetts Institute of Technology, USA

*Short Talk: Injectable and Modular Multicellular Liver Tissue Engineering*

Irene Lorenzo Llorente, Stanford University, USA

*Short Talk: Allogeneic Regenerative Cell Therapy for White Matter Stroke and Vascular Dementia*

**Poster Session 1**

**Career Roundtable (Joint)**
Jonathan Yen, St. Jude Children's Research Hospital, USA

*Therapeutic Genome Editing of Hematopoietic Stem Cells for the Treatment of Sickle Cell Disease*

Paula M. Cannon, University of Southern California, Keck School of Medicine, USA

*Genome Edited B Cells for Custom Antibody Production*

Hans-Peter Kiem, Fred Hutchinson Cancer Center, USA

*NRTX-1001 - A Human Pluripotent Stem Cell-Derived Inhibitory Interneuron Cell Therapy For Drug-Refractory Focal Epilepsy: From Preclinical Characterization To First Clinical Trial Results*

Christine L. Mummery, Leiden University Medical Center, Netherlands

*Discovering Therapies for the CVD using hiPSC*

Hans-Willem E. Snoeck, Columbia University Medical Center, USA

*Short Talk: Nanowired Human Cardiac Organoid Transplantation Enables Highly Efficient and Effective Recovery of Infarcted Hearts*

**Lung Regeneration (Q6)**

Carla F. Kim, Boston Children’s Hospital, USA

*Lung Organoids and Lung Regeneration*

Nan Tang, National Institute of Biological Sciences, China

*Alveolar Regeneration*

Thomas K. Waddell, University of Toronto, Canada

*Stem Cell Therapies for Lung Regeneration*

Jason Rock, Genentech, USA

*Immune Regulation of Lung Regeneration*

Camilla Predella, Columbia University, USA

*Short Talk: Injury Repair in Regionally Conditioned Rat Lung in vivo by Lung Progenitors Derived from Human Pluripotent Stem Cells*

Sophia Silver, Clemson University, USA

*Short Talk: Nanowired Human Cardiac Organoid Transplantation Enables Highly Efficient and Effective Recovery of Infarcted Hearts*

**WEDNESDAY, JANUARY 24**

**iPSC-Derived Therapies for Non-Malignant Disease (Q5)**
Sonja Schrepfer, University of California, San Francisco and Sana Biotechnology, USA

*Production of Immune Privileged iPSCs*

Lorenz Studer, Memorial Sloan Kettering Cancer Center, USA

*iPSC-Derived Treatment for Parkinson’s Disease*

Steven Havlicek, Neurona Therapeutics, USA

*Novel Approaches to Target HSCs for Ex Vivo and In Vivo Gene Therapy*

Christine L. Mummery, Leiden University Medical Center, Netherlands

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Hans-Willem E. Snoeck, Columbia University Medical Center, USA

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Workshop: Advances in Cell Therapies (Q5)

Tina Tylek, Drexel University, USA
Biomaterial-enabled Macrophage Cell Therapy for Regenerative Medicine

Sandra Petrus-Reurer, University of Cambridge, UK
Generation and Characterization of ‘Universal’ Low-Immunogenic Human Primary Cholangiocyte Organoids for Treatment of Bile Duct Disorders

Nicholas Kalogriopoulos, Stanford University, USA
Programmable Synthetic GPCRs for Customized Antigen-dependent Control of Cell Behaviors

May Daher, MD Anderson Cancer Center, USA
Myeloid Blasts Induce an Irreversible Epigenetic Scar in NK Cells Leading to a Global Dysfunction

Christopher Chang, UCSF, USA
One-step Enrichment of Cells with Multi-locus Knock-ins through SEED-Selection

Crystal Chen, Stanford University, USA
Autonomous T Cell Activation-inducible mRNA Switches for Enhanced Cell Therapy

Yuxiao Wang, Myeloid Therapeutics, USA
Novel Chimeric Antigen Receptors for In Vivo Progreaming of Immune Cells to Target Cancer

Workshop (Q6)
Short Talks Chosen from Abstracts

Novel Cancer Cell Therapies (Q5)

Dan S. Kaufman, University of California, San Diego, USA
Engineered iPSC-Derived Immune Cells for Improved Cancer Therapies

Katy Rezvani, University of Texas MD Anderson Cancer Center, USA
Clinical Translation of Engineered NK Cell-Based Therapies

Avery D. Posey, University of Pennsylvania, USA
Novel Targets for CAR-T Cell-Based Therapy

Amy N. Courtney, Baylor College of Medicine, USA
Short Talk: Allogeneic NKT Cells Expressing a CD19-specific CAR in Patients with Relapsed or Refractory B Cell Malignancies: An Interim Analysis

Theodoros Giavridis, Mnemo Therapeutics, Inc., USA
Short Talk: Identification of Novel, Recurrent Tumor-specific Targets for Next-generation Cancer Immunotherapies

Muscle and Heart Regeneration (Q6)

James F. Martin, Baylor College of Medicine, USA
Hippo Signaling and Cardiac Regeneration

Thomas Braun, Max Planck Institute for Heart and Lung Research, Germany
Cardiac Reprogramming

Pura Muñoz Cánoves, Altos Lab, USA
Muscle Stem Cell Aging

Fansen Meng, Texas Heart Institute, USA
Short Talk: Transient YAP-on Gene Therapy Provides Prolonged Protection against Cardiac Injury

Poster Session 2
THURSDAY, JANUARY 25

Cell Therapy for Infectious Disease and Autoimmune Disease (Q5)

Helen Heslop, Baylor College of Medicine, Houston Methodist Hospital and Texas Children’s, USA
Anti-Viral Cell Therapy

Silke Paust, The Jackson Laboratory for Genomic Medicine, USA
Mechanisms that Regulate NK Cell Anti-Viral Activity

Samik Basu, Cabaletta Bio, USA
Translational Correlates of Autoimmune Disease Patients Treated with CD19 CAR-T

Corina Amor, Cold Spring Harbor Laboratory, USA
Short Talk: Prophylactic and Long-lasting Efficacy of Senolytic CAR T Cells Against Age-related Phenotypes

Mila Bjelica, CHU Sainte Justine, Canada
Short Talk: Developing CAR-NK Cells Against Severe Acute Respiratory Syndrome Coronavirus 2 for Immunocompromised Individuals

Rejuvenation (Q6)

Amy J. Wagers, Harvard University, USA
Stem Cell Aging and Rejuvenation

Heinrich Jasper, Genentech, Inc. and Buck Institute for Research on Aging, USA
in vivo Reprogramming for Rejuvenation

Quinton Smith, University of California, Irvine, USA
Regenerative Vascular Tissue Engineering

Melissa A. Proven, Columbia University Medical Center, USA
Short Talk: Understanding How Metabolic Intervention Rejuvenates Aged Hematopoietic Stem Cells

Semir Beyaz, Cold Spring Harbor Laboratory, USA
Short Talk: Dietary Arachidonic Acid Induces Stem Cell Plasticity to Promote Tissue Resilience

HSC and Gene Therapy (Joint)

Emmanuelle Passegué, Columbia University, USA
Metabolic and Stress Regulation of HSCs
Raffaella Di Micco, Ospedale San Raffaele, Italy
Mechanistic Insights to Advance HSC-Based Gene and Cell Therapies

Donald B. Kohn, University of California, Los Angeles, USA
HSC Gene Therapy for Immunodeficiencies

Ruiyuan Zhang, Columbia University, USA
Short Talk: The Bone Marrow Niche Drives Dysregulation of the Hematopoietic System in Aging and Clonal Hematopoiesis

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

FRIDAY, JANUARY 26

Departure