**MONDAY, JANUARY 25**

**Welcoming Remarks and Keynote Address (8am Denver/Mountain Time Start)**

*Kole T. Roybal*, University of California, San Francisco, USA

**David Baker**, University of Washington, USA

**Computational Protein Design for Next-Generation Cellular Therapeutics**

**The Current State of Cellular Therapies for Cancer: Lessons from the Clinic (8:40am Denver/Mountain Time Start)**

*Kole T. Roybal*, University of California, San Francisco, USA

*Yvonne Y. Chen*, University of California, Los Angeles, USA

**David Edward Gilham**, Celyad, Belgium

**Next-Generation CART Approaches Exploiting Natural Killer Receptor Targeting**

**Marcela V. Maus**, Harvard Medical School, USA

[NOT AVAILABLE ON DEMAND] **New T Cell Therapeutics**

**Christine E. Brown**, Beckman Research Institute, City of Hope, USA

**CAR T Cells for the Treatment of Brain Malignancies**

**Isabelle Riviere**, Memorial Sloan-Kettering Cancer Center, USA

**Manufacturing Next-Generation Cellular Therapies**

**Barbra Susa**, Allogene Therapeutics, USA

**Allogeneic CAR T Therapy for the Treatment of Cancer**

**Career Roundtable (12:30pm Denver/Mountain Time Start)**

**Darrell J. Irvine**, Massachusetts Institute of Technology, USA

**Marcela V. Maus**, Harvard Medical School, USA

**Jane L. Grogan**, Graphite Bio, USA

**Poster Session 1 (1:30pm Denver/Mountain Time Start)**

**New Approaches for Programming Cellular Therapeutics (3pm Denver/Mountain Time Start)**

*Alex Marson*, University of California, San Francisco, USA

**Reprogramming Immune Cell Therapeutics with Non-Viral Gene Editing Approaches**

**Aaron M. Ring**, Yale School of Medicine, USA

**Engineered Cytokines for Cancer Immunotherapy**

**Dario Campana**, National University of Singapore, Singapore

**Expanding the Functional Capacity of Therapeutic Immune Cells**

*Ahmad S. Khalil*, Boston University, USA

**Design of Eukaryotic Gene Regulatory Circuits**

**Romina Marone**, 275.00

**Short Talk: Elimination of Mouse B Cells by Non-Virally Engineered CAR19 Knock-In T Cells**

**Alessio David Nahmad**, Tel Aviv University, Israel

**Short Talk: Engineering B Cells in-vivo Elicits Potent Cellular and Serological Responses in Mice**

**Aditya Murthy**, 275.00

**Short Talk: Efficient Gene Knockout in Primary Myeloid Cells by Non-Viral Delivery of CRISPR-Cas9**

**Jonathan B. Gilbert**, 275.00

**Short Talk: Microfluidic Cell Squeezing Enables the Generation of Novel Cell Therapies for Diverse Clinical Applications**

**Owen J. L. Rackham**, 275.00

**Short Talk: Using Data-Driven Approaches to Develop Engineered Cell Therapies**

**TUESDAY, JANUARY 26**

**Next-Generation Cellular Therapeutics for Cancer (8am Denver/Mountain Time Start)**

*Yvonne Y. Chen*, University of California, Los Angeles, USA

[NOT AVAILABLE ON DEMAND] **Enhancing T-Cell Therapies by Rational Biomolecular Engineering**

**Martin Pule**, University College London, UK

**T Cell Therapies with Engineered Control Systems**

*Kole T. Roybal*, University of California, San Francisco, USA

**Control and Customization of Immune Cell Therapies for Cancer**

**Jane L. Grogan**, Graphite Bio, USA

**Development of Next-Generation T Cell Therapies**

**Timothy K. Lu**, Massachusetts Institute of Technology, USA

**Synthetic Biology Tools to Stimulate Anti-Tumor Immunity**

**Christopher Bourne**, 150.00

**Short Talk: Mechanisms of Adoptive T Cell Micropharmacies**

**Rogelio A. Hernandez-Lopez**, University of California San Francisco, USA

**Short Talk: T Cell Circuits that Sense Antigen Density with an Ultrasensitive Threshold**

**Meet the Editors (11:30am Denver/Mountain Time Start)**

**Zeljko Durdevic**, EMBO Press, Germany

**Sara Hamilton**, Cell Press, USA

**Claudia G. Willmes**, Cell Press, USA

**Beyond Effector T Cell Therapeutics (3pm Denver/Mountain Time Start)**

*Saar I. Gill*, University of Pennsylvania, USA

**Engineered Macrophage Therapeutics**

**Dan S. Kaufman**, University of California, San Diego, USA

**NK Cell Therapies for Cancer**

**Tal Danino**, Columbia University, USA

**Programming Bacteria as a Cancer Therapy**

*Megan K. Levings*, University of British Columbia, Canada

**NextGen Treg Therapies**

**Tara L. Deans**, University of Utah, USA

**Synthetic Biology Tools for the Development of Engineered Stem Cell Therapeutics**

**Tyler Hill**, 150.00

**Short Talk: Engraftment of Gene-Engineered Human Plasma Cells in Humanized Mice Shows Early Promise for the Feasibility of Novel Plasma Cell-Based Therapies**

**WEDNESDAY, JANUARY 27**

**Engineering Materials for Cellular Therapeutics (8am Denver/Mountain Time Start)**

**Sponsored by AstraZeneca, BioLegend, Inc., BlueRock Therapeutics, Nektar Therapeutics, Novo Nordisk A/S and TCR²**, University of Washington, USA

**Therapeutics**

**Scientific Organizers:** Kole T. Roybal, Alex Marson and Yvonne Y. Chen

For the most up-to-date details, visit [https://www.keystonesymposia.org](https://www.keystonesymposia.org).
Matthias Stephan, Fred Hutchinson Cancer Research Center, USA  
Synthetic mRNA Nanocarriers for the in situ Programming of Disease-Specific Immune Cells

*Darrell J. Irvine, Massachusetts Institute of Technology, USA  
Endogenous Immunity Primed by Vaccine-Boosted CAR T Cell Therapy

*Tatiana Segura, Duke University, USA  
Biomaterials for Tissue Repair and Regulation of Inflammation

David J. Mooney, Harvard University, USA  
Artificial APCs to Manufacture and Boost T Cell Therapies

Andy Tay  
Short Talk: High-Aspect Ratio Nano-Structures for Efficient, Minimally Perturbative and Transgene-Free Immuno-Transfection

Jesus Paez Mayorga, 150.00  
Short Talk: Implantable Cell Therapy Platform With In Situ Pre-Vascularization and Localized Immunosuppression for Allogeneic Cell Transplantation

Gloria Delfanti, San Raffaele Scientific Institute, Italy  
Short Talk: Dual Targeting of Cancer and Suppressive Myeloid Cells by Tumor-Redirected iNKT Cells and Antigen-Carrying Microparticles

Sailan Shui, 150.00  
Short Talk: Generalizable Computational Approach to Design Chemically Controlled Protein Switches with Multi-Logs for Cell-Based Therapeutics

Networking Lounge (1pm Denver/Mountain Time Start)

Immune Cell Biology: Implications for Cellular Immunotherapy (3pm Denver/Mountain Time Start)

*Miriam Merad, Mount Sinai School of Medicine, USA  
Myeloid Cell Contribution to Tumor Lesion Composition and Outcome

*Andrea Schietinger, Memorial Sloan Kettering Cancer Center, USA  
Regulation of T Cell Function in Tumors

Joseph C. Sun, Memorial Sloan Kettering Cancer Center, USA  
NK Cells in Health and Disease

Debattama Sen, 275.00  
Short Talk: Disrupting Enhancers within the Core Epigenetic Program of Exhaustion Improves CD8+ T Cell Responses and Enhances Tumor Control

Baris Avsaroglu, University of California, San Francisco, USA  
Short Talk: Mapping Cellular Interactions between Cancer and Normal Cells via Synthetic Notch Ligand/Receptor Pairs

Micah Benson, 275.00  
Short Talk: Unbiased Design of Engineered T Cell Therapies Using Functional CRISPR/Cas9 Screens

Nayara Leite, Harvard University, USA  
Short Talk: Uncovering the Cell-Type Specificity in Human T1D Immune Activation Using iPSC-β Cells

Closing Remarks (5:45pm Denver/Mountain Time Start)

Kole T. Roybal, University of California, San Francisco, USA