



Emerging Cellular Therapies: T Cells and Beyond

February 11–15, 2018 | Keystone Resort | Keystone, Colorado | USA

Scientific Organizers:

Carl H. June, University of Pennsylvania, USA

Marcela V. Maus, Harvard Medical School, USA

Bruce R. Blazar, University of Minnesota, USA

*Joint with the meeting on **Lymphocytes and their Roles in Cancer***

A new community of researchers is emerging that focuses on studying and developing cellular therapies for cancer and chronic infections. The field is advancing rapidly due to our deepening understanding of cell biology. New technologies permit efficient cell culture, gene transfer and genetic editing, enabling autologous and allogeneic cell therapy. With rapid development of CAR T cells, breakthrough FDA approval status and fast-tracking clinical trials, competition is fierce in the biotechnology and pharmaceutical industries. Cell therapies with stem cells and T cells are in advanced clinical development that will enable widespread use for cancer and chronic infections such as HIV. Infusions of regulatory T cells (Tregs) have the potential to benefit patients with autoimmunity and transplantation. A goal of this conference is to bring together basic and translational scientists from these fields to identify current opportunities and challenges in cell therapies. Another goal is to bridge the fields of effector T cell and Treg cell therapies. The interdisciplinary features of this meeting should facilitate new collaborations and interactions between investigators who would not normally meet.

Session Topics:

- CAR/TCR Preclinical
- Workshop 1: Perspectives from Industry and FDA: Roundtable
- Synthetic Biology
- Engineered T Cells for HIV
- CAR/TCR in the Clinic for Cancer
- Tregs as Cellular Therapeutics
- Workshop 2: Late-Breaking Talks
- Beyond T Cells: HSC, T Progenitor and iPSCs I & II
- Intersection of Genetic Editing and Cellular Therapy

Scholarship Application & Discounted Abstract Deadline: October 11, 2017

Abstract Deadline: November 9, 2017

Discounted Registration Deadline: December 13, 2017



Note: Scholarships are available for graduate students and postdoctoral fellows and are awarded based on the abstract submitted. Submitting an abstract is an excellent opportunity to gain exposure for your work. Abstracts submitted by the abstract deadline will also be considered for short talks on the program.

Upper image of vaccine-based immunotherapy from novel nanoparticle systems courtesy of Victor Segura Ibarra and Rita Serda, PhD, National Cancer Institute, NIH

Meeting Hashtag: #KScelltherapy

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KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Emerging Cellular Therapies: T Cells and Beyond (B6)

Scientific Organizers: Carl H. June, Marcela V. Maus and Bruce R. Blazar

Sponsored by BioLegend, Inc., Editas Medicine, Juno Therapeutics, Regeneron Pharmaceuticals, Inc. and Sangamo Therapeutics, Inc.

Lymphocytes and their Roles in Cancer (R1)

Scientific Organizers: Iannis Aifantis, Ugur Sahin and Mikala Egeblad

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SUNDAY, FEBRUARY 11

Arrival and Registration

MONDAY, FEBRUARY 12

Welcome and Keynote Address (B6)

Ton N. Schumacher, Netherlands Cancer Institute, Netherlands
T Cell Recognition in Human Cancer

Welcome and Keynote Address (R1)

Alexander Y. Rudensky, HHMI/Memorial Sloan Kettering Cancer Center, USA
Regulatory T Cells and their Functions in the Tumor Microenvironment

CAR/TCR Preclinical (B6)

Philip D. Greenberg, University of Washington, USA
Making TCR-Modified T Cells Effective for Leukemia and Solid Tumors

Crystal L. Mackall, Stanford University, USA
CAR T Cells in Pediatric Malignancies

Stanley R. Riddell, Fred Hutchinson Cancer Research Center, University of Washington, USA
Strategies to Improve the Efficacy of CAR T Cells in Solid Tumors

Short Talk(s) Chosen from Abstracts

Understanding Lymphocytic Malignancy: Leukemia and Lymphoma (R1)

Louis M. Staudt, National Cancer Institute, NIH, USA
The MYD88-TLR9-B Cell Receptor Complex as a Target for Therapy in Aggressive Lymphomas

Charles G. Mullighan, St. Jude Children's Research Hospital, USA
Biology of Relapse in Acute Lymphoblastic Leukemia

Katia Georgopoulos, Massachusetts General Hospital, USA
Early Events in Lymphocytic Differentiation and Transformation

Short Talk(s) Chosen from Abstracts

Workshop 1: Perspectives from Industry and FDA: Roundtable (B6)

Short Talks Chosen from Abstracts

Workshop 1 (R1)

Short Talks Chosen from Abstracts

Synthetic Biology (B6)

Darrell J. Irvine, Massachusetts Institute of Technology, USA
Chemically engineering T cell therapies

Wendell A. Lim, University of California, San Francisco, USA
Optimizing Synthetic Biology Tools for T Cell Therapies

Travis Young, California Institute for Biomedical Research, USA
Controllable CAR-T Cell Therapy

Short Talk Chosen from Abstracts

Therapeutic Targeting of Lymphocytic Malignancy (R1)

Irene M. Ghobrial, Dana Farber Cancer Institute, USA
Targeting the Tumor Microenvironment in Multiple Myeloma

Adolfo Ferrando, Columbia University, USA
Epigenetic Mechanisms in T-Cell Acute Lymphoblastic Leukemia

Iannis Aifantis, New York University School of Medicine, USA
Targeting the Tumor Microenvironment in Acute Lymphoblastic Leukemia

Short Talk Chosen from Abstracts

Poster Session 1

TUESDAY, FEBRUARY 13

Cellular Therapies in Blood Malignancies and Beyond (R1)

Carl H. June, University of Pennsylvania, USA
CAR T Cells and their Therapeutic Promise in the Treatment of Leukemia

Crystal L. Mackall, Stanford University, USA
Recent Updates of Chimeric Antigen Receptor Clinical Trials

Chiara Bonini, Vita-Salute San Raffaele University, Italy
Gene Editing of Memory Stem T Cells for Cancer Immunotherapy

Michel Sadelain, Memorial Sloan Kettering Cancer Center, USA
Next Generation CAR-T Cell-Expressing Vectors and in vivo Utilization

Short Talk(s) Chosen from Abstracts

Engineered T Cells for HIV (B6)

Catherine M. Bollard, Children's National Health System, USA
Developing HIV-specific T Cell Therapies: Lessons from EBV

Paula M. Cannon, University of Southern California, Keck School of Medicine, USA
Shutting the Door on HIV by Engineering Hematopoietic Stem Cells

James L. Riley, University of Pennsylvania, USA
Engineering T Cells to Functionally Cure HIV-1 Infection

Speaker to be Announced

Short Talk(s) Chosen from Abstracts

CAR/TCR in the Clinic for Cancer (B6)

Stephen J. Forman, City of Hope, USA
CAR Trials in the Clinic

Marcela V. Maus, Harvard Medical School, USA
CAR T Cells Multiple Myeloma and Glioblastoma

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Saar I. Gill, University of Pennsylvania, USA
CAR T Cells for Acute Myelogenous Leukemia

Short Talk Chosen from Abstracts

Lymphocytes as Elements of the Tumor Microenvironment (R1)

David H. Raulet, University of California, Berkeley, USA
Immune Surveillance of Cancer Cells by Natural Killer Cells

Michael Kalos, Eli Lilly and Company, USA
T Cells in the Microenvironment: Conductors, First Violin, or Part of the Orchestra?

Lisa M. Coussens, Oregon Health & Science University, USA
Dynamic Interactions Between Myeloid and Lymphoid cells Regulate Response to Therapy in Solid Tumors

Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, FEBRUARY 14

Tregs as Cellular Therapeutics (B6)

Bruce R. Blazar, University of Minnesota, USA
Vimentin Restrains Regulatory T-cell Suppression of Graft-versus-Host Disease

Jeffrey A. Bluestone, University of California, San Francisco, USA
Manipulating Tregs to Control Tolerance in Autoimmunity and Cancer

Megan K. Levings, University of British Columbia, Canada
HLA-A2 Directed CAR Tregs

Laurence A. Turka, Massachusetts General Hospital, USA
Alloantigen-specific Tregs for Solid Organ Transplantation

Short Talk(s) Chosen from Abstracts

Emerging Technologies: Visualization and Dissection of Tumor Microenvironment (R1)

Dana Pe'er, Memorial Sloan Kettering Cancer Center, USA
A Single Cell Approach to Understanding the Tumor Microenvironment

Matthew F. Krummel, University of California, San Francisco, USA
Imaging a World Beyond Checkpoints: Innate Partners for Lymphocytes in Cancer

Jerome Galon, INSERM U872, Cordeliers Research Center, France
Immunoscore as a Stronger Predictor of Patient Survival in Colorectal Cancer

Michael Goldberg, Dana-Farber Cancer Institute, USA
Enhancing cancer immunotherapy through immuno-engineering

Short Talk(s) Chosen from Abstracts

Workshop 2: Late Breaking Talks (B6)

Short Talks Chosen from Abstracts

Beyond T Cells: HSC, T Progenitor, and iPSCs I (B6)

Speaker to be Announced

Martin Pule, University College London, UK
New Designs in Synthetic T Cells

Jeffrey Steven Miller, University of Minnesota, USA
Novel Ways to Activate and Target NK Cells to Treat Cancer

Short Talk Chosen from Abstracts

Emerging Concepts in the Development of Tumor Vaccines (R1)

Ugur Sahin, TRON – Translationale Oncology, Germany
Systemic RNA Delivery, Dendritic Cell Vaccines and Implications for Cancer Immunotherapy

Cornelis J. M. Melief, Leiden University Medical Center, Netherlands
Combination Immunotherapy of Cancers caused by High Risk HPV16

Johanna Olweus, University of Oslo, Norway
Selecting Immunogenic Targets for Cancer Immunotherapy

Short Talk Chosen from Abstracts

Poster Session 3

THURSDAY, FEBRUARY 15

Beyond T Cells: HSC, T Progenitor, and iPSCs II (B6)

Juan Carlos Zúñiga-Pflücker, Sunnybrook Research Institute, Canada
Generation of Human Progenitor T Cells from Stem Cells

Michel Sadelain, Memorial Sloan Kettering Cancer Center, USA
iPS-Derived Genetically-Modified T Cells

Jakub Tolar, University of Minnesota, USA
Gene Edited Stem Cells: From Cloning to Clinic

Speaker to be Announced

Short Talk(s) Chosen from Abstracts

Combinatorial Treatments and their Effects on Lymphocyte Function in Cancer (R1)

David G. DeNardo, Washington University Medical School, USA
The Pancreatic Tumor Microenvironment; Modulator of Tumor Progression and Response to Therapy

Dimitris Skokos, Regeneron Pharmaceuticals, USA
T Cell Dysfunction and Combination Immunotherapy

Michael A. Curran, University of Texas MD Anderson Cancer Center, USA
Optimizing T Cell Frequency and Function via Checkpoint Antibody / Vaccine Combinations

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Sjoerd H. van der Burg, LUMC, Netherlands

Combination Treatments to Modulate the Microenvironment and Boost Tumor-specific T cells

Short Talk(s) Chosen from Abstracts

Workshop 2 (R1)

Short Talks Chosen from Abstracts

Intersection of Genetic Editing and Cellular Therapy (B6)

Alex Marson, University of California, San Francisco, USA

Talk Title to be Announced

Andrew M. Scharenberg, Casebia Therapeutics, USA

Editing T-Cells for Adoptive Therapy of Inflammatory Disorders

Carl H. June, University of Pennsylvania, USA

Adoptive Transfer with Genetically Edited T Cells

Future Directions for Next Generation Sequencing: Genomics, Epigenetics and Immunogenomics (R1)

Mikala Egeblad, Cold Spring Harbor Laboratory, USA

Visualization of the Switch from Immune Control to Immune Escape

Mickey Atwal, Cold Spring Harbor Laboratory, USA

High Throughput Profiling of T Cell Receptor Sequences in Cancer Immunotherapy

Manel Esteller, Belvitge Biomedical Research Institute (IDIBELL), Spain

Cancer Epigenetics: From Knowledge to Applications

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (B6)

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (R1)

FRIDAY, FEBRUARY 16

Departure