Scientific Organizers:

Robert D. Schreiber, Washington University School of Medicine, USA
James P. Allison, University of Texas MD Anderson Cancer Center, USA
Philip D. Greenberg, University of Washington, USA
Glenn Dranoff, Novartis Institutes for BioMedical Research, USA

Part of the Keystone Symposia Global Health Series, supported by the Bill & Melinda Gates Foundation

The fields of cancer immunology and immunotherapy continue to make great strides in providing both a comprehensive understanding of the basic mechanisms underlying tumor-immune system interactions and applying this knowledge to the development of effective immune-based cancer therapies. This Keystone Symposia meeting is organized to highlight recent insights into the complex roles of immune components and pathways in controlling or alternatively promoting cancer and to showcase recent uses of cancer vaccines, checkpoint blocking strategies, adoptive cell therapies and cellular engineering approaches, either as mono- or combinatorial therapies, that have resulted in durable, effective and safe therapeutic responses to an increasing number of cancer patients. Part of the meeting will also focus on new, developing technologies that are likely to expand our capacity to monitor the effects of cancer immunotherapy with a precision, refinement and at a level that has not been possible in the past.

Session Topics:

• Multimodal Approaches to Immunotherapy
• Immunosuppressive Cells in the Tumor Microenvironment
• Cancer Immunotherapy: Targeting Immune Checkpoints
• Cancer Immunotherapy: Combinatorial Approaches
• Cancer Immunotherapy: Cancer Vaccines that Work and Why
• Cancer Immunotherapy: Cellular Engineering
• Nex-Gen Technologies

Global Health Travel Award Application Deadline: October 18, 2016
Scholarship Application & Discounted Abstract Deadline: November 16, 2016
Abstract Deadline: December 19, 2016
Discounted Registration Deadline: January 18, 2017

Note: Scholarships are available for graduate students and postdoctoral fellows and are awarded based on the abstract submitted.

Meeting Hashtag: #KScancerimm
www.keystonesymposia.org/17C7
**SUNDAY, MARCH 19**
Arrival and Registration

**MONDAY, MARCH 20**
Welcome and Keynote Session
*Robert D. Schreiber*, Washington University School of Medicine, USA
Glenn Dranoff, Novartis Institutes for BioMedical Research, USA
**Mechanisms of Protective Tumor Immunity**
Andreas G. Plückthun, University of Zürich, Switzerland
**Future Biologics: Exploiting the Opportunities for Protein Engineering**

**Multimodal Approaches to Immunotherapy**
*James P. Allison*, University of Texas MD Anderson Cancer Center, USA
**Immune Blockade in Cancer Therapy: New Insights and Opportunities**
Padmanee Sharma, University of Texas MD Anderson Cancer Center, USA
**From the Clinic to the Lab: Investigating Immune Responses to Immune Checkpoint Therapies**
Nicholas P. Restifo, NCI, National Institutes of Health, USA
**Genome-Scale CRISPR-Cas9 Screen Identifies Genes Essential for T Cell-Based Cancer Therapies**

**Workshop 1: Neoantigens, Vaccines and Responses**
Nicholas K. Akers, Icahn School of Medicine at Mount Sinai, USA
**Modeling Tumor Immuno-Dynamics to Predict Patient Survival & Immunotherapy Efficacy**
Govinda Sharma, BC Cancer Agency, Canada
**A Novel High-Throughput Screening Approach for the Detection of Cytotoxic T Cell Receptor Epitopes**
Sanja Stevanovic, NCI, National Institutes of Health, USA
**Landscape of Immunogenic Tumor Antigens in Successful Immunotherapy of Virally-Induced Epithelial Cancer**
Alice Tzeng, Cleveland Clinic Lerner College of Medicine, USA
**Temporally Programmed CD8alpha+ DC Activation Enhances Combination Cancer Immunotherapy**
Aileen Li, Harvard University, USA
**Mesoporous Silica (MPS) Vaccine to Enhance Anti-Tumor Immunity**
*Jay A. Berzofsky*, NCI, NIH, USA
**Translation of Cancer Vaccines from Mice to Human Clinical Trials**

**Immunosuppressive Cells in the Tumor Microenvironment**
*Glenn Dranoff*, Novartis Institutes for BioMedical Research, USA
**Alexander Y. Rudensky**, HHMI/Memorial Sloan Kettering Cancer Center, USA
**Tregs in Cancer Immunity**
Vincenzo Bronte, University of Verona, Italy
**Role of Myeloid-Derived Suppressor Cells in Tumor Immunity**

**Cancer Immunotherapy: Combinatorial Approaches**
*Robert D. Schreiber*, Washington University School of Medicine, USA
**Role of Macrophages in Tumor Immunity**
Garry P. Nolan, Stanford University, USA
**System-Wide Order, from Disorder, at the Cancer-Immune Interface**

**Poster Session 1**

**TUESDAY, MARCH 21**
**Cancer Immunotherapy: Targeting Immune Checkpoints**
*Ira Mellman*, Genentech, Inc., USA
**PD-1/PD-L1**
Riccardo Mezzadra, NKI-AvL, Netherlands
**Short Talk: Identification of CMTM6 and CMTM4 as PD-L1 Protein Regulators**
Andrew D. Weinberg, Earle A. Chiles Research Institute/Oregon Health & Science University, USA
**OX40 Agonists: Past, Present and Future**
Ana Carrizosa Anderson, Harvard Medical School, USA
**Targeting Tim-3 in Cancer**
Randolph J. Noelle, Dartmouth College, USA
**Targeting the VISTA Pathway in Oncology**
Vinidhra Mani, Harvard Medical School, USA
**Short Talk: Visualizing the Mechanistic Basis of Checkpoint Blockade Therapy in Cancer**

**Workshop 2: Cellular Engineering and Therapy**
*Stanley R. Riddell*, Fred Hutchinson Cancer Research Center, University of Washington, USA
**Engineering Adoptive T Cell Therapy for Efficacy in Ovarian Cancer**
Kristin Anderson, University of Washington, USA
**Multiple Tumor Models**
Ashwini Balakrishnan, Fred Hutchinson Cancer Research Institute, USA
**Designed Ankyrin Repeat Proteins (DARPins) as Recognition Motifs in Chimeric Antigen Receptors**
Mauro Castellari, University of Pennsylvania, USA
**A Comparison of Affinity-Tuned Her2 CARs Using a New Mouse Model for On-Target Off-Tumor CAR T Cell Cytotoxicity**
**Novel Platform for Identifying Rare Antigen-Specific CD4 T Cells in Multiple Tumor Models**
Natalie Ann Vandeven, University of Washington, USA
**Novel Platform for Identifying Rare Antigen-Specific CD4 T Cells in Merkel Cell Carcinoma patients**
Debattama Sen, Harvard Medical School, USA
**The Epigenetic Landscape of T Cell Exhaustion**

**Cancer Immunotherapy: Taking a Place in Mainstream Oncology (C7)**
March 19-23, 2017 • Fairmont Chateau Whistler • Whistler, British Columbia, Canada

**Scientific Organizers:**
Robert D. Schreiber, James P. Allison, Philip D. Greenberg and Glenn Dranoff


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For the most up-to-date details, visit [www.keystonesymposia.org/17C7](http://www.keystonesymposia.org/17C7).
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**Poster Session 2**

**WEDNESDAY, MARCH 22**

**Cancer Immunotherapy: Cancer Vaccines that Work and Why**

*Elizabeth M. Jaffee,* Johns Hopkins University, USA

Vaccine-Based Combinatorial Immunotherapy Can Convert Pancreatic Cancers into Immunologic Diseases

**Cornelia Liu Trimble,** Johns Hopkins University School of Medicine, USA

High-Dimensional Analyses of the Mucosal Microenvironment in Precancerous, Intraepithelial Cervical HPV Disease

**Catherine Ju-Ying Wu,** Dana-Farber Cancer Institute, USA

Developing and Improving Personalized Neoantigen-Targeting Cancer Vaccines

**Ugur Sahin,** BioNTech AG, Germany

Individualizing Cancer Treatment by mRNA Therapies

**Danielle M. Talbot,** Celgene, USA

Short Talk: Subclinical Irradiation-Induced Neoantigens Enhance Immunotherapy of Cancers with Low Mutational Loads

**Amanda Lulu,** University of Virginia, USA

Short Talk: Pre-Existing Immune Memory in Healthy Donors to Cancer-Associated Phosphopeptides

**Inflammation and the Tumor Microenvironment**

*Michael Karin,* University of California, San Diego, USA

Immune Regulation of Liver Cancer: Chronic Hepatitis Promotes HCC Development by Dismantling Cancer Immunosurveillance

**Shannon J. Turley,** Genentech, Inc., USA

Leukocyte Function and Positioning in Diverse Stromal Niches

**Thomas Gajewski,** University of Chicago, USA

Tumor-Intrinsic Mediators of T Cell-Inflamed Versus Non-Inflamed Tumor Microenvironment

**Evans Newell,** Fred Hutchinson Cancer Research Center, USA

Short Talk: Deep Profiling of Human Hepatocellular Carcinoma Immune Infiltrates: Involvement of CD103+ Resident Memory-Like T and NK Cells

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**Poster Session 3**

**THURSDAY, MARCH 23**

**Cancer Immunotherapy: Cellular Engineering**

*Philip D. Greenberg,* University of Washington, USA

Adaptive T Cell Therapy with TCR-Engineered T Cells

**Michel Sadelain,** Memorial Sloan Kettering Cancer Center, USA

Targeting CARs to the TRAC Locus Enhances T Cell Potency

**Sandra Demaria,** Weill Cornell Medical College, USA

Radiotherapy Needs to Go Viral to Increase Responses to Checkpoint Inhibitors

**Antoni Ribas,** University of California, Los Angeles, USA

Overcoming Resistance to PD-1 Blockade Therapy

**Alyssa K. Kosmides,** Johns Hopkins University, USA

Short Talk: Immunoswitch Particles: A New Approach to Cancer Immunotherapy

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**Poster Session 4**

**FRIDAY, MARCH 24**

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

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*Session Chair † Invited but not yet accepted  Program current as of November 22, 2018. Program subject to change. Meal formats are based on meeting venue. For the most up-to-date details, visit www.keystonesymposia.org/17C7.*