

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Advances in Cancer Immunotherapy (C4)

March 22-26, 2020 • Fairmont Chateau Whistler • Whistler, BC, Canada

Scientific Organizers: Antoni Ribas, W. Nicholas Haining and Priti Hegde

Held in honor of cancer immunotherapy research pioneers Dr. Alan Korman and Dr. Nils Lonberg, thanks to generous support from an anonymous donor.

Sponsored by BioLegend, Inc., Compass Therapeutics, Gilead Sciences, Inc., Genentech, Inc., Incyte Corporation, MorphoSys AG and Surface Oncology

Discounted Abstract & Scholarship Deadline: November 19, 2019 / Abstract Deadline: December 17, 2019 / Discounted Registration Deadline: January 22, 2020

SUNDAY, MARCH 22

Arrival and Registration

MONDAY, MARCH 23

Welcome and Keynote Address

Ton N. Schumacher, Netherlands Cancer Institute, Netherlands
T Cell Activity in the Tumor Microenvironment

New Approaches to Adoptive T Cell Transfer Therapy

Malcolm K. Brenner, Baylor College of Medicine, USA
CAR-T Cell Fratricide – From Foe to Friend

Crystal L. Mackall, Stanford University, USA
CAR T Cell Engineering

Yvonne Y. Chen, University of California, Los Angeles, USA
Engineering Smarter and Stronger T Cells for Cancer Immunotherapy

Yingxiao Wang, University of California, San Diego, USA
Short Talk: Engineering Remotely Controllable CAR T Cells for Cancer Immunotherapy

Anthony K. Park, City of Hope, USA
Short Talk: Effective Combination Immunotherapy using Oncolytic Viruses to Deliver CD19t as a CAR Target for the Treatment of Solid Tumors

Workshop 1

Bent Jakobsen[†], Immunocore Ltd., UK
TCR/Anti-CD3 Bispecific Fusion Proteins Induce Local Responses That 'Warm' Cold Tumours

Lisa Marshall[†], RAPT Therapeutics, USA
Targeting the Stress Response Kinase GCN2 Potentiates Anti-tumor Immune Response

Vandana Kalia[†], University of Washington, USA
PD-1 Signals Are Critical for Maintenance of CD8 T Cell Memory

Gloria Bora Kim, University of Pennsylvania, USA
Splice Variants As Neoantigens for Cancer Immunotherapy

James C. Lee, University of California, San Francisco, USA
Liver Metastasis Mediated Control of Systemic Tumor-Specific Immunity and Response to Checkpoint Immunotherapy

Christine Carine Mousson, Genentech, Inc., USA
Intra-Host Heterogeneity of Response to CIT: Learning from the STAMP Preclinical Live Imaging Model

Response and Resistance to Cancer Immunotherapy

Jane Oliaro, Peter MacCallum Cancer Centre, Australia
The Identification of New Targets for Cancer Immunotherapy

Charles Swanton, Francis Crick Institute, UK
Immunogenomic Mechanisms of Resistance to Immunotherapy

W. Nicholas Haining, Merck Research Laboratories, USA
Genetic Screens for Immunotherapy

AHyun Choi, Novartis Institutes for BioMedical Research, USA
Short Talk: Loss of EMC Inhibits Tumor Growth through Enhanced Adaptive Immune Response

Theodore Roth, University of California, San Francisco, USA
Short Talk: Highly Parallel Knock-In Targeting for Genome Engineering of Cellular Immunotherapies

Poster Session 1

TUESDAY, MARCH 24

Igniting an Immune Response to Cancer

Ira Mellman, Genentech, Inc., USA
Mechanistic Basis of Cancer Immunotherapy

Padmanee Sharma, University of Texas MD Anderson Cancer Center, USA
From the Clinic to the Lab: Investigating Mechanisms of Response and Resistance to Immune Checkpoint Therapy

Zhijian "James" Chen, University of Texas Southwestern Medical Center, USA
Igniting Anti-Tumor Immunity with cGAS

Sohail F. Tavazoie, Rockefeller University, USA
Depleting Myeloid-Suppressive Cells for Cancer Immunotherapy

Maija Hollmén, University of Turku, Finland
Short Talk: Immune Activation with a Novel Anti-Macrophage Antibody (Anti-Clever-1 mAb; FP-1305) in Phase I/II First-in-Human MATINS Trial Patients with Advanced Solid Tumors

Patrick A. Ott[†], Dana-Farber Cancer Institute, USA
Short Talk: Long Term Overall Survival and Predictors in Anti-PD-1 Naïve Patients with Melanoma Brain Metastases Treated with Immune Checkpoint Inhibitors in the Real-World Setting: A Multi Cohort Study

Matthias Braun, QIMR Berghofer, Australia
Short Talk: Tumor CD155 Drives Resistance to Immunotherapy by Downregulating the Activating Receptor CD226 in CD8+ T Cells

Epigenetic Control of Cancer Immunotherapy

Speaker to be Announced

E. John Wherry, University of Pennsylvania, USA
Epigenetic Features of Exhausted Antitumor T Cells

Confluence of Engineering and Cancer Immunotherapy

Vanessa Peterson, Merck, USA
Uncovering Novel T Cell Biology with Multi-Omics Single Cell Sequencing and Whole Genome CRISPR Screening

Evan Scott, Northwestern University, USA
Engineered Nanobiomaterials for Cancer Immunotherapy

James R. Heath, Institute for Systems Biology, USA
Single Cell Approaches to Analyzing Antitumor Responses

Poster Session 2

WEDNESDAY, MARCH 25

Orchestrating Antitumor Immune Responses

Robert D. Schreiber, Washington University School of Medicine, USA
Immunoediting in Cancer

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Priti Hegde, Foundation Medicine, USA

Talk Title to be Announced

Thomas Gajewski, University of Chicago, USA

Microbiome and Immune Responses to Cancer

Siwen Hu-Lieskovan, Huntsman Cancer Institute, USA

Talk Title to Be Announced

Coralie Backlund, Massachusetts Institute of Technology, USA

Short Talk: Cell Penetrating Peptides Improve T cell Response to Neoantigen Peptide Vaccines

Yuxuan Miao, Rockefeller University, USA

Short Talk: Adaptive Immune Resistance Emerges from Tumor-Initiating Stem Cells

Understanding Immune Responses at the Genomic Level

Elaine R. Mardis, Nationwide Children's Hospital, USA

Immunogenomic Evaluation of CNS Cancers in the Context of Oncolytic Virus Therapy

Eliezer M. Van Allen, Dana-Farber Cancer Institute, USA

Tumor Genomics and Selective Response to Cancer Immunotherapy

Nadine A. Defranoux, Parker Institute for Cancer Immunotherapy, USA

Short Talk: Identification of Key Parameters for Effective Neoantigen Prediction through a Consortium Effort: The Tumor Neoantigen Selection Alliance

Debattama Sen, Harvard Medical School, USA

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

Yeon Joo Kim, University of California, Los Angeles, USA

Short Talk: Interferon-Gamma-Induced Melanoma Plasticity and Response to PD-1 Blockade Therapy

Poster Session 3

THURSDAY, MARCH 26

Keynote Address

James P. Allison, University of Texas MD Anderson Cancer Center, USA

Distinct Mechanisms of Action of Immune Checkpoint Inhibitors

Treating Cancer with the Immune System

Georgina V. Long, Melanoma Institute Australia, The University of Sydney, Australia

Clinical Trials with Activators of Pattern Recognition Receptors or Oncolytic Viruses

Antoni Ribas, University of California, Los Angeles, USA

Mechanisms of Primary and Acquired Resistance to PD-1 Blockade Therapy

Zoila Areli Lopez Bujanda, Johns Hopkins University, USA

Short Talk: ADT-Mediated Intra-Tumoral Myeloid Infiltration Promotes Resistance to Immune Checkpoint Blockade in Prostate Cancer

Kelli Connolly[†], Yale University, USA

Short Talk: Tumor-Draining Lymph Nodes Contain an Untapped Reservoir of Stem-Like CD8 T Cells

Workshop 2

Chang Liu, University of Pittsburgh, USA

Neuropilin-1 Is a T Cell Memory Checkpoint Limiting Long-Term Anti-Tumor Immunity

Thomas D. Wu, Genentech, Inc., USA

Peripheral T Cell Expansion Predicts Tumor Infiltration and Clinical Response to Cancer Immunotherapy

Katie Campbell[†], University of California, Los Angeles, USA

Integrating DNA and RNA Sequencing Analysis to Describe Somatic Alterations and Expression in the HLA Gene Loci

Shira Cherny, University of Washington, USA

Characterization of Myeloid Cells Subsets in the Tumor Microenvironment of Merkel Cell Carcinoma

Puay Ling Lee, Francis Crick Institute, UK

Uncovering Epigenetic Mechanisms of Cancer Immuno-evasion

Amanda Oliver, Peter MacCallum Cancer Centre, Australia

Tissue Specific Differences in the Tumor Microenvironment Influence Immunotherapy Responses

Understanding New Cancer Immunotherapies

Ansuman Satpathy, Stanford University School of Medicine, USA

Single-Cell Genomics in Cancer Immunotherapy

Arlene H. Sharpe, Harvard Medical School, USA

Effects of PD-1 Blockade Therapy

Juan C. Jaen, Arcus Biosciences, Inc., USA

Clinical Applications of Adenosine Pathway Inhibitors

Stephen Mok, MD Anderson Cancer Center, USA

Short Talk: CTLA-4 Blockade Generates Memory T-Cells with Greater Proliferative And Cytotoxic Capacity Than PD-1 Blockade

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

FRIDAY, MARCH 27

Departure