This is the fifth conference in the Tumor Immunology Special Conference series. In the past, this conference has appealed to nearly 400 attendees, from basic immunologist, non-immunologists to clinical researchers. A hallmark of this conference is to integrate several sub-disciplines of cancer immunology with a broad focus on treatment and prevention of different cancers.

Building on previously successful Tumor Immunology Special Conferences, this conference is designed to provide highly stimulating discussions to further the scientific and translational goals of the field and allow for more effective exchange of ideas between basic cancer immunologists, non-immunologists, and clinical scientists. The central theme of this year’s conference is to discuss the advances made in basic and translational tumor immunology across multiple disciplines. Important topics to be covered in this meeting are: interaction of radiobiology, antibody effector mechanisms in immune therapy, tumor microenvironment, microbiome, overcoming obstacles to generating adaptive immunity, adoptive-T-cell therapy, Metabolism, and novel understanding in the biology of vaccination. Overall, the conference will appeal to basic, translational, and clinical scientists from academics to industry.

The AACR would like to thank the following organizations for their generous support of this conference.

**Lead Supporter**

**Bristol-Myers Squibb**

**Professional Educational Grants**

AstraZeneca  Genentech  Gilead  Novartis

**Travel Award Supporters**

Aflac  National Cancer Institute
Conference Program

Monday, December 1

7:00 p.m.-9:00 p.m. Opening Plenary Session

Welcome Remarks

Keynote Addresses

Molecular basis of T cell exhaustion: Insights for immunotherapy
E. John Wherry, University of Pennsylvania, Philadelphia, PA

The intersection of inflammation, immunity, and cancer: From basic biology to translational research
Michael Karin, University of California, San Diego, CA

9:00 p.m.-10:30 p.m. Opening Reception

Tuesday, December 2

7:00 a.m.-8:00 a.m. Continental Breakfast and Meet-the-Expert Roundtables

A list of roundtable leaders and topics is available at the registration desk.

8:00 a.m.-10:15 a.m. Session 1: Interaction of Radiobiology

Session Chairperson: Robert H. Vonderheide, Abramson Cancer Center, University of Pennsylvania, Philadelphia, PA

Turning a tumor into a vaccine factory: In situ vaccination for low-grade lymphoma
Joshua Brody, Mount Sinai Hospital, New York, NY

Partnership of radiotherapy and immunotherapy: A new paradigm in cancer treatment
Sandra Demaria, New York University School of Medicine, New York, NY

Breaking immune privilege in pancreatic cancer
Robert H. Vonderheide

The heat shock protein-CD91 pathway is necessary for tumor immunosurveillance*
Robert J. Binder, University of Pittsburgh, Pittsburgh, PA

MUC1 vaccine for colon cancer prevention: Microarray and bioinformatic analysis of pre-vaccination gene signatures distinguishing responders from non-responders*
Olivera J. Finn, University of Pittsburgh, Pittsburgh, PA

*Short talks from proffered papers.
10:15 a.m.-10:45 a.m. Break

10:45 a.m.-1:15 p.m. Session 2: Antibody Effector Mechanisms in Immune Therapy
  
  **Session Chairperson:** Martin Glennie, University of Southampton, Southampton, United Kingdom

  **Enhancing the efficacy of antitumor antibodies**
  Raphael Clynes, Bristol-Myers Squibb Company, Lawrenceville, NJ

  **Designing immunostimulatory antibodies for cancer treatment**
  Martin Glennie

  **Enhancing immune effector function via antibody engineering**
  Christian Klein, Roche GlycArt AG, Schlieren, Switzerland

  **Translation of cancer vaccine strategies from mice to clinical trials***
  Jay A. Berzofsky, Center for Cancer Research, National Cancer Institute, Bethesda, MD
  *The abstract for this presentation is available as B26.*

  **Dissecting the tumor myeloid compartment reveals rare activating antigen presenting cells, critical for T cell immunity***
  Miranda Broz, University of California, San Francisco, CA
  *The abstract for this presentation is available as B65.*

  **Determine a transcriptional mechanism novel to tumor infiltrating T cell dysfunction***
  Katherine A. Waugh, University of Colorado - School of Medicine, Aurora, CO

1:15 p.m.-3:30 p.m. Poster Session A (Lunch provided)

3:30 p.m.-5:45 p.m. Session 3: Tumor Microenvironment
  
  **Session Chairperson:** Nina Bhardwaj, Mount Sinai Medical Center, New York, NY

  **Molecular mechanisms controlling the T cell-inflamed tumor microenvironment: Implications for therapy**
  Thomas Gajewski, University of Chicago, Chicago, IL

  **Effective immunotherapy regimens incorporating highly active human STING-activating cyclic dinucleotide derivatives**
  Thomas W. Dubensky, Aduro BioTech, San Francisco, CA

  **T cell exclusion in pancreatic ductal adenocarcinoma: The FAP+ cancer-associated fibroblast and CXCL12**
  Douglas T. Fearon, Cancer Research UK Cambridge Research Institute, Cambridge, United Kingdom

  **CXCL13-producing extrafollicular Tfh-like CD4+ T cells in human breast cancer***
  Chunyan Gu-Trantien, Jules Bordet Institute, Brussels, Belgium

  **IRF8 regulates GM-CSF expression in T cells and tumor cells to mediate myeloid-derived suppressor cell differentiation***
  Amy Paschall, Georgia Regents University, Augusta, GA

*Short talks from proffered papers.
5:45 p.m.-5:55 p.m.  Break

5:55 p.m.-6:55 p.m.  Special Session  
How to Get Your Papers Published: A Discussion with Journal Editors

This session is open to junior investigators and AACR Associate Members.

Glenn Dranoff, Dana-Farber Cancer Institute, Boston, MA
Robert H. Vonderheide, Abramson Cancer Center, University of Pennsylvania, Philadelphia, PA

7:00 p.m.  Dinner on own

Wednesday, December 3

7:00 a.m.-8:00 a.m.  Continental Breakfast and Meet-the-Expert Roundtables

A list of roundtable leaders and topics is available at the registration desk.

8:00 a.m.-10:15 a.m.  Session 4: Microbiome  
Session Chairperson: Cynthia L. Sears, Johns Hopkins University, Baltimore, MD

The gut microbiota-cancer axis  
Laurence Zitvogel, Institut Gustave-Roussy, Villejuif, France

Microbiota associations in colon cancer  
Cynthia L. Sears

Fusobacteria and colon cancer  
Wendy M. Garrett, Harvard School of Public Health, Boston, MA

Genomic characterization of immune escape pathways in gastric cancer*  
Kai Wang, Pfizer Oncology, San Diego, CA

Agonistic CD40 antibody combined with chemotherapy drives TLR4/MyD88 independent regression of pancreatic tumors in a T cell dependent manner*  
Katelyn T. Byrne, University of Pennsylvania, Philadelphia, PA

10:15 a.m.-10:30 a.m.  Break

*Short talks from proffered papers.
10:30 a.m.-12:30 p.m.  **Session 5: Overcoming Obstacles to Generating Adaptive Immunity**  
*Session Chairperson: Catherine J. Wu, Dana-Farber Cancer Institute, Boston, MA*

**Type-1-cytokines synergize with oncogene inhibition to induce tumor growth arrest**  
Nicholas Restifo, National Institutes of Health, Bethesda, MD

**Designing cancer vaccines that mimic viral infections**  
Esteban Celis, Georgia Regents University Cancer Center, Augusta, GA

**PD-1 blockade therapy for cancer**  
Antoni Ribas, UCLA Medical Center, Los Angeles, CA

**Fighting fire with fire: Developing a personalized neoantigen cancer vaccine**  
Catherine J. Wu

12:30 p.m.-2:45 p.m.  **Poster Session B (Lunch provided)**

2:45 p.m.-5:00 p.m.  **Session 6: Adoptive T Cell Therapy**  
*Session Chairperson: Robert H. Vonderheide, Abramson Cancer Center, University of Pennsylvania, Philadelphia, PA*

**Chimeric antigen receptor T cells as therapy**  
Carl H. June, Abramson Cancer Center, University of Pennsylvania, Philadelphia, PA

**Engineering T cells to be effective in eradicating tumors**  
Philip D. Greenberg, Fred Hutchinson Cancer Research Center, University of Washington, Seattle, WA

**Curative potential of T-cell immunotherapy for cancer**  
Steven A. Rosenberg, National Cancer Institute, Bethesda, MD

**Enhanced affinity T cell receptor based therapy can surmount immune and physical barriers to treat pancreatic ductal adenocarcinoma**  
Ingunn M. Stromnes, Fred Hutchinson Cancer Research Center, Seattle, WA

**Targeting histone deacetylase 6 in T-cells to improve melanoma immunotherapy**  
Andressa Sodre Laino, Moffitt Cancer Center, Tampa, FL

5:00 p.m.-6:15 p.m.  **A Regulatory Path to Approval of an Immune-Checkpoint Inhibitor in Combination with a Targeted Therapy**  
*Session Chairperson: Antoni Ribas, UCLA Medical Center, Los Angeles, CA*

**Panelists:**  
Antoni Ribas, UCLA Medical Center, Los Angeles, CA  
Marc Theoret, Center for Drug Evaluation and Research, Food and Drug Administration, Silver Spring, MD  
Steven D. Averbuch, Bristol-Myers Squibb Company, Princeton, NJ

6:15 p.m.  **Dinner on own**

*Short talks from proffered papers.
Thursday, December 4

7:00 a.m.-8:00 a.m.  Continental Breakfast and Meet-the-Expert Roundtables

A list of roundtable leaders and topics is available at the registration desk.

8:00 a.m.-10:15 a.m.  Session 7: Immunometabolism and Immunoregulation
  
  **Session Chairperson: Elizabeth A. Repasky, Roswell Park Cancer Institute, Buffalo, NY**

  Impact of thermoregulatory metabolism on immunosuppression and therapeutic responsiveness of tumors
  Elizabeth A. Repasky

  Regulation of metabolic plasticity in effector T cells
  Russell G. Jones, McGill University, Montreal, QC, Canada

  T cell trafficking in lymphoid and non-lymphoid tissues
  Victor H. Engelhard, University of Virginia, Charlottesville, VA

  Use of random peptide array to discover cancer neoantigens for vaccines and diagnostics*
  Luhui Shen, Center for Innovations in Medicine, Biodesign Institute, Arizona State University, Tempe, AZ

  Potentiating immunological memory in mice using aptamer targeted siRNA delivery to inhibit mediators of effector differentiation in CD8+ cytotoxic T lymphocytes*
  Alexey Berezhnoy, University of Miami Miller School of Medicine, Miami, FL

10:15 a.m.-10:45 a.m.  Break

10:45 a.m.-12:30 p.m.  Session 8: Biology of Vaccination
  
  **Session Chairperson: Nina Bhardwaj, Mount Sinai Medical Center, New York, NY**

  Vaccines: The igniters of antitumor immunity
  Lei Zheng, Johns Hopkins University School of Medicine, Baltimore, MD

  Vaccines targeting innate immune cells
  Nina Bhardwaj

  Mechanisms of protective tumor immunity
  Glenn Dranoff, Dana-Farber Cancer Institute, Boston, MA

*Short talks from proffered papers.