The recent FDA approvals of Provenge® as the first therapeutic cancer vaccine and Ipilimumab® as the first monoclonal antibody that blocks negative immune regulation are landmark achievements that highlight substantive progress in cancer immunology. These novel treatments derive from the cumulative insights of basic and translational scientists into the mechanisms of protective tumor immunity in cancer patients. Advances in genetic, cellular and biochemical technologies have dramatically increased our understanding of the pathways through which the host responds to cancer. Tumor-host interactions in the microenvironment are increasingly recognized to play a critical role in determining disease inhibition or promotion. This meeting will bring together leading cancer immunologists to discuss:

- Most recent insights into immune recognition, regulation, tumor escape and therapeutic manipulation;
- Emerging areas of cancer metabolism and material science engineering that relate to cancer immunology;
- Integration of basic and clinical aspects of tumor immunity.

The concurrent meeting on Antibodies as Drugs will underscore the increasing connections between these fields, and potentially accelerate the development of new cancer immunotherapies.

Plenary Session Topics:
- Tumor Targeting – From Understanding Mechanisms to New Targeting Agents (Joint)
- Tumor Microenvironment
- Engineering and Immunotherapy
- Cancer Vaccines
- Adoptive Cellular Therapy
- Metabolism and Cancer
- Immunomodulatory Antibody Therapies (Joint)
- Anti-Cancer Antibodies

Abstract & Scholarship Deadline: September 25, 2012
Late-Breaking Abstract Deadline: October 25, 2012
Early Registration Deadline: November 27, 2012

Note: Scholarships are available to students and postdoctoral fellows and require a brief application and submission of an abstract. Short talk speakers will also be selected from abstracts. Early registration saves US$150 on later fee. Information shown is subject to possible change. Please visit meeting website for the most up-to-date program information.
**KEYSTONE SYMPOSIA**

**Cancer Immunology and Immunotherapy (J4)**

*Scientific Organizers: Glenn Dranoff, Carl H. June and Suzanne L. Topalian*

*Sponsored by Bayer USA Foundation and Bristol-Myers Squibb Company. Supported by an educational donation provided by Amgen.*

**Antibodies as Drugs (J3)**

*Scientific Organizers: Paul Carter and Andreas G. Plückthun*

*January 27-February 1, 2013 • Fairmont Hotel Vancouver • Vancouver, British Columbia, Canada*

*Sponsored by AbbVie Inc., Astellas Pharma Inc. and Genentech, Inc. Supported by an educational donation provided by Amgen.*

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**SUNDAY, JANUARY 27**

**Arrival and Registration**

**Welcome and Keynote Address (J4)**

*Glenn Dranoff,* Novartis Institutes for BioMedical Research, USA

**Welcome and Keynote Address (J3)**

*Paul Carter,* Genentech, Inc., USA

*Andreas G. Plückthun,* University of Zürich, Switzerland

**Jeffrey V. Ravetch,** Rockefeller University, USA

*Solving the Antibody Paradox*

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**MONDAY, JANUARY 28**

**Tumor Targeting - From Understanding Mechanisms to New Targeting Agents (Joint)**

*Dario Neri,* ETH Zürich, Switzerland

**Karl Dane Witttrup,** Massachusetts Institute of Technology, USA

*Synergistic Antibody and Cytokine Effects in Cancer Immunotherapy*

**Kerry A. Chester,** University College London Cancer Institute, UK

*Antibody-Targeted Nanoparticles for Cancer Treatment*

**Erkki Ruoslahti,** Sanford-Burnham Medical Research Institute, USA

*Increasing Extravasation with Peptides*

**Anna M. Wu,** University of California, Los Angeles, USA

*Engineered Antibodies for Molecular Imaging of Cancer*

**Henry B. Lowman,** CytomX, USA

*Short Talk: Probody™ Therapeutics: A New Class of Proteolytically Activated Antibodies*

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**Workshop 1: Emerging Antibody Generation Methods (J3)**

*James D. Marks,* University of California, San Francisco, USA

**Filippa Fleetwood,** Royal Institute of Technology, Sweden

*Surface Display of a Single-Domain Antibody Library on Gram-Positive Bacteria*

**Christian Kunz,** MorphoSys AG, Germany

*The Role of HuCAL in the Discovery of Lead Antibodies with a Unique MoA*

**Audrey D. McConnell,** AnaptysBio, Inc., USA

*High Affinity Humanized Antibodies without Making Hybridomas; Immunization Paired with Mammalian Cell Display and in vitro Somatic Hypermutation*

**Amandeep K. Gakhal,** Sutro Biopharma, USA

*A New Method for Direct Selection of Synthetic Antibody Fragments on Cell Surface Targets from a Phage-Displayed Library*

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**Welcome and Keynote Address (J4)**

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

*Checkpoint Blockade*

**Welcome and Keynote Address (J3)**

*Andreas G. Plückthun,* University of Zürich, Switzerland

**Jeffrey V. Ravetch,** Rockefeller University, USA

*Solving the Antibody Paradox*

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**Tumor Microenvironment (J4)**

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

**Wolf-Hervé Fridman,** Cordeliers Research Centre, France

*The Immune Microenvironment of Primary and Metastatic Human Tumors*

**Robert D. Schreiber,** Washington University School of Medicine, USA

*Cancer Immunodeitigens; Mechanisms, and Implications for Cancer Immunotherapy*

**Nikhil S. Joshi,** Yale University School of Medicine, USA

*Short Talk: Effector Regulatory T Cell Differentiation during Autochthonous Mouse Lung Adenocarcinoma Development*

**Drew M. Pardoll,** Johns Hopkins University School of Medicine, USA

*Inflammation and Cancer*

**Payloaded Antibodies for Cancer Treatment (J3)**

*Peter D. Senter,* Seattle Genetics Inc., USA

*Empowered Antibodies for Cancer Therapy*

**Dario Neri,** ETH Zürich, Switzerland

*Armed Antibodies for Vascular Targeting*

**Paul G. Polakis,** Genentech, Inc., USA

*Antibody Drug Conjugates for the Treatment of Cancer*

**Brian J. Agnew,** Thermo Fisher Scientific, USA

*Short Talk: Site-Selective Antibody Labeling without Engineering: Answering Unmet Needs in Antibody Payload Conjugation*

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**Poster Session 1**

**TUESDAY, JANUARY 29**

**Engineering and Immunotherapy (J4)**

*Suzanne L. Topalian,* Johns Hopkins University School of Medicine, USA

**David J. Mooney,** Harvard University, USA

*Polymer Scaffolds for immunotherapy*

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

*Interfacing Nanoparticle Drug Carriers with Lymphocytes to Enhance Cellular Immunotherapy*

**Carl H. June,** University of Pennsylvania, USA

*Engineered T Cells for Adoptive Therapy*

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* Session Chair † Invited but not yet accepted  
Program current as of October 27, 2017. Program subject to change. Meal formats are based on meeting venue. For the most up-to-date details, visit www.keystonesymposia.org/13J4 and www.keystonesymposia.org/13J3.
New Technologies for Generating Proteins with Novel Functions (J3)

*Andreas G. Plückthun, University of Zürich, Switzerland
David Baker, University of Washington, USA
Andrew D. Ellington, University of Texas at Austin, USA
Julia Shifman, Hebrew University of Jerusalem, Israel

Antibodies as Drugs (J3)

Cancer Vaccines (J4)

*Carl H. June, University of Pennsylvania, USA
Cornelia L. Trimble, Johns Hopkins University School of Medicine, USA


Keynote Address: Antigen Presentation and Innate Immune Recognition of T Cells

Clinical Immunology of Cancer

Modulating the Activity of Growth Factor Receptors (J3)

*Karl Dane Wittrup, Massachusetts Institute of Technology, USA
Ermanno Gherardi, University of Pavia, Italy
Andreas G. Plückthun, University of Zürich, Switzerland

Tumor and Bacterial Vaccines

Hollie J. Jackson, Memorial Sloan Kettering Cancer Center, USA
Sheena N. Smith, University of Zurich, Switzerland
Laurence J. N. Cooper, ZIOPHARM Oncology, Inc., USA
Antonio Lanzavecchia, Institute for Research in Biomedicine, Switzerland

Andreas G. Plückthun, University of Zürich, Switzerland
Sheena N. Smith, University of Zurich, Switzerland
Laurence J. N. Cooper, ZIOPHARM Oncology, Inc., USA

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**Antibodies as Drugs (J3)**

**Scientific Organizers:** Paul Carter and Andreas G. Plückthun

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**Workshop 2: Enhancing Effector Functions and Extending Half-Life (J3)**

*Henry B. Lowman*, CytomX, USA

**Bispecific and Multispecific Targeting Agents (J3)**

*Paul Carter*, Genentech, Inc., USA

**Immunomodulatory Antibody Therapies (Joint)**

*George J. Weiner*, University of Iowa, USA

**Metabolism and Cancer (J4)**

*Stanley R. Riddell*, Fred Hutchinson Cancer Research Center, University of Washington, USA

**Anti-Cancer Antibodies (J4)**

*Nils Lonberg*, Bristol-Myers Squibb, USA

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**Metabolism and Cancer (J4)**

*Sarah Q. Crome*, University Health Network, Canada

**Bispecific and Multispecific Targeting Agents (J3)**

*H. Kaspar Binz*, Molecular Partners, Switzerland

**Immunomodulatory Antibody Therapies (Joint)**

*Suzanne L. Topalian*, Johns Hopkins University School of Medicine, USA

**Metabolism and Cancer (J4)**

*Laurence Zitvogel*, University of Verona, Italy

**Bispecific and Multispecific Targeting Agents (J3)**

*Nils Lonberg*, Bristol-Myers Squibb, USA

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KEYSTONE SYMPOSIA
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Timo K. van den Berg, Sanquin Blood Supply, Netherlands
Short Talk: CD47-SIRPalpha Interactions Form a Barrier for Antibody-Mediated Tumor Cell Destruction by Phagocytes

Ronald P. DeMatteo, Memorial Sloan-Kettering Cancer Center, USA
Combined Immunologic and Molecular Therapy for Cancer

Glenn Dranoff, Novartis Institutes for BioMedical Research, USA
Therapy-Induced Antibody Responses

Challenges and New Opportunities with Antibody Drugs (J3)
*Kerry A. Chester, University College London Cancer Institute, UK
Ryan J. Watts, Denali Therapeutics Inc, USA
Engineering Bispecific Blood-Brain Barrier Crossing Antibodies
Leo James, MRC Laboratory of Molecular Biology, UK
Intracellular Immunity and TRIM21

Sripad Ram, University of Texas Southwestern Medical Center, USA
Short Talk: Multifocal Plane Microscopy Reveals Novel Intracellular Trafficking Pathways at the Blood-Brain Barrier with Implications to Antibody Delivery to the Brain

FRIDAY, FEBRUARY 1
Departure