

An AACR Special Conference

Hematologic Malignancies: Translating Discoveries to Novel Therapies

September 20-23, 2014 • Sheraton Philadelphia Downtown • Philadelphia, PA

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The AACR is proud to announce a new Special Conference focused on the blood-based cancers and associated disorders categorized as hematologic malignancies and will include presentations pertaining to leukemia, lymphoma, myeloma, myelodysplastic syndrome, and myeloproliferative neoplasms. This conference will span the spectrum of relevant cancer science and medicine, from basic science discoveries to their translation in the clinic, and will cover those scientific areas that cut across all blood cancers such as genomics, epigenetics, cell death pathways, and the tumor microenvironment, as well as translational and clinical topics such as targetable signaling pathways, drug development, immunotherapy, other treatment modalities, and early clinical trials.

This conference offers a unique opportunity for a lively discussion, in a small setting, of the challenges in the field among basic, translational, and clinical researchers and for potential collaborations among national and international investigators in the field. The chairpersons and members of the Scientific Program Committee for this Special Conference are world-renowned experts in the diverse areas of the field. Under their leadership, the meeting will provide an outstanding forum for the presentation of today's most exciting developments in the research and treatment of hematologic malignancies. In addition, the major goals of this AACR conference are to highlight the common aspects of both hematologic malignancies and solid tumors and to foster new knowledge and creative ideas about how to treat and cure these diseases.

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

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Conference Program

Saturday, September 20

- 4:00 p.m.-5:30 p.m. **Educational Session: Molecular Pathology and Classification of Hematological Malignancies**
Session Chairperson: Clara D. Bloomfield, The Ohio State University, Columbus, OH
- 4:00 p.m. **Clinical significance of molecular findings in acute myeloid leukemia**
Clara D. Bloomfield
- 4:30 p.m. **Principles of lymphoma classification**
Laurence DeLeval, University Hospital of Lausanne, Lausanne, Switzerland
- 5:00 p.m. **Genetic landscape of myeloma and its clinical significance**
Faith Davies, Institute of Cancer Research and Royal Marsden Hospital, Sutton, UK
- 5:30 p.m.-6:30 p.m. **Dinner on Own**
- 6:30 p.m.-9:00 p.m. **Welcome and Opening Keynote Session**
Session Chairperson: Kenneth C. Anderson, Dana-Farber Cancer Institute, Boston, MA
- 6:30 p.m. **Welcome Remarks**
Margaret Foti, CEO, American Association for Cancer Research
Kenneth C. Anderson, Conference Chairperson
- 6:45 p.m. **Keynote Lecture**
The future of epigenetics: Cancer therapy through cellular rehabilitation rather than execution
Craig B. Thompson, Memorial Sloan Kettering Cancer Center, New York, NY
- 7:00 p.m. **The Accomplishments and Impact of Janet D. Rowley**
Michelle M. Le Beau, University of Chicago Comprehensive Cancer Center, Chicago, IL
- 8:00 p.m. **Keynote Memorial Lecture, dedicated to Janet D. Rowley**
Novel function of microRNAs
Carlo M. Croce, The Ohio State University Comprehensive Cancer Center, Columbus, OH
- 9:00 p.m.-10:30 p.m. **Opening Reception**

Janet D. Rowley, MD

Blum-Riese Distinguished Professor of Medicine, Molecular Genetics and Cell Biology, and Human Genetics, University of Chicago, Chicago, IL

Recognized world-wide as the founder of modern cancer cytogenetics, Dr. Rowley is best known for identifying recurring chromosomal translocations in hematologic malignancies. She showed that many of these chromosomal alterations had diagnostic and prognostic significance, and she cloned a number of genes at translocation breakpoints. Her studies have led directly to the development of targeted therapies such as imatinib for chronic myelogenous leukemia.

Dr. Rowley's leadership in revolutionizing the medical understanding of the role of genetics in causing disease has been recognized in the form of many awards and over a dozen honorary degrees from around the world.

Sunday, September 21

7:00 a.m.-8:00 a.m. **Continental Breakfast**

8:00 a.m.-10:00 a.m. **Plenary Session 1: Tumor Microenvironment and Metabolism**
Session Chairperson: John G. Gribben, Barts Cancer Institute, London, UK

8:00 a.m. **Mouse models of isocitrate dehydrogenase (IDH) mutations in hematologic malignancies**
Tak W. Mak, Ontario Cancer Institute, Princess Margaret Cancer Centre, Toronto, ON, Canada

8:30 a.m. **Impact of B cell malignancies in forming unique microenvironments**
John G. Gribben

9:00 a.m. **Multiple myeloma as a model of bone metastasis**
Irene M. Ghobrial, Dana-Farber Cancer Institute, Boston, MA

9:30 a.m. **The microenvironment in CLL: Cellular and molecular players and emerging therapeutic targets**
Jan A. Burger, The University of Texas MD Anderson Cancer Center, Houston, TX

10:00 a.m.-10:30 a.m. **Break**

- 10:30 a.m.-12:30 p.m. **Plenary Session 2: Immunotherapy**
Session Chairperson: Ronald Levy, Stanford University, Stanford, CA
- 10:30 a.m. **CARs for leukemia and beyond?**
Carl H. June, Abramson Cancer Center of University of Pennsylvania, Philadelphia, PA
- 11:00 a.m. **Monoclonal antibodies and in situ vaccination**
Ronald Levy
- 11:30 a.m. **Developing broadly active immunotherapy**
Glenn Dranoff, Dana-Farber Cancer Institute, Boston, MA
- 12:00 p.m. **Preclinical development of a humanized anti-CD47 antibody targeting AML stem cells**
Ravindra Majeti, Stanford School of Medicine, Stanford, CA
- 12:30 p.m.-1:00 p.m. **Lunch**
- 1:00 p.m.-2:30 p.m. **Panel Discussion 1: Drug Development in the 21st Century: Tackling the Grand Challenges**
Session Chairperson: Wyndham E. Wilson, National Cancer Institute, Bethesda, MD
- 1:00 p.m. Wyndham E. Wilson
- 1:15 p.m. Richard B. Gaynor, Eli Lilly and Company, Indianapolis, IN
- 1:30 p.m. James P. Omel, Central Nebraska Multiple Myeloma Support Group, Grand Island, NE
- 1:45 p.m. Michael J. Keating, The University of Texas MD Anderson Cancer Center, Houston, TX
- 2:00 p.m. Panel Discussion
- 2:30 p.m.-5:00 p.m. **Poster Session A and Light Refreshments**

5:00 p.m.-7:30 p.m. **Joint Session: Clinical Science Intersections between Melanoma and Hematologic Malignancies**

This session is generously supported by Celgene and The Melanoma Research Alliance.

Two hematology experts will be joined by two speakers from the AACR Special Conference on Advances in Melanoma: From Biology to Therapy to create a unique session and an opportunity to interact with colleagues across disciplines. Overlapping themes in solid and blood cancers will be discussed in the areas of signaling, targeted therapy, and immunotherapy.

5:00 p.m. **Introduction by Session Chairpersons**
Kenneth C. Anderson, Dana-Farber Cancer Institute, Boston, MA; Levi A. Garraway, Dana-Farber Cancer Institute, Boston, MA

MRA: Powerful research, faster results
Wendy K.D. Selig, President and CEO, Melanoma Research Alliance, Washington, DC

Research: Moving beyond hope to outcomes
Elizabeth Thompson, CEO, Lymphoma Research Foundation, New York, NY

5:15 p.m. **Preclinical models for targeting oncogenic Ras signaling in cancer**
Kevin M. Shannon, University of California, San Francisco, CA

5:45 p.m. **Treatment of non-V600-mutated BRAF melanoma: A role for combination MEK and CDK4/6 inhibition**
Jeffrey A. Sosman, Vanderbilt University Medical Center, Nashville, TN

6:15 p.m. **PD-1 pathway immunotherapy**
Gordon Freeman, Dana-Farber Cancer Institute, Boston, MA

6:45 p.m. **Adoptive T cell therapy with CAR modified T cells; We have a Model A Ford, can we build a Ferrari?**
Renier J. Brentjens, Memorial Sloan Kettering Cancer Center, New York, NY

7:15 p.m. Panel Discussion

7:30 p.m.-9:00 p.m. **Reception for the attendees of both AACR Special Conferences**

Monday, September 22

7:00 a.m.-8:00 a.m. **Continental Breakfast**

8:00 a.m.-10:00 a.m. **Plenary Session 3: Genomics**
Session Chairperson: Riccardo Dalla-Favera, Columbia University Institute for Cancer Genetics, New York, NY

This session is supported by Penn Medicine.

8:00 a.m. **Acute lymphoblastic leukemia: Recent insights from genomic profiling into pathophysiology and therapy**
Charles G. Mullighan, St. Jude Children's Research Hospital, Memphis, TN

8:30 a.m. **The evolutionary landscape of chronic lymphocytic leukemia**
Catherine J. Wu, Dana-Farber Cancer Institute, Boston, MA

9:00 a.m. **Pathogenetic and therapeutic insights from the genome of diffuse large B-cell lymphoma**
Riccardo Dalla-Favera

9:30 a.m. **AML genomics: An update**
Elaine R. Mardis, Washington University School of Medicine, St. Louis, MO

10:00 a.m.-10:30 a.m. **Break**

10:30 a.m.-12:30 p.m. **Concurrent Session 1: Leukemia**
Session Chairperson: Kimberly Stegmaier, Dana-Farber Cancer Institute, Boston, MA

10:30 a.m. **An oncogenic enhancer drives NOTCH1-induced leukemia**
Adolfo Ferrando, Columbia University, New York, NY

10:55 a.m. **Integrating chemical and functional genomics for leukemia discovery**
Kimberly Stegmaier

11:20 a.m. **Regulation of acute leukemia initiation and progression by long noncoding RNAs**
Iannis Aifantis, NYU Langone Medical Center, New York, NY

11:45 a.m. **The histone demethylase Jmjd1c is required for MLL-AF9 leukemia initiating cell homeostasis through modulating Hoxa9-controlled transcription program***
Nan Zhu, Memorial Sloan Kettering Cancer Center, New York, NY

12:00 p.m. **Investigating the use of tyrosine kinase inhibitors in Ph-like ALL***
Kathryn G. Roberts, St. Jude Children's Research Hospital, Memphis, TN

12:15 p.m. **Delineating the roles of lysine 27 methylation-associated epigenetic modulators in T cell leukemia***
Panagiotis Ntziachristos, NYU Langone Medical Center, New York, NY

*Short talks from proffered papers.

- 10:30 a.m.-12:30 p.m. **Concurrent Session 2: Myeloma**
Session Chairperson: Kenneth C. Anderson, Dana-Farber Cancer Institute, Boston, MA
- 10:30 a.m. **Targeting genetic heterogeneity in multiple myeloma through immune activation**
P. Lief Bergsagel, Mayo Clinic, Scottsdale, AZ
- 10:55 a.m. **Aberrant histone methylation in multiple myeloma**
Jonathan D. Licht, Northwestern University, Chicago, IL
- 11:20 a.m. **New insights into therapeutic targets in multiple myeloma**
Kenneth C. Anderson
- 11:45 a.m. **Genomic-based treatment advances in Waldenström's macroglobulinemia**
Steven P. Treon, Dana-Farber Cancer Institute, Boston, MA
- 12:10 p.m. **Exploiting oncogene-induced DNA replicative stress as synthetic lethal approach to target myeloma***
Francesca Cottini, Dana-Farber Cancer Institute, Boston, MA
- 12:30 p.m.-1:00 p.m. **Lunch**
- 1:00 p.m.-2:30 p.m. **Panel Discussion 2: Implementation of Clinical Genomics**
Session Chairperson: Randy D. Gascoyne, BC Cancer Agency, Vancouver, BC, Canada
- 1:00 p.m. **Comprehensive clinical genomic profiling in hematolymphoid malignancies: An overview**
Vincent A. Miller, Foundation Medicine, Inc., Cambridge, MA
- 1:20 p.m. **Implementation of clinical genomics: Promise and challenges**
John D. Carpten, TGen, Phoenix, AZ
- 1:40 p.m. **How might next-generation sequencing penetrate clinical practice for lymphoid malignancies?**
Randy D. Gascoyne
- 2:00 p.m. **Panel Discussion**

*Short talks from proffered papers.

- 2:30 p.m.-4:30 p.m. **Plenary Session 4: Cell Death Pathways**
Session Chairperson: Suzanne Cory, The Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia
- 2:30 p.m. **Using mitochondria to guide leukemia therapy**
Anthony G. Letai, Dana-Farber Cancer Institute, Boston MA
- 3:00 p.m. **How cells survive: Single cell analysis reveals properties of nongenetic apoptosis resistance**
Douglas R. Green, St. Jude Children's Research Hospital, Memphis, TN
- 3:30 p.m. **Harnessing death for life**
Suzanne Cory
- 4:00 p.m. **BCL-2 inhibition – An example of translational medicine – Update**
Gary B. Gordon, AbbVie Inc., North Chicago, IL
- 4:30 p.m.-5:00 p.m. **Break**
- 5:00 p.m.-6:30 p.m. **Panel Discussion 3: Clinical Research: Now and in the Future**
Session Chairperson: James H. Doroshow, National Cancer Institute, Bethesda, MD
- 5:00 p.m. Peter F. Lebowitz, Janssen Research & Development, Spring House, PA
- 5:20 p.m. James H. Doroshow
- 5:40 p.m. Ann Farrell, U.S. Department of Health and Human Services, Food and Drug Administration, Silver Spring, MD
- 6:00 p.m. Panel Discussion
- 6:30 p.m.-8:00 p.m. **Dinner on Own**
- 8:00 p.m.-10:30 p.m. **Poster Session B and Dessert Reception**

Tuesday, September 23

7:00 a.m.-8:00 a.m. **Continental Breakfast**

8:00 a.m.-10:00 a.m. **Plenary Session 5: Stem Cells**
*Session Chairperson: Emmanuelle Passegué, UCSF Helen Diller Family
Comprehensive Cancer Center, San Francisco, CA*

8:00 a.m. **Regulation of self-renewal in cancer stem cells**
Pier Giuseppe Pelicci, European Institute of Oncology, Milan, Italy

8:30 a.m. **Decoding leukemia stem cell RNA recoding**
Catriona Jamieson, UCSD Moores Cancer Center, San Diego, CA

9:00 a.m. **Competitive strategies of transformed HSCs: Lessons learned from CML biology**
Emmanuelle Passegué

9:30 a.m. **SRSF2 mutations impair hematopoietic differentiation by altering exonic splicing**
Omar Abdel-Wahab, Memorial Sloan Kettering Cancer Center, New York, NY

10:00 a.m.-10:15 a.m. **Break**

10:15 a.m.-12:15 p.m. **Concurrent Session 3: Lymphoma**
Session Chairperson: Louis M. Staudt, National Cancer Institute, Bethesda, MD

This session is supported by The Lymphoma Research Foundation.

10:15 a.m. **Therapies of lymphoma targeting oncogenic signaling pathways**
Louis M. Staudt

10:40 a.m. **Identification of targetable vulnerabilities in lymphoma**
Margaret A. Shipp, Dana-Farber Cancer Institute, Boston, MA

11:05 a.m. **The genetic basis of diffuse large B-cell lymphoma**
Laura Pasqualucci, Columbia University Irving Comprehensive Cancer Center,
New York, NY

11:30 a.m. **Patient-derived tumor grafts from primary T-cell lymphoma represent innovative
models to design patients' tailored therapies**
Giorgio Inghirami, Weill Cornell Medical College, New York, NY

11:55 a.m. **DLBCL tumors are sensitized to ferroptosis, a regulated form of nonapoptotic cell
death***
Wan Seok Yang, Columbia University, New York, NY

*Short talks from proffered papers.

- 10:15 a.m.-12:15 p.m. **Concurrent Session 4: Myelodysplastic Syndrome and Myeloproliferative Neoplasms**
Session Chairperson: Ross L. Levine, Memorial Sloan Kettering Cancer Center, New York, NY
- 10:15 a.m. **Role of JAK-STAT pathway activation in MPN pathogenesis and therapeutic response**
 Ross L. Levine
- 10:40 a.m. **Interpreting the role of acquired gene mutations in defining clinical outcome and treatment response**
 Elli Papaemmanuil, Sanger Institute, Cambridge, UK
- 11:05 a.m. **Molecular profiling of MDS for precision therapy**
 Seishi Ogawa, Kyoto University, Kyoto, Japan
- 11:30 a.m. **Pathogenesis and clonal evolution of myeloproliferative neoplasms**
 Radek C. Skoda, University Hospital Basel, Basel, Switzerland
- 11:55 a.m. **Mutant U2AF1 alters hematopoiesis and pre-mRNA splicing in transgenic mice***
 Cara Lunn Shirai, Washington University in St. Louis, St. Louis, MO
- 12:15 p.m.-12:45 p.m. **Lunch**
- 12:45 p.m.-2:45 p.m. **Plenary Session 6: Epigenetics**
Session Chairperson: Scott A. Armstrong, Memorial Sloan Kettering Cancer Center, New York, NY
- 12:45 p.m. **Targeting epigenetic mechanisms in leukemia**
 Scott A. Armstrong
- 1:15 p.m. **DNA methylation, the cancer epigenome, and translational implications**
 Stephen B. Baylin, Johns Hopkins University School of Medicine, Baltimore, MD
- 1:45 p.m. **Epigenetic programming and therapy in germinal center derived B-cell lymphomas**
 Ari M. Melnick, Weill Cornell Medical College, New York, NY
- 2:15 p.m. **Chemical modulation of chromatin structure and function**
 James E. Bradner, Dana-Farber Cancer Institute, Boston, MA
- 3:00 p.m. **Departure**

*Short talks from proffered papers.