Hematologic Malignancies: Translating Discoveries to Novel Therapies

May 6-9, 2017
Westin Boston Waterfront
Boston, Massachusetts

Saturday, May 6

Plenary Session 1: Initiating and Stem Cells in Hematologic Malignancies
Session Chair: Emmanuelle Passegué, Columbia University, New York, New York
4:15 p.m.-5:30 p.m.

Mechanisms of formation and progression of pre-leukemic stem cells
Ulrich G. Steidl, Albert Einstein College of Medicine, Bronx, New York

Hijacking of emergency myelopoiesis pathways in myeloid leukemia
Emmanuelle Passegué

Modeling clonal hematopoietic disorders in zebrafish using combinatorial mutagenesis and color barcoding*
Serine Avagyan, Dana-Farber Cancer Institute, Boston Children's Hospital, Boston, Massachusetts

Break
5:30 p.m.-5:45 p.m.

Welcome Remarks / Opening Keynote Lecture
5:45 p.m.-7:00 p.m.

Engineered T cells: Opportunities and challenges
Carl H. June, University of Pennsylvania, Philadelphia, Pennsylvania

Opening Reception
7:00 p.m.-9:00 p.m.

Sunday, May 7

Continental Breakfast / Networking Roundtables
7:00 a.m.-8:00 a.m.

Plenary Session 2: The Cellular and Molecular Basis of Drug Resistance and Response to Therapy
Session Chair: Catherine J. Wu, Dana-Farber Cancer Institute, Boston, Massachusetts
8:00 a.m.-10:00 a.m.

Genetics and mechanisms of chemotherapy resistance in relapse acute lymphoblastic leukemia
Adolfo Ferrando, Columbia University, New York, New York

Tumor heterogeneity and clonal evolution in CLL in relationship to therapy
Catherine J. Wu

*Short talk from proffered abstract
Intratumor heterogeneity and its role in therapeutic escape in multiple myeloma
Rodger E. Tiedemann, Princess Margaret Cancer Centre, Toronto, Ontario, Canada

Mechanisms of NT5C2 activating mutations driving thiopurine resistance in relapsed lymphoblastic leukemia*
Chelsea Dieck, Columbia University, New York, New York

Therapeutic synergy between Tigecycline and Venetoclax in a pre-clinical model of MYC/BCL2 double-hit lymphoma*
Micol Ravà, Istituto Italiano di Tecnologia, Milano, Italy

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

Plenary Session 3: Chemical Biology
Session Chair: Rajesh Chopra, The Institute for Cancer Research, London, United Kingdom
10:30 a.m.-1:00 p.m.

New chemical approaches for targeting challenging targets in cancer
Nathanael S. Gray, Dana-Farber Cancer Institute, Boston, Massachusetts

Therapeutic targeting of epigenetic regulators in acute leukemia
Jolanta E. Grembecka, University of Michigan, Ann Arbor, Michigan

Targeting the CRLaCRBN E3 ligases for treatment of hematological cancers
Rajesh Chopra

Targeted therapies as molecular probes for comprehensive pre-clinical evaluation
Mark Dawson, Peter MacCallum Cancer Center, Melbourne, Victoria, Australia

Degradation of leukemia oncogenes: A novel approach to therapy of leukemia*
Sara Buhrlage, Dana-Farber Cancer Institute, Boston, Massachusetts

SY-1425 (tamibarotene), a potent and selective RARa agonist, induces changes in the transcriptional regulatory circuit of AML cells leading to differentiation*
Christopher Fiore, Syros Pharmaceuticals, Cambridge, Massachusetts

Poster Session / Lunch
1:00 p.m.-3:00 p.m.

Plenary Session 4: Aberrant RNA Metabolism
Session Chair: Catriona H.M. Jamieson, UCSD Moores Cancer Center, La Jolla, California
3:00 p.m.-5:00 p.m.

Spliceosome gene mutations in MDS: Biology and potential therapeutic strategies
Matthew J. Walter, Washington University School of Medicine, St. Louis, Missouri

The role of malignant RNA editing in leukemia stem cell generation
Catriona H. M. Jamieson

RNA regulators and the control of self-renewal
Michael G. Kharas, Memorial Sloan Kettering Cancer Center, New York, New York

*Short talk from proffered abstract
**A specialized translation program in quiescent cancer cells**
Shobha Vasudevan, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts

**MicroRNA-130a regulates hematopoietic stem cell self-renewal and erythroid differentiation**
Gabriela Krivdova, Princess Margaret Cancer Centre, University Health Network, Toronto, Ontario, Canada

**Plenary Session 5: Initiating and Stem Cells in Hematologic Malignancies II**
*Session Chair: Benjamin L. Ebert, Brigham & Women's Hospital, Boston, Massachusetts*
5:00 p.m.—6:00 p.m.

*Title to be announced*
Benjamin L. Ebert

**TOX is a novel oncogenic driver in T-cell acute lymphoblastic leukemia and regulates non-homologous end joining DNA repair**
David Langenau, Massachusetts General Hospital, Boston, Massachusetts

**Single-cell transcriptional profiling of acute myeloid leukemia identifies self-renewing stem cells**
Zohar Sachs, University of Minnesota, Minneapolis, Minnesota

**Monday, May 8**

**Continental Breakfast / Networking Roundtables**
7:00 a.m.—8:00 a.m.

**Plenary Session 6: Genomics**
*Session Chair: Lucy A. Godley, University of Chicago, Chicago, Illinois*
8:00 a.m.—10:30 a.m.

**Genetic predisposition to hematopoietic malignancies**
Lucy A. Godley

**Large-scale population studies to inform patients’ tailored clinical management**
Elli Papaemmanuil, Memorial Sloan Kettering Cancer Center, New York, New York

**Genetic dissection and therapeutic targeting of erythroleukemia**
Charles G. Mullighan, St. Jude Children's Research Hospital, Memphis, Tennessee

**CRISPR-Cas9 genetic screens uncover a B cell receptor-MYD88 superpathway in diffuse large B cell lymphoma**
Louis M. Staudt, National Cancer Institute, Bethesda, Maryland

**FBXO11 is recurrently mutated in Burkitt Lymphoma and its inactivation accelerates lymphomagenesis in Eμ-myc mice**
Chiara Pighi, Boston Children's Hospital, Harvard Medical School, Boston, Massachusetts

**Characterization of lineage vs. context-dependent essential genes in multiple myeloma using CRISPR/Cas9 genome editing**
Constantine S. Mitsiades, Dana-Farber Cancer Institute, Boston, Massachusetts

**Break**
10:30 a.m.—11:00 a.m.

*Short talk from proffered abstract*
Plenary Session 7: Cell Death Pathways  
*Session Chair: Veronika Sexl, VetmedUni, Institute of Pharmacology and Toxicology, Vienna, Austria*  
11:00 a.m.-1:00 p.m.

**Directing blood cancer therapy with mitochondrial BH3 profiling**  
Anthony G. Letai, Dana-Farber Cancer Institute, Boston, Massachusetts

**CDK6: At the interface of Rb and p53**  
Veronika Sexl

**Immunomodulatory therapy of multiple myeloma with IAP antagonists**  
Marta Chesi, Mayo Clinic Arizona, Scottsdale, Arizona

**Probing mitochondria to guide personalized therapy for acute myeloid leukemia**  
Shruti Bhatt, Dana-Farber Cancer Institute, Boston, Massachusetts

**p53-related protein kinase is a novel prognostic marker and therapeutic target in multiple myeloma**  
Francesca Cottini, Ohio State University, Columbus, Ohio

**Lunch / Networking Roundtables**  
1:00 p.m.-3:00 p.m.

Plenary Session 8: Immunotherapy  
*Session Chair: Ricky W. Johnstone, Peter MacCallum Cancer Center, Melbourne, Australia*  
3:00 p.m.-5:00 p.m.

**Targeting CARs to the TRAC locus enhances T cell potency**  
Justin Eyquem, Memorial Sloan Kettering Cancer Center, New York, New York

**Engineering effective and safe T cell therapy**  
Stanley R. Riddell, Fred Hutchinson Cancer Research Center, Seattle, Washington

**Targetable genetic bases of immune evasion in lymphoma**  
Margaret A. Shipp, Dana-Farber Cancer Institute, Boston, Massachusetts

**Epigenetic regulation of cancer immune surveillance processes**  
Ricky W. Johnstone

**Panel Discussion: Immunotherapy**  
5:00 p.m.-5:45 p.m.

Tuesday, May 9

**Continental Breakfast / Networking Roundtables**  
7:00 a.m.-8:00 a.m.

Plenary Session 9: Epigenetics  
*Session Chair: Jonathan D. Licht, University of Florida Health Cancer Center, Gainesville, Florida*  
8:00 a.m.-10:00 a.m.

*Short talk from proffered abstract*
Role of mutations in epigenetic regulators in pathogenesis of myeloid malignancies
Ross L. Levine, Memorial Sloan Kettering Cancer Center, New York, New York

Deregulation and oncogenic functions of the NSD2/MMSET histone methyl transferase in hematological malignancies
Jonathan D. Licht

Epigenetic program in aging and MDS
Maria E. Figueroa, University of Miami, Miami, Florida

Polycomb repressive complex 2 inactivation induces primary chemotherapy resistance in T-ALL by upregulating the TRAP1 mitochondrial chaperone*
Alejandro Gutierrez, Boston Children's Hospital, Boston, Massachusetts

BRD9 defines a novel mammalian SWI/SNF (BAF) complex configuration which supports proliferation in AML*
Brittany Michel, Dana-Farber Cancer Institute, Boston, Massachusetts

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

Plenary Session 10: Tumor Microenvironment and Tumor-Host Interaction
Session Chair to be announced
10:15 a.m.-11:45 a.m.

Metabolic vulnerabilities in AML
David T. Scadden, Massachusetts General Hospital, Boston, Massachusetts

Image-based tracking of cancer heterogeneity and therapy resistance
Tannishtha Reya, University of California San Diego, La Jolla, California

Targeting immune receptor mutations in lymphoma
Hans-Guido Wendel, Memorial Sloan Kettering Cancer Center, New York, New York

Departure
12:30 p.m.

*Short talk from proffered abstract