Sunday, December 3, 2017

5:00 p.m.–6:00 p.m.

Welcome and Opening Keynote
Grand Ballroom ABC

Fusion oncoproteins in pediatric cancer: Mechanisms and therapeutic opportunities
Scott A. Armstrong, Dana-Farber Cancer Institute, Boston, MA

6:00 p.m.–8:00 p.m.

Welcome Reception
Grand Ballroom E

Monday, December 4, 2017

7:00 a.m.–8:00 a.m.

Breakfast
Grand Ballroom D

8:00 a.m.–10:00 a.m.

Plenary Session 1: Fusion Oncoproteins as Drivers of Childhood Cancer
Grand Ballroom ABC
Session Chair: Olivier Delattre, Institut Curie, Paris, France

Identity shifts in pediatric cancers
Olivier Delattre

Subgroup-specific enhancer hijacking in medulloblastoma
Paul A. Northcott, St. Jude Children's Research Hospital, Memphis, TN

Identification of new vulnerabilities in fusion-driven pediatric cancers with functional and chemical genomic approaches
Kimberly Stegmaier, Dana-Farber Cancer Institute, Boston, MA

PAX3-FOXO1 transgenic zebrafish models identify HES3 as a mediator of tumorigenesis*
Genevieve Kendall, University of Texas Southwestern Medical Center, Dallas, TX

Undifferentiated sarcomas harbor frequent oncogenic fusions and prognostic copy number alterations: A report from the Children's Oncology Group (COG) Soft Tissue Sarcoma Committee*
Theodore Laetsch, University of Texas Southwestern Medical Center, Dallas, TX

**Short talks from proffered abstracts*

10:00 a.m.–10:30 a.m. **Break**
Pre-Function Lobby

10:30 a.m.–12:30 p.m. **Plenary Session 2: Immunotherapy 1**
Grand Ballroom ABC
Session Chair: Michael C. Jensen, Seattle Children's Research Institute, Seattle, WA

CAR T cells in the pediatric cancer clinic: Innovation and opportunities
Michael C. Jensen

The role of hypermutation and replication repair deficiency in response of childhood cancers to immune checkpoint inhibitors
Uri Y. Tabori, The Hospital for Sick Children, Toronto, ON, Canada

Engineering T cells for the immunotherapy for pediatric solid tumors
Stephen Gottschalk, St. Jude Children's Research Hospital, Memphis, TN

Analysis of immune infiltrate identifies checkpoint blockade and TLR3 activation as efficient synergistic combination of immunotherapy in rhabdoid tumors*
Amaury Leruste, Paris-Sciences-Lettres, Institut Curie Research Center, Paris, France

GD2-directed chimeric antigen receptor T cells mediate potent antitumor effect and cure in xenograft models of diffuse intrinsic pontine glioma*
Robbie G. Majzner, Stanford University School of Medicine, Palo Alto, CA

12:30 p.m.–3:00 p.m. **Lunch and Poster Session A**
Grand Ballroom D&E

3:00 p.m.–5:00 p.m. **Plenary Session 3: Resistance and Refractory/Relapse**
Grand Ballroom ABC
Session Chair: Yael P. Mossé, Children's Hospital of Philadelphia, Philadelphia, PA

Epigenetic mechanisms of resistance to targeted therapy
Rani E. George, Dana-Farber Cancer Insitute, Boston, MA

Title to be announced
Yael P. Mossé

Neuroblastoma is a biphasic tumor
Rogier Versteeg, Academic Medical Center-University of Amsterdam, Amsterdam, The Netherlands

Genomic analysis of osteosarcoma reveals opportunities for targeted therapy*
Alejandro Sweet-Cordero, University of California San Francisco, San Francisco, CA

High-throughput drug screening identifies pazopanib and clofilium tosylate as promising treatments for malignant rhabdoid tumors*
Céline Chauvin, Paris-Sciences-Lettres, Institut Curie Research Center, Paris, France

**Short talks from proffered abstracts*

5:00 p.m.–5:15 p.m. **Break**
Pre-Function Lobby

5:15 p.m.–6:30 p.m. **Policy Session: Pediatric Cancer Drug Development: Challenges and Opportunities for Success**
Grand Ballroom ABC
Session Chair: Michael P. Link, Stanford University, Palo Alto, CA
(Not CME accredited)

Panelists
Peter C. Adamson, Children's Hospital of Philadelphia, Philadelphia, PA
Hubert N. Caron, Roche Applied Science, Basel, Switzerland
Nancy F. Goodman, Kids v. Cancer, Washington, DC
Danielle Leach, St. Baldrick's Foundation, Monrovia, CA
Michael P. Link, Stanford University, Palo Alto, CA
John M. Maris, Children's Hospital of Philadelphia, Philadelphia, PA
Gregory H. Reaman, Food and Drug Administration, Silver Spring, MD

Tuesday, December 5, 2017

7:00 a.m.–8:00 a.m. **Breakfast**
Grand Ballroom D

8:00 a.m.–10:00 a.m. **Plenary Session 4: Genomics and Clinical Trials**
Grand Ballroom ABC
Session Chair: Charles G. Mullighan, St. Jude Children's Research Hospital, Memphis, TN

Pediatric precision oncology programs in Germany and Europe
Stefan M. Pfister, German Cancer Research Center, Heidelberg, Germany

Modeling and targeting CREBBP mutations in relapsed acute lymphoblastic leukemia
Charles G. Mullighan

Implementing and evaluating precision oncology approaches for childhood cancer patients
D. William Parsons, Baylor College of Medicine, Dan L. Duncan Cancer Center, Houston, TX

A pediatric phase 1 study of larotrectinib, a highly selective inhibitor of the tropomyosin receptor kinase (TRK) family: An updated analysis*
Brian Turpin, Cincinnati Children's Hospital Medical Center, Cincinnati, OH

Overexpression and mutations of CXorf67 in "infant-type" posterior fossa type-A ependymomas*
David Ellison, St. Jude Children's Research Hospital, Memphis, TN

**Short talks from proffered abstracts*

10:00 a.m.–10:30 a.m. **Break**
Pre-Function Lobby

10:30 a.m.–12:30 p.m. **Plenary Session 5: Epigenetics**
Grand Ballroom ABC
Session Chair: Nada Jabado, McGill University, Montreal, QC, Canada

Look at the stars and make a wish
Nada Jabado

SWI/SNF (BAF) chromatin remodeling complexes are frequently mutated in cancer: Mechanisms and vulnerabilities
Charles W. M. Roberts, St. Jude Children's Research Hospital, Memphis, TN

Mammalian SWI/SNF (BAF) complexes in pediatric cancers: New mechanisms and therapeutic opportunities
Cigall Kadoch, Dana-Farber Cancer Institute, Boston, MA

Cancer-specific retargeting of BAF complexes by a prion-like domain*
Gaylor Boulay, Massachusetts General Hospital Molecular Pathology Unit and Cancer Center, Harvard Medical School, Boston, MA

Selective gene dependencies in MYCN-amplified neuroblastoma include the core transcriptional regulatory circuitry*
Adam D. Durbin, Dana-Farber Cancer Institute, Boston, MA

12:30 p.m.–2:30 p.m. **Lunch on Own**

2:30 p.m.–4:30 p.m. **Plenary Session 6: Cancer Modeling**
Grand Ballroom ABC
Session Chair: Michael A. Dyer, St. Jude Children's Research Hospital, Memphis, TN

Elucidating oncohistone function using in vivo models of diffuse intrinsic pontine glioma
Suzanne J. Baker, St. Jude Children's Research Hospital, Memphis, TN

MYC activation through enhancer hijacking or focal enhancer amplification drives a subset of high-risk pediatric neuroblastoma
A. Thomas Look, Dana-Farber Cancer Institute, Boston, MA

MYCN amplification and ATRX mutations are incompatible in neuroblastoma
Michael A. Dyer

Synthetic lethality between ATRX mutations and MYCN amplification in neuroblastoma*
Maged Zeineldin, St. Jude Children's Research Hospital, Memphis, TN

**Short talks from proffered abstracts*

Hedgehog pathway drives fusion-negative rhabdomyosarcoma initiated from nonmyogenic endothelial progenitors*
Mark E. Hatley, St. Jude Children's Research Hospital, Memphis, TN

4:30 p.m.–7:00 p.m. **Reception and Poster Session B**
Grand Ballroom D&E

Wednesday, December 6, 2017

7:00 a.m.–8:00 a.m. **Breakfast**
Grand Ballroom D

8:00 a.m.–10:00 a.m. **Plenary Session 7: Immunotherapy 2**
Grand Ballroom ABC
Session Chair: Crystal L. Mackall, Stanford University School of Medicine, Stanford, CA

Engineered T cells for pediatric cancers
Crystal L. Mackall

DNA-demethylating agents enhance cytolytic activity of CD8+ T cells and antitumor immunity
Daniel Diniz De Carvalho, Princess Margaret Cancer Centre, Toronto, ON, Canada

Strategies for harnessing both innate and adoptive immunity in hematopoietic stem cell transplantation for children with hematologic malignancies
Franco Locatelli, University of Pavia, Rome, Italy

Targeting p-TEFb as well as the EWS-ETS-specific transcriptional program in Ewing sarcoma synergistically blocks tumor growth*
Günther Richter, Technische Universität München, Children's Cancer Research Center, Munich, Germany

Mutations in microRNA processing genes dysregulate a miR-16/34-PLAG1-IGF2 axis in Wilms tumors*
Kenneth Chen, University of Texas Southwestern Medical Center, Dallas, TX

10:00–10:30 a.m. **Break**
Pre-Function Lobby

**Short talks from proffered abstracts*

10:30 a.m. –12:30 p.m.

Plenary Session 8: New Technologies for Understanding Cancer
Grand Ballroom ABC
Session Chair: Annie Huang, The Hospital for Sick Children, Toronto, ON, Canada

Metabolic complexity in cancer cells and tumors
Ralph J. DeBerardinis, University of Texas Southwestern Medical Center, Dallas, TX

Deep epigenomic interrogation of rare pediatric brain cancers
Annie Huang

Functional proteomics and site-specific genomic rearrangements of pediatric cancers
Alex Kentsis, Memorial Sloan Kettering Cancer Center, New York, NY

Comprehensive analysis of hypermutation in human cancer reveals drivers that can be traced to the germline*
Adam Shlien, The Hospital for Sick Children, Toronto, ON, Canada

Whole-genome analysis of the epigenetic mark 5-hydroxymethylcytosine reveals differential profiles in low-, intermediate-, and high-risk neuroblastomas*
Mark Applebaum, University of Chicago, Chicago, IL

12:30 p.m.

Closing Remarks

**Short talks from proffered abstracts*