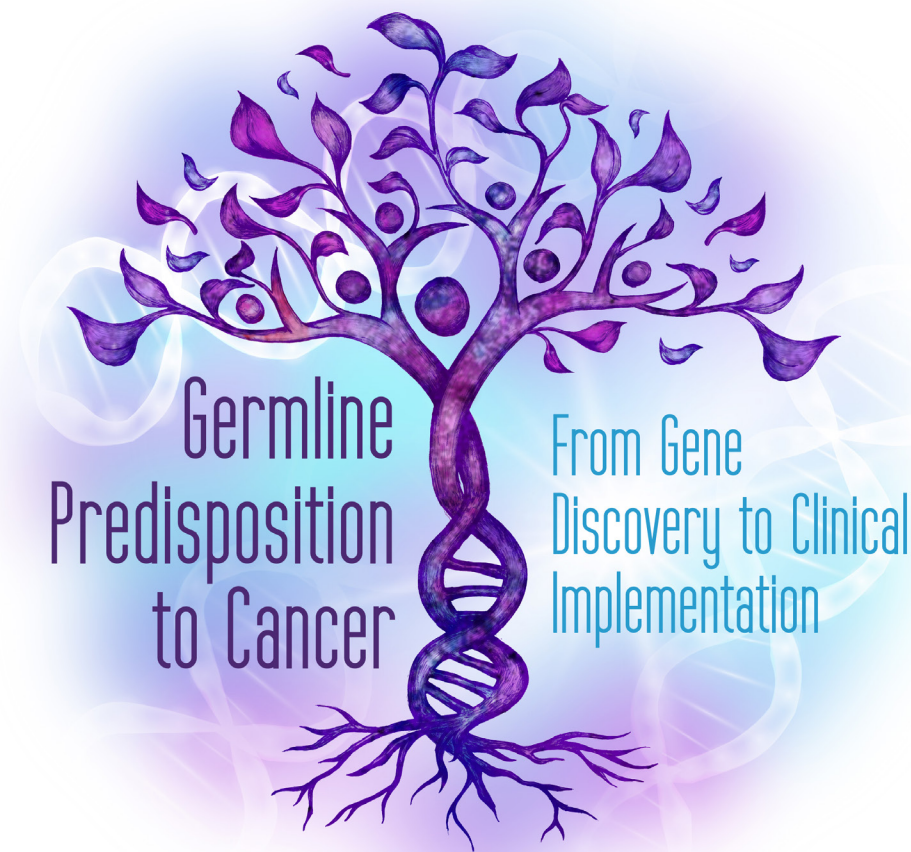


GERMLINE PREDISPOSITION TO CANCER: From Gene Discovery to Clinical Implementation

Fifty years ago witnessed the discovery of Li-Fraumeni Syndrome (LFS), one of the first examples of hereditary predisposition to cancer. Ten years later, a novel tumor suppressor protein p53 was identified, and subsequently it was learned that pathogenic germline variants in *TP53*, the gene encoding p53, are responsible for LFS.

With these seminal breakthroughs has emerged a new era in our understanding of the heritable nature of cancer, where there are now more than 100 different cancer predisposing genes and associated genetic syndromes. Furthermore, recent large-scale genomic sequencing efforts have determined that at least 10-15% of children with cancer develop the disease due to an underlying predisposition. Undoubtedly, this proportion will expand as new cancer predisposing genes are identified and the functions of non-coding regions of the genome better defined. Along with these genetic discoveries, our understanding of cancer biology and treatment has greatly expanded. Nevertheless, many unanswered questions remain.

The 15th St. Jude Children's Research Hospital Biomedical Symposium will bring together leading experts in oncology, genetics, ethics and computational biology to discuss several exciting new discoveries and the remaining challenges in the field.



2019

St. Jude Children's Research Hospital
BIOMEDICAL SYMPOSIUM
SYMPOSIUM HOSTS KIM NICHOLS, MD | JUN J. YANG, PhD

OCT 4
8 AM – 5:30 PM
MTC Auditorium

8-8:30 AM	Registration, Coffee and Refreshments	NOTES
8:30-8:40 AM	Opening Remarks – Jun J. Yang, PhD	
8:40-9:30 AM	Uri Tabori, MD Hospital for Sick Children/SickKids “Replication Repair Deficiency and Hypermutation: From a Rare Childhood Syndrome to Novel Therapies” Faculty Host: Paul Northcott, PhD	
9:30-10:20 AM	Mignon Lee-Cheun Loh, MD University of California San Francisco “Juvenile Myelomonocytic Leukemia: Learning from Children in a World Without Walls” Faculty Host: Jeffrey Klco, MD, PhD	
10:20-10:35 AM	Coffee Break	
10:35-11:25 AM	Richard Houlston, MD, PhD Institute for Cancer Research-London (ICR) “Decoding Susceptibility to Leukemia” Faculty Host: Zhaoming Wang, PhD	
11:25 AM-12:15 PM	Benjamin Levine Ebert, MD, PhD Harvard Medical School/Dana Farber Cancer Center “Clinical and Biological Consequences of Clonal Hematopoiesis” Faculty Host: Esther Obeng, MD, PhD	
12:15-1:30 PM	Lunch (Speakers at assigned tables with selected trainees)	
1:30-2:20 PM	Kelly E. Ormond, MS, CGC, LGC Stanford University “Consent and Disclosure of Germline Genetic Test Results” Faculty Host: Liza-Marie Johnson, MD, MPH, MSB	
2:20-3:10 PM	Gail P. Jarvik, MD, PhD University of Washington-Seattle “Challenges in Genomic Medicine” Faculty Host: Larissa Furtado, MD	
3:10-3:25 PM	Coffee Break	
3:25-4:15 PM	Lea Starita, PhD University of Washington-Seattle “Multiplexed Functional Assays for Understanding the Effects of Genetic Variation” Faculty Host: Chunliang Li, PhD	
4:15-5:05 PM	Ben Lehner, PhD Centre for Genomic Regulation, Barcelona “Solving Protein Structures and Understanding Genetic Interactions Using Deep Mutagenesis” Faculty Host: Jiyang Yu, PhD	
5:05-5:10 PM	Closing Remarks –Kim E. Nichols, MD	
6:00 PM	Symposium Celebration Crosstown Concourse, 1370 Concourse Avenue East Atrium, 2nd Floor	

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