

# KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

## Cancer Evolution and Combinatorial Cancer Therapies: Concepts and Challenges (L1)

January 19-23, 2020 • Fairmont Banff Springs • Banff, AB, Canada

Scientific Organizers: William Sellers, Charles Swanton and Lillian Siu

Sponsored by BioLegend, Inc., Incyte Corporation, Novartis Institutes for BioMedical Research and Roche

Discounted Abstract & Scholarship Deadline: September 25, 2019 / Abstract Deadline: October 17, 2019 / Discounted Registration Deadline: November 20, 2019

### SUNDAY, JANUARY 19

#### Arrival and Registration

### MONDAY, JANUARY 20

#### Welcome and Keynote Address

**Charles Swanton**, Francis Crick Institute, UK  
*TRACERx: Tracking Cancer Evolution, Metastases and Immune Evasion*

#### The Evolution of Cancer I

**Carlo Maley**, Arizona State University, USA  
*Lessons in Cancer Prevention from Whales and Other Animals*

**Trevor A. Graham**, Queen Mary University of London, UK  
*Evolutionary Dynamics of Cancer Subclones*

**Andrea Sottoriva**, Institute of Cancer Research, UK  
*Harnessing Evolutionary Steering in Cancer Therapy to Control Drug Resistance*

#### Short Talks Chosen from Abstracts

#### The Evolution of Cancer II

**Samra Turajlic**, Royal Marsden Hospital, UK  
*Tracking Cancer Evolution Reveals Constrained Routes to Metastases: TRACERx Renal*

**Giovanni Ciriello**, University of Lausanne, Switzerland  
*Conditional Selection of Genomic Alterations Dictates Cancer Evolution and Oncogenic Dependencies*

**Christina Curtis**, Stanford University, USA  
*Towards Quantifying and Forecasting Tumor Progression*

#### Short Talks Chosen from Abstracts

#### Poster Session 1

### TUESDAY, JANUARY 21

#### Cancer Heterogeneity

**Sorana Morrissy**, University of Calgary, Canada  
*Tracking Intra-Tumor Heterogeneity in Brain Tumors*

**Jeffrey A. Engelman**, Novartis Institutes for BioMedical Research, USA  
*The Therapeutic Implications for Cancer Heterogeneity*

**Sohrab Shah**, Memorial Sloan Kettering Cancer Center, USA  
*Clonal Genotype and Population Structure Inference from Single-Cell Tumor Sequencing*

**Thomas G. Graeber**, University of California, Los Angeles, USA  
*Pan-Cancer Convergence to a Small-Cell Neuroendocrine Phenotype that Shares Susceptibilities with Hematological Malignancies*

#### Short Talks Chosen from Abstracts

#### Understanding Checkpoints and Resistance in Immuno-Oncology

**Marios Giannakis**, Dana-Farber Cancer Institute, USA  
*Identification of Modulators of Immune Response from the Clinic: Implications for Combining I/O Agents*

**Elisabeth G.E. de Vries**, Universitair Medisch Centrum Groningen, Netherlands  
*Molecular Imaging for Immunotherapy*

**Benjamin D. Greenbaum**, Icahn School of Medicine at Mount Sinai, USA

*Modeling the Emergence and Evolution of Non-Self in Tumors*

#### Short Talks Chosen from Abstracts

#### Poster Session 2

### WEDNESDAY, JANUARY 22

#### Leveraging Therapeutic Resistance towards Combination Therapies

**Poulikos I. Poulikakos**, Icahn School of Medicine at Mount Sinai, USA  
*Resistance to CDK Inhibitors*

**Gaddy Getz**, Broad Institute, USA  
*The Elucidation of Drivers of Therapeutic Resistant from Large-Scale Patient Sample Analysis*

**Alice T. Shaw**, Massachusetts General Hospital Cancer Center, USA  
*Understanding and Overcoming Resistance to ALK Inhibitors in NSCLC*

**Himisha Beltran**, Dana Farber Cancer Institute, USA  
*Therapeutic Resistance to Androgen Receptor Blockade*

#### Short Talks Chosen from Abstracts

#### The Preclinical Modeling and Discovery of Combinations

**William R. Sellers**, Broad Institute of MIT and Harvard, USA  
*Targeting Genetic Redundancy in Cancer through Combinatorial CRISPR Screens*

**Jonathan S. Weissman**, University of California, San Francisco, USA  
*Elucidating Genetic Combinations through CRISPR*

**Peter Sorger**, Harvard Medical School, USA  
*Measuring and Modeling Cancer Combination Therapy in Preclinical Models and Patient Populations*

#### Short Talks Chosen from Abstracts

#### Poster Session 3

### THURSDAY, JANUARY 23

#### Therapeutic Combinations

#### Speaker to be Announced

**Lillian Siu**, Princess Margaret Hospital, Canada  
*Oncology Drug Combinations - Are We at an Impasse?*

**Steven Stein**, Incyte, USA  
*The Development of IO Combinations*

#### Speaker to be Announced

#### Short Talks Chosen from Abstracts

#### Clinical Trials and Clinical Trial Design

**Tatiana Prowell**, Food and Drug Administration and Johns Hopkins University, USA  
*The Regulatory View on the Development of Combination Therapeutics*

**Jeanne Tie**, Peter MacCallum Cancer Centre / Walter & Eliza Hall Institute, Australia  
*Can Circulating Tumor DNA Re-Define the Adjuvant Treatment Paradigm?*

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**Antoni Ribas**, University of California, Los Angeles, USA

*Testing I/O Combinations in Clinical Trials*

**Short Talk Chosen from Abstracts**

**Meeting Wrap-Up: Outcomes and Future Directions (Organizers)**

**FRIDAY, JANUARY 24**

**Departure**