



**MULTIDISCIPLINARY APPROACHES TO UNDERSTAND CANCER TREATMENT RESISTANCE**  
Cancer Systems Biology Consortium (CSBC) & Cancer Target Discovery and Development (CTD<sup>2</sup>) Network  
Joint Virtual Symposium Series  
**November 16-17, 2020**  
**December 2, 2020**  
**December 16-17, 2020**

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**Session 1: Monday, November 16**

*All times ET*

- 11:30 a.m. – 11:45 a.m.     **NCI Director's Presentation**  
Norman Sharpless, M.D.  
Director, National Cancer Institute
- 11:45 a.m. – 12:00 p.m.     **Welcome and Meeting Goals**  
Gordon Mills, M.D., Ph.D.  
Oregon Health & Science University
- Kevin Haigis, Ph.D.  
Dana-Farber Cancer Institute
- 12:00 p.m. – 2:05 p.m.     **Session I: Combinatorial Therapy;**  
**Chairperson: Gordon Mills, M.D., Ph.D, Oregon Health & Science University**  
*(focus on approaches to design and implement combination therapies; 20 minutes for each presentation & 5 mins for Q&A)*
- 12:00 p.m. – 12:25 p.m.     *TBD*  
William Hahn, M.D., Ph.D.  
Dana-Farber Cancer Institute
- 12:25 p.m. – 12:50 p.m.     *TBD*  
Charles Sawyers, M.D.  
Memorial Sloan Kettering Cancer Center
- 12:50 p.m. – 1:15 p.m.     *Targeting drug resistance by regulatory-network based cell reprogramming*  
Andrea Califano, Ph.D.  
Columbia University
- 1:15 p.m. – 1:40 p.m.     *Systematic characterizations of functionally-relevant mutational landscapes*  
Elizabeth Brunk, Ph.D.  
University of California, San Diego
- 1:40 p.m. – 2:05 p.m.     *Modeling tumor heterogeneity towards personalized cancer medicine*  
Nataly Kravchenko-Balasha, Ph.D.  
The Hebrew University of Jerusalem
- 2:05 p.m. – 2:15 p.m.     **Preview of upcoming next session**

**Session 2: Tuesday, November 17**

12:00 p.m. – 2:05 p.m.

**Session II: Evolutionary Biology;**

**Chairperson: TBD**

*(focus on the dynamics of evolution to understand treatment resistance; 20 minutes for each presentation & 5 mins for Q&A)*

12:00 p.m. – 12:25 p.m.

*TBD*

Christina Curtis, Ph.D.  
Stanford University

12:25 p.m. – 12:50 p.m.

*Evolutionary Therapy*

Alexander (Sandy) Anderson, Ph.D.  
Moffitt Cancer Center

12:50 p.m. – 1:15 p.m.

*TBD*

Andrea Sottoriva, Ph.D.  
The Institute of Cancer Research, UK

1:15 p.m. – 1:40 p.m.

*Invasion of homogeneous and polyploid populations in nutrient-limiting environments*

Noemi Andor, Ph.D.  
Moffitt Cancer Center

1:40 p.m. – 2:05 p.m.

*Single-cell lineage tracing and RNA-seq reveal the rates, routes, and drivers of metastasis in cancer xenografts*

Jeffrey Quinn, Ph.D.  
University of California, San Francisco

2:05 p.m. – 2:15 p.m.

**Preview of next session**

**Session 3: December 2, 2020**

12:00 p.m. – 2:05 p.m.

**Session III: Tumor Ecosystem;**

**Chairperson: Kevin Haigis, Ph.D., Dana Farber Cancer Institute**

*(focus on the role of the tumor ecosystem in drug resistance and sensitivity; 20 minutes for each presentation & 5 mins for Q&A)*

12:00 p.m. – 12:25 p.m.

*Characterization and targeting of tumor-associated macrophages in the melanoma tumor microenvironment*

Kathryn Miller-Jensen, Ph.D.

Yale University

12:25 p.m. – 12:50 p.m.

*A unified atlas of CD8 T cell dysfunctional states in cancer and infection*

Christina Leslie, Ph.D.

Memorial Sloan Kettering Cancer Center

12:50 p.m. – 1:15 p.m.

*TBD*

Judith Varner, Ph.D.

University of California, San Diego

1:15 p.m. – 1:40 p.m.

*Targeting immunosuppressive macrophages overcomes PARP-inhibitor resistance in BRCA1-associated triple-negative breast cancer*

Jennifer Guerriero, Ph.D. (invited)

Harvard Medical School

1:40 p.m. – 2:05 p.m.

*An Integrated Clinical, Omic, and Image Atlas of an Evolving Metastatic Breast Cancer*

Joe Gray, Ph.D.

Oregon Health & Science University

2:05 p.m. – 2:15 p.m.

**Preview of next session**

**Session 4: December 16, 2020**

- 12:00 p.m. – 2:05 p.m.      **Session IV: Tumor Heterogeneity & Cell Plasticity I;**  
**Chairperson: Shannon Hughes, Ph.D., Division of Cancer Biology, NCI**  
*(role of heterogeneity in drug response and resistance, biological basis for cell plasticity and impact on response and resistance; 20 minutes for each presentation & 5 mins for Q&A)*
- 12:00 p.m. – 12:25 p.m.      *A novel endocytic mechanism used for antigen uptake from live tumor to immune cells*  
Nina Serwas, Ph.D.  
University of California, San Francisco
- 12:25 p.m. – 12:50 p.m.      *Single Cell Analysis of Treatment-Naïve versus Treatment-Refractory NSCLC Demonstrates Differential Enrichment of Partial Epithelial-Mesenchymal States*  
Sylvia Plevritis, Ph.D.  
Stanford University
- 12:50 a.m. – 1:15 p.m.      *TBD*  
Trey Ideker, Ph.D.  
University of California, San Diego
- 1:15 p.m. – 1:40 p.m.      *Tumor stem cells arising from a non-stem origin maintain a differentiated phenotype and modulate T cell activity*  
Ken Lau, Ph.D.  
Vanderbilt University
- 1:40 p.m. – 2:05 p.m.      *TBD*  
Arthur Lander, M.D., Ph.D.  
University of California, Irvine
- 2:05 p.m. – 2:15 p.m.      **Preview of Next Session**

**Session 5: December 17, 2020**

12:00 p.m. – 2:05 p.m.	<b>Session V: Tumor Heterogeneity &amp; Cell Plasticity II;</b> <b>Chairperson: Daniela Gerhard, Ph.D., Office of Cancer Genomics, NCI</b> <i>(role of heterogeneity in drug response and resistance, biological basis for cell plasticity and impact on response and resistance; 20 minutes for each presentation &amp; 5 mins for Q&amp;A)</i>
12:00 p.m. – 12:25 p.m.	<i>Decoding Enhancer Dynamics and Its Drivers in Breast Cancer metastasis and therapy resistance</i> Zhijie (Jason) Liu, Ph.D. UT Health San Antonio
12:25 p.m. – 12:50 p.m.	<i>Single-cell pharmacogenomics targets an inflamed chemoresistant tumor subpopulation in triple negative breast cancer</i> Sourav Bandyopadhyay, Ph.D. University of California, San Francisco
12:50 p.m. – 1:15 p.m.	<i>TBD</i> Andrew Ewald, Ph.D. Johns Hopkins University
1:15 p.m. – 1:40 p.m.	<i>TBD</i> Stuart Schreiber, Ph.D. Harvard University
1:40 p.m. – 2:05 p.m.	<i>Signaling network analysis reveals therapeutic targets and resistance mechanisms</i> Forest White, Ph.D. Massachusetts Institute of Technology
2:05 p.m. – 3:00 p.m.	<b>Wrap-up Discussion; Summary of series and exploring potential for collaboration between the consortiums</b>