National Cancer Institute (NCI)  
Symposium on Mechanisms of Cancer Drug Resistance and Sensitivity  
October 4-5, 2018  
Shady Grove Campus: 9609 Medical Center Drive, Rockville, MD 20850, TE 406/408/410

**AGENDA**

**Day 1: Thursday, October 4th; 1:00 p.m. – 5:35 p.m. Eastern Time**

1:00 – 1:05 **Welcome** – L. Austin Doyle, MD (NCI)

1:05 – 1:15 **Goals of Symposium** – James Doroshow, MD (NCI)

1:15 – 1:20 **Introduction of Keynote Speaker** – Charles Sawyers, MD (MSKCC)

1:20 – 1:50 **Keynote Presentation**: Discovery of targetable mechanisms of endocrine resistance in ER+, HER2-negative breast cancer – Carlos Arteaga, MD (UT Southwestern)

1:50 – 2:00 **Q & A**

**Session 1: Insights into Immunomodulatory Drug Resistance**

2:00 – 2:10 Introduction – Helen Chen, MD (NCI)

2:10 – 2:30 Organoid modeling of the tumor immune microenvironment – Calvin Kuo, MD, PhD (Stanford)

2:30 – 2:50 Defining T cell states associated with response to checkpoint immunotherapy in melanoma – Moshe Sade-Feldman, PhD (MGH)

2:50 – 3:10 Genetic mechanisms of sensitivity and resistance to cancer immunotherapy – Drew Pardoll, MD, PhD (JHMI)

3:10 – 3:30 Unraveling the intrinsic and extrinsic resistance mechanisms to checkpoint blockade – Siwen Hu-Lieskovian, MD, PhD (UCLA)

3:30 – 3:50 Panel Discussion

3:50 – 4:05 **Coffee Break**

**Session 2: The Tumor Microenvironment in Drug Resistance and Sensitivity**

4:05 – 4:15 Introduction – Trever Bivona, MD, PhD (UCSF)

4:15 – 4:35 Cancer Treatment Resistance Mediated by Damage Responses in the Tumor Microenvironment – Pete Nelson, MD (Fred Hutch)

4:35 – 4:55 Tumor microenvironmental changes induced by TKI treatment in advanced NSCLC – Collin Blakely, MD, PhD (UCSF)

4:55 – 5:15 Tumor intrinsic and microenvironmental mechanisms driving drug combination efficacy and resistance in AML – Jeffrey Tyner, PhD (OHSU)

5:15 – 5:35 Panel Discussion
Day 2: Friday, October 5th; 8:00 a.m. – 5:15 p.m. Eastern Time

8:00 – 8:15  NCI Initiatives to Fund Current and Future Drug Resistance & Sensitivity Research – L. Austin Doyle, MD (NCI)
8:15 – 8:20  Introduction of Keynote Speaker – L. Austin Doyle, MD (NCI)
8:20 – 8:50  Keynote Presentation: Lineage Plasticity in Cancer – Charles Sawyers, MD (MSKCC)
8:50 – 9:00  Q & A

Session 3: Emerging Pre-clinical Models to study Drug Resistance and Sensitivity

9:00 – 9:10  Introduction – Keith Stewart, MB, ChB (Mayo Clinic Arizona)
9:10 – 9:30  Utilizing preclinical in vivo models to elucidate mechanisms of drug resistance – Juliet Williams, PhD (Novartis)
9:30 – 9:50  A systematic liquid biopsy platform to study drug resistance – Ryan Corcoran, MD, PhD (MGH)
9:50 – 10:10 3D models versus 2D exponentially growing models: Are they more “in vivo” like? – Beverly Teicher, PhD (FLNRC, NCI)
10:10 – 10:30 Transcriptional regulation of prostate cancer lineage specification and antiandrogen sensitivity – Yu Chen, MD, PhD (MSK)
10:30 – 10:50 Panel Discussion

10:50 – 12:15 Poster Session and Networking Break

12:15 – 1:00  Lunch (on your own)

Session 4: Resistance Biomarkers and Pathways

1:00 – 1:10  Introduction – Jeffrey Tyner, PhD (OHSU)
1:10 – 1:30  Imaging stem cell signals in cancer heterogeneity and therapy resistance – Tannishtha Reya, PhD (UCSD)
1:30 – 1:50  In vivo screens for enhancers of checkpoint blockage response – Nick Haining, BCh, BM (DFCI)
1:50 – 2:10  Identification of genetic alterations associated with poor treatment response in DLBCL patients treated with lenalidomide/RCHOP – Thomas Witzig, MD (Mayo Clinic Minnesota)
2:10 – 2:40  Non-genomic mechanisms of resistance to drugs targeting oncogenic drivers in lung cancer – Christine Lovly, MD, PhD (Vanderbilt)
2:40 – 3:00  Panel Discussion

3:00 – 3:30  Networking Break
Session 5: Large Dataset Analysis in Drug Resistance Research

3:30 – 3:40 Introduction – Pete Nelson, MD (Fred Hutch)

3:40 – 4:00 Data integration and functional interrogation to overcome drug resistance – Kris Wood, PhD (Duke)

4:00 – 4:20 Integrative analysis to identify resistance biomarkers – Eliezer Van Allen, MD (DFCI)

4:20 – 4:40 Genome-wide screens in AML – Shannon McWeeney, PhD (OHSU)

4:40 – 5:00 Panel Discussion

5:00 – 5:15 **Wrap-up – Jeff Moscow, MD (NCI)**