

# Model-Informed Drug Development in Oncology

February 1, 2018

FDA White Oak Great Room

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## Workshop Co-chairs

Amy E. McKee, M.D.  
FDA

René Bruno, Ph.D.  
Past-President, ISoP

Yaning Wang, Ph.D.  
FDA

Jin Y. Jin, Ph.D.  
President, ISoP

## AGENDA

8:00 AM Welcome and Workshop Objectives – *Issam Zineh, Pharm.D. (FDA)*

8:10 AM Challenge and Opportunity of MIDD in Oncology – *Janet Woodcock, M.D. (FDA)*

### SESSION I: Non-clinical MIDD in Oncology

*Moderator: Jin Y. Jin, Ph.D. (Genentech)*

8:35 AM Models in Support of Drug Combinations and Dosing  
– *Sergey Aksenov, Ph.D. (AstraZeneca)*

9:00 AM Modeling of Bispecific Monoclonal Antibody  
– *Armin Sepp, Ph.D. (GlaxoSmithKline)*

9:25 AM Simultaneous Preclinical and Clinical Efficacy and Safety Modeling to Recommend  
Phase 2 Doses for Cancer Drug Combinations  
– *Dean Bottino, Ph.D. (Takeda)*

### 9:50 AM PANEL DISCUSSION

*Morning speakers and the following additional panelists:*  
*Haleh Saber (FDA)*

10:20 AM BREAK

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## SESSION II: Clinical MIDD in Oncology

*Moderator: Sandeep Dutta, Ph.D. (Amgen)*

- 10:40 AM **Beyond MTD: Integrating Non-safety Endpoints into Oncology Dose-finding**  
– *Stuart Bailey, Ph.D. (Novartis)*
- 11:05 AM **Novel Endpoints in Clinical Trials to Accelerate and Streamline Drug Development**  
– *Tito Fojo, M.D., Ph.D. (Columbia University)*
- 11:30 AM **Joint Modeling of Tumor Kinetic and Overall Survival**  
– *J r mie Guedj, Ph.D. (INSERM, Paris)*

## 11:55 AM LUNCH (on your own)

### 1:00 PM Inspiring Examples: Model-informed decisions in clinical development

- Clinical Perspective: Bringing the Community Care Setting Into the Learning Versus Confirming Paradigm – *Michael Maitland, M.D., Ph.D. (Inova)*
- Case Example I: Characterization of Post-progression Outcomes as a Function of Time on Treatment – *David Turner, Ph.D. (Merck)*
- Case Example II: Modeling of Tumor Kinetics and Overall Survival to Identify Prognostic and Predictive Biomarkers of Efficacy for Durvalumab – *Yanan Zheng, Ph.D. (MedImmune)*
- Case Example III: Tumor Growth Dynamic-Overall Survival Modeling with Ipilimumab in Melanoma – *Amit Roy, Ph.D. (Bristol-Myers Squibb)*
- Case Example IV: Applications of Tumor Growth Inhibition-Overall Survival Models to Support Atezolizumab Combination Studies – *Ren  Bruno, Ph.D. (Genentech/Roche)*
- Case Example V: Using Modeling Approach to Inform the Decision at Early Drug Development Stage – *Jingwen (Jenny) Zheng, Ph.D. (Pfizer)*

### 2:30 PM PANEL DISCUSSION

*Session II speakers and the following additional panelists:*  
*Nam Atiqur Rahman (FDA), Jerry Yu (FDA)*

### 3:00 PM BREAK

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## SESSION III: MIDD Before and After Approval

*Moderator: Yaning Wang, Ph.D. (FDA)*

**3:15 PM**      **Model Informed Development of Abemaciclib: Collaboration, Computation, and Communication**

– *Kellie Turner-Jones, Ph.D. (Eli Lilly)*

**3:40 PM**      **Model-Informed Analysis During NDA/BLA Review**

– *Chao Liu, Ph.D. (FDA)*

**4:05 PM**      **MIDD Applied Post-Approval: Examples with Ibrutinib, a BTK Inhibitor**

– *Daniele Ouellet, Ph.D. (Janssen)*

## 4:30 PM      **PANEL DISCUSSION**

*Session III speakers and the following additional panelists:*

*Lei Nie (FDA), Patricia Keegan (FDA)*

**5:00 PM**      **Meeting Summary – Jin Y. Jin, Ph.D. (ISoP President)**

**5:10 PM**      **Closing Remarks – Amy E. McKee, M.D. (FDA)**

## 5:20 PM      **MEETING ADJOURNS**