

## Demonstrating Equivalence of Generic Complex Drug Substances and Formulations

October 6, 2017  
FDA White Oak – Bldg. 31, Rm. 1503

### Agenda

8:00 – 8:15 am Opening Remarks  
John Peters, M.D.  
Deputy Director, Office of Generic Drugs (OGD)  
CDER/FDA

8:15 – 8:45 am Introduction  
Xiaohui (Jeff) Jiang, PhD  
Deputy Director, Division of Therapeutic Performance  
ORS/OGD/CDER/FDA  
*“Introduction to complex products and FDA considerations”*

#### Session I: Demonstrating Complex API Sameness

8:45 – 9:00 am  
Deyi Zhang, PhD  
Chemist, Division of Therapeutic Performance  
ORS/OGD/CDER/FDA  
*“Introduction: Demonstrating Complex API Sameness”*

9:00 – 9:30 am  
Ram Sasisekharan, PhD  
Alfred H. Caspary Professor of Biological Engineering and Health Sciences & Technology  
Massachusetts Institute of Technology (MIT)  
*“Comparative characterization of highly heterogeneous drugs”*

9:30 – 10:00 am  
Daniela Verthelyi, PhD  
Biologist, Office of Biological Products  
OPQ/CDER/FDA  
*“Comparative immunogenicity assessment of impurities in drug products”*

**10:00 – 10:15 am Break**

#### Session II: Characterization of Complex Excipients and Formulations

10:15 – 10:30 am

Yan Wang, PhD  
Scientific Lead, Division of Therapeutic Performance  
ORS/OGD/CDER/FDA

*“Introduction: Characterization of Complex Excipients and Formulations”*

10:30 – 11:00 am

Kinam Park, PhD

Showalter Distinguished Professor of Biomedical Engineering & Professor of Pharmaceutics  
Purdue University

*“Characterizations of PLGA polymers”*

11:00 – 11:30 am

Diane Burgess, PhD

Board of Trustees Distinguished Professor & Professor of Pharmaceutics  
University of Connecticut

*“IVRT and IVIVC of PLGA microspheres”*

11:30 – 12:00 pm

Steven P. Schwendeman, PhD

Chair and Ara G. Paul Professor of Pharmaceutical Sciences & Professor of Biomedical  
Engineering

University of Michigan

*“Formulation characterization of PLGA microspheres”*

**12:00 – 1:15 pm**

**Lunch/ Poster Session**

Session III: Novel IVRT for Complex Formulations

1:15 – 1:30 pm

Darby Kozak, PhD

Team Lead, Division of Therapeutic Performance  
ORS/OGD/CDER/FDA

*“Introduction: Novel IVRT for Complex Formulations”*

1:30 – 2:00 pm

Michael J. Sailor, PhD

Distinguished Professor of Chemistry and Biochemistry  
University of California, San Diego

*“In vitro drug release testing of ophthalmic suspensions”*

2:00 – 2:30 pm

Robert Bellantone, PhD

President and Chief Scientific Officer,  
Physical Pharmaceutica, LLC.

*“Pulsatile microdialysis of suspension and emulsion products”*

2:30 – 3:00 pm

Alex Nivorozhkin, PhD  
President and Chief Scientific Officer,  
Neo-Advent Technologies, LLC.  
*“Liposomal Formulations of Amphotericin B”*

**3:00 – 3:15 pm**

**Break**

3:15 – 4:15 pm

FDA Panel Representatives  
Andre Raw, PhD (PDEBI/DIPAP/OPPQ/OPQ)  
Dale Conner, PhD (OB/OGD)  
Katherine Tyner, PhD (SS/OPQ)  
Daniela Verthelyi, PhD (DBRRIII/OBP/OPQ)  
Xiaoming Xu, PhD (PQBII/DPQR/OTR/OPQ)  
Darby Kozak, PhD (DTP/ORS/OGD)  
Yan Wang, PhD (DTP/ORS/OGD)  
Eric Pang, PhD (DTP/ORS/OGD)

Panel Discussion &  
Audience Questions

4:15 – 4:30 pm

Robert Lionberger, Ph.D.  
Director, Office of Research and Standards (ORS)  
OGD/CDER/FDA

Closing Remarks