



# 2019 COMPLEX GENERIC DRUG PRODUCT DEVELOPMENT WORKSHOP - SEPTEMBER 25-26

COLLEGE PARK, MARYLAND  
ATTEND IN PERSON OR VIA WEBCAST

Version 6, September 24, 2019  
(use link below to check for updates)

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## AGENDA

[\(Jump to Day Two\)](#)

### Day One: Wednesday, September 25, 2019

7:15 a.m. Registration Opens

7:55 - 8:05: Administrative Announcements

Jeff Kelly

8:05 - 8:15

Welcome

**Brenda Stodart**  
*Captain, United States Public Health Service  
Director, Small Business and Industry Assistance (SBI)*  
Division of Drug Information (DDI) | Office of Communications (OCOMM) | CDER

8:15 - 8:30

Opening Remarks / Keynote

**Sally Choe**  
*Director of the Office of Generic Drugs (OGD)*  
CDER

[Speakers' Biographies](#)

## Day One: Wednesday, September 25, 2019

### SESSION 1: Overview and Update

8:30 – 9:00

#### Pre-ANDA Program Update

**Karen Bengtson**

Office of Research and Standards (ORS)  
Office of Generic Drugs (OGD) | CDER

**Suneela Prodduturi**

Office of Pharmaceutical Quality (OPQ) | CDER

9:00 – 9:30

#### FDA's Inactive Ingredient Database: Improvements on the Path to 2020

**Susan Zuk**

Office of Policy for Pharmaceutical Quality (OPPQ) | OPQ | CDER

9:30 – 10:00

#### Q&A and Panel Discussion

**Karen Bengtson, Suneela Prodduturi, Susan Zuk, Kris André (ORS | OGD), Robert Lionberger (ORS | OGD), Jonathan Hughes (Office of Generic Drug Policy (OGDP) | OGD)**

10:00 - 10:20: BREAK

### SESSION 2: Scientific and Regulatory Advances for Generic Topical and Transdermal Product Development

10:20 – 10:40

#### Research Activities, Scientific Advances, & Modernization of Bioequivalence Standards for Generic Topical and Transdermal Products

**Sam Raney**

ORS | OGD | CDER

10:40 – 11:00

#### Innovation and Harmonization of Bioequivalence Standards for Generic Topical and Transdermal Products

**Priyanka Ghosh**

ORS | OGD | CDER

11:00 – 11:20

#### Best Practices & Efficient Strategies for Generic Topical Product Development

**Tannaz Ramezanli**

ORS | OGD | CDER

## Day One: Wednesday, September 25, 2019

11:20 – 11:40

### Critical Quality Considerations for Transdermal Delivery Systems

**Brock Roughton**  
Office of Lifecycle Drug Products (OLDP) | OPQ | CDER

11:40 – 12:20

### Q&A and Panel Discussion

Sam Raney, Priyanka Ghosh, Tannaz Ramezanli, Brock Roughton

12:20 - 1:30 p.m. LUNCH & NETWORKING - On your own. Click [HERE](#) for onsite dining options

## SESSION 3: Characterization of Complex Injectable API and Formulations

1:30 – 1:50

### Characterization and Comparative Evaluation Strategies to Demonstrate Complex API Sameness

**Deyi Zhang**  
ORS | OGD | CDER

1:50 – 2:10

### Complex Peptide ANDAs: Test and Reference Product Comparability Studies from a Quality Perspective

**Cameron Smith**  
OLDP | OPQ | CDER

2:10 - 2:30

### Development, Characterization, and Evaluation Considerations of Particle Analysis to Support Generic Product Quality and Bioequivalence Determination

**Xiaoming Xu**  
Office of Testing and Research (OTR) | OPQ | CDER

2:30 - 3:10

### Q&A and Panel Discussion

Deyi Zhang, Cameron Smith, Xiaoming Xu, Ram Randad (ONDP | OPQ), Darby Kozak (ORS | OGD)

3:10 - 3:30: BREAK

**Day One: Wednesday, September 25, 2019**

**SESSION 4: Bioequivalence Approaches for Complex Injectable API and Formulations**

3:30 – 3:50

**Bioequivalence Approaches for Long Acting Drug Products: Regulatory and Scientific Considerations**

**Yan Wang**  
ORS | OGD | CDER

3:50 – 4:10

**Characterization and Comparative Evaluation Strategies to Demonstrate Complex Excipient Sameness**

**Bin Qin**  
ORS | OGD | CDER

4:10 – 4:30

**Considerations on In Vitro Drug Release Testing for Long Acting Drug Products for Quality Control Purpose**

**Vidula Kolhatkar**  
Office of New Drug Products (ONDP) | OPQ | CDER

4:30 – 5:10

**Q&A and Panel Discussion**

**Yan Wang, Bin Qin, Vidula Kolhatkar, Bing Cai (OLDP | OPQ)**

**5:10 p.m. - DAY ONE ADJOURN**

**5:30 - 7:00 PM: NETWORKING OPPORTUNITY**

Onsite attendees are invited to gather at [THE HOTEL's Lobby Bar](#) to continue the conversation with fellow attendees.



**[Speakers' Biographies](#)**

## Day Two: Thursday, September 26, 2019

7:30 a.m. Registration Opens

7:55 - 8:05: Administrative Announcements

Jeff Kelly

8:05 - 8:10

Welcome

**Forest "Ray" Ford, Jr.**  
DDI | OCOMM | CDER

### SESSION 5: Drug-Device Combination Products - Injectable Products

8:10 – 8:30

Overview of Drug-Device Combination and What Constitutes Complex Drug-Device Combination

**Lisa Bercu**  
OGDP | OGD | CDER

8:30 – 8:50

Overview of Comparative Analyses (Clinical Perspective)

**Michelle Lin**  
Office of Bioequivalence (OB) | OGD | CDER

8:50 – 9:10

Evaluation of Generic Complex Drug-Device Products: Injectable Product Considerations from a Quality Perspective

**Bitu Mirzai Azarm**  
OLDP | OPQ | CDER

9:10 – 9:30

Comparative Analyses: Focus on Injectable Drug-Device Combination Products

**Andrew Fine**  
OB | OGD | CDER

9:30 – 10:10

Q&A and Panel Discussion

**Lisa Bercu, Bing Cai, Kimberly Witzmann (OB | OGD), Steven Hertz (Office of Process and Facilities (OPF) | OPQ), Alan Stevens (Center for Devices and Radiological Health (CDRH))**

10:10 - 10:30: BREAK

## Day Two: Thursday, September 26, 2019

### SESSION 6: Complex Drug-Device Combination Products - Orally-Inhaled and Nasal Drug Products (OINDPs)

10:30 – 10:45

#### Product-Specific Guidance (PSG) Recommendations and Updates for OINDPs

**Bryan Newman**  
ORS | OGD | CDER

10:45 – 11:00

#### Considerations for Pre-ANDA Meeting Requests for Orally Inhaled and Nasal Drug Products

**Denise Conti**  
ORS | OGD | CDER

11:00 – 11:20

#### Comparative Analyses: Device and User Interface Considerations

**Kimberly Witzmann**  
ORS | OGD | CDER

11:20 – 11:40

#### Bioequivalence Considerations for Conducting Bridging Studies with OINDPs

**Tian Ma**  
OB | OGD | CDER

11:40 – 12:00

#### CMC Updates and Other Considerations for Generic Orally Inhaled Drug Products

**Fang Yuan**  
OLDP | OPQ | CDER

12:00 – 12:30

#### Q&A and Panel Discussion

Bryan Newman, Denise Conti, Kimberly Witzmann, Tian Ma, Fang Yuan, Bhagwant Rege (OLDP | OPQ)

12:30 - 1:40 p.m. LUNCH & NETWORKING - On your own. Click [HERE](#) for onsite dining options

### [Speakers' Biographies](#)

## Day Two: Thursday, September 26, 2019

### SESSION 7: Quantitative Methods and Modeling-Informed Regulatory Decision Making

1:40 – 1:50

#### General Overview: The Use of Quantitative Methods and Modeling to Facilitate Generic Drug Development and Regulatory Assessment

**Liang Zhao**  
ORS | OGD | CDER

1:50 – 2:10

#### PK/PD Meta-analysis of Abuse Deterrent Opioid Drug Products: PSG Development, Research and ANDA Assessment

**Lanyan (Lucy) Fang**  
ORS | OGD | CDER

2:10 – 2:30

#### Regulatory Considerations on Dose-scale Analysis in Assessing Pharmacodynamic Equivalence

**Xiajing Gong**  
ORS | OGD | CDER

2:30 – 2:50

#### Physiologically-based Pharmacokinetic Modeling and Simulation Approaches: Best Practices for Regulatory Applications Related to Locally-acting Generic Drugs

**Eleftheria Tsakalozou**  
ORS | OGD | CDER

2:50 – 3:10

#### Credibility Establishment for Computational Fluid Dynamics Models of Complex Generic Drug Delivery

**Ross Walenga**  
ORS | OGD | CDER

3:10 – 3:25: BREAK

3:25 – 3:45

#### Application of Quantitative Clinical Pharmacology (QCP) in Development of Long Acting Injectable Products

**Satish Sharan**  
ORS | OGD | CDER

## Day Two: Thursday, September 26, 2019

3:45 – 4:25

### Q&A and Panel Discussion

Liang Zhao, Yaning Wang (OCP | OTS), Robert Lionberger, Murray Ducharme (Learn and Confirm, Inc.)

4:25 – 4:30

### Closing Remarks

**Robert Lionberger, PhD**  
*Director, Office of Research and Standards*  
OGD | CDER

4:30 PM: ADJOURN

### [Speakers' Biographies](#)

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