

CDER SMALL BUSINESS AND INDUSTRY ASSISTANCE (SBIA)



# Advancing Generic Drug Development

*Translating Science to Approval*

SEPTEMBER 13-14  
VIA WEBCAST | [www.fda.gov/CDERSBIA](http://www.fda.gov/CDERSBIA)

Version 3 – Updated July 31, 2023

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## AGENDA

All times are Eastern (UTC-5)  
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### DAY ONE: Wednesday, September 13, 2023

9:00 – 9:15

#### Welcome

**Brenda Stodart, PharmD, MS, BCGP, RAC**

*Captain, United States Public Health Service*  
 Director, Small Business, and Industry Assistance (SBIA)  
 Division of Drug Information (DDI) Office of Communications (OCOMM)  
 Center for Drug Evaluation and Research (CDER)

9:15 – 9:30

#### Keynote

**Robert Califf, MD (Invited)**

*Commissioner of Food and Drugs*  
 Food and Drug Administration

#### Your SBIA Hosts for Day One

**Forest "Ray" Ford, PharmD, BCPS**

*CAPT, USPHS, Pharmacist*  
 DDI | OCOMM | CDER

**Renu Lal, PharmD**

*LCDR, USPHS, Pharmacist*  
 DDI | OCOMM | CDER

## DAY ONE: Wednesday, September 13, 2023

### Session 1: Noteworthy Guidances and Generic Approvals for Topical and Transdermal Products

Session Leads: **Darby Kozak, PhD**, *Deputy Director*, Division of Therapeutic Performance I (DTP I) | Office of Research and Standards (ORS) | Office of Generic Drugs (OGD) | Center for Drug Evaluation and Research (CDER) and **Ahmed Zidan, PhD**, *Senior Staff Fellow*, Division of Product Quality Research (DPQR) | Office of Testing and Research (OTR) | Office of Pharmaceutical Quality (OPQ) | CDER

9:30 – 10:00

#### General Guidances Related to Characterization-Based Bioequivalence Approaches for Topical Products

**Priyanka Ghosh, PhD**

*Lead Pharmacologist*

DTP I | ORS | OGD | CDER

**Hiren Patel, PhD**

*Senior Staff Fellow*

Division of Bioequivalence II (DB II)  
Office of Bioequivalence (OB) | OGD | CDER

10:00 – 10:20

#### An Overview of the Current Product-Specific Guidances for Topical Products

**Megan Kelchen, PhD**

*Senior Pharmacologist*

DTP I | ORS | OGD | CDER

10:20 – 10:40

#### How Research Supports Product-Specific Guidances for Topical Products

**Ahmed Zidan, PhD**

*Senior Staff Fellow*

DPQR | OTR | OPQ | CDER

**10:40 – 10:50: BREAK**

## DAY ONE: Wednesday, September 13, 2023

10:50 – 11:10

### Overview and Changes to Guidance for Industry: Topical Dermatology Corticosteroids In Vivo Bioequivalence

**Ke Ren, PhD**

*Deputy Division Director*

Division of Bioequivalence III (DB III) | OB | OGD | CDER

11:10 – 11:30

### ANDA Challenges Related to Vasoconstrictor Studies

**Kairui (Kevin) Feng, PhD**

*Senior Chemical Engineer*

Division of Quantitative Methods and Modeling (DQMM) | ORS | OGD | CDER

11:30 – 12:15

### Session 1: Q&A Panel

**Priyanka Ghosh, Hiren Patel, PhD, Megan Kelchen, Ahmed Zidan, Ke Ren, Kairui (Kevin) Feng, and**

**Markham C. Luke, MD, PhD**

*Division Director, DTP I | ORS | OGD | CDER*

**Sam Raney, PhD**

*Associate Director for Science, ORS | OGD | CDER*

**Pahala Simamora, PhD**

*Division Director, DLBP II | OLDP | OPQ | CDER*

**Rong Wang, PharmD, PhD**

*Associate Director, DB I | OB | OGD | CDER*

**12:15 – 1:00 PM: LUNCH BREAK**

## DAY ONE: Wednesday, September 13, 2023

### Session 2: Noteworthy Guidances for Nasal Suspension and Inhalation Products

Session Leads: **Darby Kozak, PhD**, *Deputy Director*, DTP I | ORS | OGD | CDER and **Ahmed Zidan, PhD**, *Senior Staff Fellow*, DPQR | OTR | OPQ | CDER

1:00 – 1:20

#### Complex Nasal Suspension PSG: Utilization of Newly Recommended In Vitro Only Bioequivalence Option

**Susan Boc, PhD**  
*Pharmacokineticist*  
DTP I | ORS | OGD | CDER

1:20 – 1:40

#### Complex Nasal Suspension: Utilization of In Silico PK Studies to Support Development and Approval

**Ross Walenga, PhD**  
*Senior Chemical Engineer*  
DQMM | ORS | OGD | CDER

1:40 – 2:00

#### Loxapine Inhalation Powder: OTR Research Conducted to Inform the PSG Recommendations

**Nathan Reed, PhD**  
*Chemist*  
DCDA B2, OTR, OPQ, CDER

**Elizabeth Bielski, PhD**  
*Senior Pharmacologist*  
DTP I, ORS, OGD, CDER

2:00 – 2:30

#### Session 2: Q&A Panel

**Susan Boc, Ross Walenga, Nathan Reed, Elizabeth Bielski, and**

**Vipra Kundoor, PhD**  
*Pharmacologist*, DB I | OB | OGD | CDER

**Mai Tu, PhD**  
*Chemist*, LBB4 | DLBP II | OLDP | OPQ | CDER

**Ahmed Zidan, PhD**  
*Senior Staff Fellow*, DPQR | OTR | OPQ | CDER

2:30 – 2:40 PM: BREAK

## DAY ONE: Wednesday, September 13, 2023

### Session 3: Noteworthy Guidances for Injectable Products

Session Leads: **Cameron Smith, PhD**, *Branch Chief*, DLBP I | OLDP | OPQ | CDER and **Yan Wang, PhD**, *Lead Pharmacologist*, DTP I | ORS | OGD | CDER

2:40 – 2:55

#### In Vitro Approaches for Injectable Suspension Products: Medroxyprogesterone Acetate & Triamcinolone Acetate

**Qiangnan Zhang, PhD**  
*Staff Fellow*  
DTP I | ORS | OGD | CDER

2:55 – 3:10

#### Risk-based PSG Recommendations for Comparative Immunogenicity and Impurity Profile Assessment

**Eric Pang, PhD**  
*Senior Chemist*  
DTP I | ORS | OGD | CDER

3:10 – 3:30

#### Session 3: Q&A Panel

**Qiangnan Zhang, Eric Pang, and  
Dapeng Cui, PhD**  
*Lead Pharmacologist*, DB I | OB | OGD | CDER  
**Cameron Smith, PhD**  
*Branch Chief*, DLBP I | OLDP | OPQ | CDER

**DAY ONE: Wednesday, September 13, 2023**

**Session 4: Noteworthy Complex Generic Drug Approvals: Multiphase Systems**

Session Leads: **Brock Roughton, PhD**, *Branch Chief*, DLBP II | OLDP | OPQ | CDER and **Ke Ren, PhD**, *Deputy Division Director*, DB III | OB | OGD | CDER

3:30 – 3:50

**Cyclosporine & Difluprednate Ophthalmic Emulsions**

**Qiuxi Fan, PhD**

*Pharmaceutical Scientist*  
DLBP II | OLDP | OPQ | CDER

**Yoriko Harigaya, PharmD**

*Senior Staff Fellow*  
DB II | OB | OGD | CDER

3:50 – 4:10

**Amphotericin B Liposome: Changes Identified**

**Bin Qin, PhD**

*Senior Chemist*  
DTP I | ORS | OGD | CDER

4:10 – 4:25

**Phytonadione – Self-Assembled System & Thermodynamics Systems**

**William Smith, PhD**

*Research Scientist*  
DPQR | OTR | OPQ | CDER

4:25 – 4:55

**Session 4: Q&A Panel**

**Qiuxi Fan, Yoriko Harigaya, Bin Qin, William Smith, and**

**John Jiang, PhD**

*Chemist*, DLBP II | OLDP | OPQ | CDER

**Hee Chung, PhD**

*Lead Pharmacologist*, DB I | OB | OGD | CDER

**Khondoker Alam, PhD**

*Senior Pharmacologist*, DQMM | ORS | OGD | CDER

**Xiaoming Xu, PhD**

*Supervisory Chemist*, DPQR | OTR | OPQ | CDER

4:55 – 5:00

**Day One Closing Remarks**

**Lei Zhang, PhD**

*Deputy Director*  
ORS | OGD | CDER

**DAY TWO: Thursday, September 14, 2023**

9:00 – 9:15

**Day Two SBIA Overview**

**Forest "Ray" Ford, PharmD, BCPS**  
 CAPT, USPHS  
 DDI | OCOMM | CDER

**Session 5: Noteworthy Complex Generic Drug Approvals: Orally Inhaled Products**

Session Leads: **Lanyan (Lucy) Fang, PhD**, *Deputy Division Director*, DQMM | ORS | OGD | CDER and **Michael Spagnola, MD**, *Lead Physician*, Division of Clinical Safety and Surveillance (DCSS) | Office of Safety and Clinical Evaluation (OSCE) | OGD | CDER

9:15 – 9:30

**Innovative Technology: Particle Image Velocimetry (PIV) and High-Speed Imaging to Support Approval of Generic Orally Inhaled Drug Products**

**Steven Chopski, PhD**  
*Staff Fellow*  
 DQMM | ORS | OGD | CDER

9:30 – 9:45

**First Generic Drug Approval: Budesonide & Formoterol Fumarate Dihydrate Inhalation Aerosol (RLD: Symbicort): A Bioequivalence Perspective**

**Zhen Xu, PhD**  
*Staff Fellow*  
 DB III | OB | OGD | CDER

9:45 – 10:00

**First Generic Drug Approval: Budesonide & Formoterol Fumarate Dihydrate Inhalation Aerosol (RLD: Symbicort): A Quality Perspective**

**Fang Yuan, PhD**  
*Senior Chemist*  
 IO | OLDP | OPQ | CDER

10:00 – 10:15

**Post-Approval Impact of Generic Fluticasone Propionate & Salmeterol Inhalation Powder**

**Andrew Clerman, MD, PhD**  
*Senior Physician*  
 Division of Therapeutic Performance I (DTP I)  
 ORS | OGD | CDER

**DAY TWO: Thursday, September 14, 2023**

10:15 – 10:55

**Session 5: Q&A Panel**

**Steven Chopski, Zhen Xu, Fang Yuan, Andrew Clerman, and**

**Srinivas Behara, PhD**

*Chemist, Division of Immediate and Modified Release Products III (DIMRP III)  
 OLDP | OPQ | CDER*

**Tian Ma, PhD**

*Senior Staff Fellow, DB I | OB | OGD | CDER*

**Elizabeth Bielski, PhD**

*Senior Pharmacologist, DTP I | ORS | OGD | CDER*

**10:55 – 11:05 AM: BREAK**

**Session 6: Noteworthy Complex Generic Drug Approvals: Oral Locally Acting & Oral Suspension Drug Products**

Session Leads: **Brock Roughton, PhD**, *Branch Chief, DLBP II | OLDP | OPQ | CDER* and **Ke Ren, PhD**, *Deputy Division Director, DB III | OB | OGD | CDER*

11:05 – 11:25

**In Vitro Binding Studies for Bioequivalence Demonstration**

**Wei-Jhe Sun, PhD**

*Senior Staff Fellow  
 DTP II, ORS, OGD, CDER*

11:25 – 11:45

**Q1/Q2 Recommendation (Sucralfate)**

**Manar Al-Ghabeish, PhD**

*Staff Fellow  
 DTP II | ORS | OGD | CDER*

11:45 – 12:05

**Non-Q2 Sucralfate Suspension Approval**

**Suman Dandamudi, PhD**

*Senior Pharmacologist  
 DB III | OB | OGD | CDER*



**DAY TWO: Thursday, September 14, 2023**

12:05 – 12:35

**Session 6: Q&A Panel**

**Wei-Jhe Sun, Manar Al-Ghabeish, Suman Dandamudi, and**

**Alicia Hoover, PhD**

*Supervisory Chemist, Division of Pharmaceutical Analysis (DPA) | OTR | OPQ | CDER*

**Fang Wu, PhD**

*Senior Pharmacologist, DQMM | ORS | OGD | CDER*

**Hongfei Zhou, PhD**

*Senior Pharmacologist, DB III | OB | OGD | CDER*

**12:35 – 1:35: LUNCH BREAK**

**Session 7: Enhanced Processes, Research, and Assessment Tools to Support Generic Drug Product Development**

Session Leads: **Lanyan (Lucy) Fang, PhD**, *Deputy Division Director, DQMM | ORS | OGD | CDER* and **Michael Spagnola, MD**, *Lead Physician, Division of Clinical Safety and Surveillance (DCSS) | Office of Safety and Clinical Evaluation (OSCE) | OGD | CDER*

1:35 – 1:50

**GDUFA Research Program: Research Priorities to Support Generic Drug Development**

**Sam Raney, PhD**

*Associate Director for Science*

*ORS | OGD | CDER*

1:50 – 2:05

**Identify Research Needs and PSG Development for Complex Products**

**Xiaoming Xu, PhD**

*Division Director*

*DPQR | OTR | OPQ | CDER*

2:05 – 2:20

**Enhance Communication in Using Modeling Approaches in ANDAs**

**Liang Zhao, PhD**

*Division Director*

*DQMM | ORS | OGD | CDER*

## DAY TWO: Thursday, September 14, 2023

2:20 – 2:50

### Session 7: Q&A Panel

**Sam Raney, Xiaoming Xu, Liang Zhao, and**

**Darby Kozak, PhD**

Deputy Division Director | DTP I | ORS | OGD | CDER

**Robert Lionberger, PhD**

Director | ORS | OGD | CDER

**Zhen Zhang, PhD**

Master Pharmacologist | DB I | OB | OGD | CDER

2:50 – 3:00 PM: BREAK

## Session 8: Global Collaboration to Support Efficient Generic Product Development & Regulatory Assessment

Session Leads: **Heather Boyce, PhD**, *Lead Pharmacokineticist*, DTP II | ORS | OGD | CDER and **Diana Vivian, PhD**, *Associate Director*, DB II | OB | OGD | CDER

3:00 – 3:15

### Supporting the First Harmonized Bioequivalence Guideline under ICH -Considerations for Future Implementation

**Nilufer Tampal, PhD**

*Associate Director for Scientific Quality*

OB | OGD | CDER

3:15 – 3:30

### FDA-EMA Parallel Scientific Advice Pilot Program for Complex Generic/Hybrid Drug Products

**Lei Zhang, PhD**

*Deputy Director*

ORS | OGD | CDER

3:30 – 3:45

### The Generic Drug Cluster Program and the Path to Global Harmonization

**Sarah Ibrahim, PhD**

*Associate Director for Global Affairs*

OGD | CDER

3:45 - 4:00

### Data Reliability – Inspection, Global Collaboration

**Brian Folian, JD, MS**

*Deputy Director*

Office of Study Integrity and Surveillance (OSIS)

Office of Translational Sciences (OTS) | CDER

## DAY TWO: Thursday, September 14, 2023

4:00 – 4:40

### Session 8: Q&A Panel

**Nilufer Tampal, Lei Zhang, Sarah Ibrahim, Brian Folian, and**

**Wenlei Jiang, PhD**

*Senior Advisor for Innovation and Strategic Outreach, ORS | OGD | CDER*

**Xiaojian Jiang, PhD**

*Deputy Division Director, DB II | OB | OGD | CDER*

**Myong-Jin Kim, PharmD**

*Division Director, DTP II | ORS | OGD | CDER*

4:40 – 4:50

### Closing Remarks

**Robert Lionberger, PhD**

*Director*

*ORS | OGD | CDER*

**4:50: WORKSHOP ADJOURN**

**List of Acronyms Used in This Document:**

Board Certified Geriatric Pharmacist (BCGP)  
Board Certified Pharmacotherapy Specialists (BCPS)  
Captain (CAPT)  
Center for Drug Evaluation and Research (CDER)  
Division of Bioequivalence I (DB I)  
Division of Bioequivalence II (DB II)  
Division of Bioequivalence III (DB III)  
Division of Biotechnology Review and Research III (DBRR III)  
Division of Clinical Safety and Surveillance (DCSS)  
Division of Complex Drug Analysis (DCDA)  
Division of Drug Information (DDI)  
Division of Immediate and Modified Release Products III (DIMRP III)  
Division of Liquid-Based Products I (DLBP I)  
Division of Liquid-Based Products II (DLBP II)  
Division of Product Quality Research (DQPR)  
Division of Quantitative Methods & Modeling (DQMM)  
Division of Therapeutic Performance I (DTP I)  
Division of Therapeutic Performance II (DTP II)  
Doctor of Medicine (MD)  
Doctor of Pharmacy (PharmD)  
Doctor of Philosophy (PhD)  
Food and Drug Administration (FDA)  
Lieutenant Commander (LCDR)  
Liquid-Based Branch 4 (LBB 4)  
Master of Science (MS)  
Office of Bioequivalence (OB)  
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