



# RDD2022

*Respiratory Drug Delivery*

Omni Orlando, ChampionsGate, Florida

May 1-5, 2022

Conference Supporters



SUNDAY • MAY 1 • 2022

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3:00 – 7:00 p.m.     **Registration**     *International Ballroom Foyer*

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7:30 – 9:30 p.m.     **Welcome Reception**     *Shallow Pool*  
*Sponsored by Our Conference Supporters*

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## MONDAY • MAY 2 • 2022

7:30 a.m.	<b>Continental Breakfast Registration</b>	<i>Rotunda &amp; Ballroom Commons International Ballroom Foyer</i>
8:30 a.m.	<b>Welcome and Introduction</b> Richard N. Dalby, Ph.D. Professor, School of Pharmacy University of Maryland, Baltimore, Maryland	<i>National Ballroom</i>
8:45 a.m.	<b>Presentation of Charles G. Thiel Award</b> Michael Hindle, Ph.D. Professor, School of Pharmacy Virginia Commonwealth University, Richmond, Virginia	<i>National Ballroom</i>
9:00 a.m.	<b>PLENARY PRESENTATION</b> Sponsored by Our Conference Supporters  Moderator: Joanne Peart, Ph.D.  <i>Is the Climate Right for a New pMDI Propellant?</i> John N. Pritchard, Ph.D., Inspiring Strategies, Leicester, United Kingdom	<i>National Ballroom</i>
10:00 a.m.	<b>REFRESHMENTS</b>	<i>International Ballroom</i>
10:30 a.m. - 12:00 p.m.	<b>SESSION 1: Focus on Therapeutics New Tools, Therapies &amp; Technologies</b>  Moderator: Peter R. Byron, Ph.D.	<i>National Ballroom</i>
10:30 a.m.	<b><i>Physiologically Relevant Microfluidic Platforms for High Throughput Preclinical Development</i></b> Hui X Ong, Ph.D., Macquarie University and Woolcock Institute of Medical Research, Sydney, Australia	
11:00 a.m.	<b><i>Pivoting Research to Fight COVID-19: Stabilizing and Delivering Antivirals, Antibodies and Vaccines using Thin Film Freezing</i></b> Robert O. Williams III Ph.D., The University of Texas at Austin, Austin, Texas	
11:30 a.m.	<b><i>Adoption and Implementation of Respiratory Digital Health Solutions Post-Pandemic</i></b> Mayur Patel M.Eng., PA Consulting, Melbourn, United Kingdom	
12:00 p.m.	<b>SESSION 1 ENDS • LUNCH</b>	

12:00 p.m. - 2:00 p.m.	<b>Posters and Exhibition</b> "Grab and Go" Lunch	<i>International Ballroom</i>
2:00 p.m. - 3:00 p.m.	<b>SESSION 2: Nasal Spotlight</b> <b>New Tools to Streamline Nasal Product Approval</b>	<i>National Ballroom</i>
	Moderators: Julie Suman, Ph.D. and Stephen Shrewsbury, MB, ChB	
2:00 p.m.	<b><i>Leveraging In Vitro Bioequivalence Tests for Locally-Acting Suspension Nasal Sprays with Three Anatomically-Correct Replicas of Human Nasal Airways Representing Intersubject Variability</i></b> Laleh Golshahi, Ph.D., Virginia Commonwealth University, Richmond, Virginia	
2:30 p.m.	<b><i>Evaluating Particle Size Differences of Suspension-Based Nasal Sprays Through In Vitro and Pharmacokinetic Approaches</i></b> Günther Hochhaus, Ph.D., University of Florida, Gainesville, Florida	
3:00 p.m.	<b>SESSION 2 ENDS • REFRESHMENTS</b>	<i>International Ballroom</i>
3:30 p.m. - 5:00 p.m.	<b>SESSION 3: Posters on the Podium</b>	<i>National Ballroom</i>
	Moderators: Daniela Traini, Ph.D. and Serena Bonasera, Ph.D.	
	Poster authors chosen by the editorial team present their work during a fast-paced podium session.	
3:35 p.m.	<b><i>A Within-Host Modeling Framework for SARS-CoV-2 Infection to Support Intranasal Vaccine Strategies</i></b> Jeffrey Schroeter, Ph.D., Applied Research Associates, Raleigh, North Carolina	
3:45 p.m.	<b><i>In Vitro Regional Deposition of Nasal Sprays in an Idealized Nasal Inlet: Comparison With In Vivo Gamma Scintigraphy</i></b> John Chen, B.Sc., University of Alberta, Alberta, Canada	
3:55 p.m.	<b><i>Influence of Gender on the Disposition of OHet72 after Pulmonary Administration</i></b> Margaret Bourlon, B.Eng., University of Oklahoma, Oklahoma City, Oklahoma	
4:05 p.m.	<b><i>The Combined Effect of Valve and Spray Orifice Diameters On pMDI Plume Force</i></b> Benjamin Myatt, Ph.D., Kindeva Drug Delivery, Loughborough, United Kingdom	

## MONDAY • MAY 2 • 2022 *continued*

### SESSION 3 (continued)

*National Ballroom*

- 4:15 p.m. ***A Continuous Process for Blending Dry Powders for Inhalation***  
Jamie Spahn, B.S.,  
The University of Texas at Austin, Austin, Texas
- 4:25 p.m. ***The Application of Artificial Intelligence in Designing Dry Powders for Inhalation Using Thin-Film-Freezing Technology***  
Junhuang Jiang, TBD.,  
The University of Texas at Austin, Austin, Texas
- 4:35 p.m. ***In Vitro Performance of A Pediatric Air-Jet DPI Delivering a Spray-Dried Antibiotic Formulation***  
Dale Farkas, Ph.D.,  
Virginia Commonwealth University, Richmond, Virginia
- 4:45 p.m. ***Microfluidic Aerosol Generation: Development of a Next Generation Hand-Held Device for Aerosol Drug Delivery***  
Jason Brenker, Ph.D.,  
Monash University, Melbourne, Australia
- 4:55 p.m. **Presentation of VCU RDD Peter R. Byron Graduate Student Award**

5:00 p.m. **SESSION 3 ENDS**

5:00 p.m. -  
7:00 p.m. **Posters and Exhibition Evening Reception** *International Ballroom*  
***Bringing Science, Innovation and People Together***

## TUESDAY • MAY 3 • 2022

7:30 a.m. **Continental Breakfast Registration** *Rotunda & Ballroom Commons  
International Ballroom Foyer*

8:30 a.m. -  
12:00 p.m. **SESSION 4: Project Green MDI  
Next Generation Metered Dose Inhalers:  
Promise for our Patients and the Planet** *National Ballroom*

Co-Chairs: Stephen W. Stein, M.Sc., Kindeva Drug Delivery  
David A. Lewis, Ph.D., OzUK

8:30 a.m. ***Evolving Legislation Associated with Fluorinated Hydrocarbon Propellants used in Metered Dose Inhalers***  
Maureen Hardwick, J.D.,  
On Behalf of International Pharmaceutical Aerosol Consortium (IPAC),  
Washington DC

9:00 a.m. ***The Formulator's Guide to Transitioning to Low Global Warming Potential pMDIs*** *National Ballroom*  
 Jag Shur, Ph.D.,  
 Nanopharm, an Aptar Pharma Company, Newport, United Kingdom

9:30 a.m. ***Considerations for Robust Clinical and Commercial Manufacturing of Next Generation Sustainable Metered Dose Inhalers***  
 Nick Atkinson, MIET,  
 Recipharm, Holmes Chapel, United Kingdom

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10:00 a.m. **REFRESHMENTS** *International Ballroom*

10:30 a.m. ***Safety, Tolerance and Pharmacokinetics of HFA-152a in Healthy Volunteers*** *National Ballroom*  
 Philip Kuehl, Ph.D.,  
 Lovelace Biomedical, Albuquerque, New Mexico

11:00 a.m. ***A Journey to Net Zero Using Solstice Air***  
 Ryan Hulse, Ph.D.,  
 Honeywell, Buffalo, New York

11:30 a.m. **Explore with Experts**  
***Next Generation Metered Dose Inhalers: Promise for our Patients and the Planet***  
**Co-Chairs:**  
 Stephen W. Stein, M.Sc. and David A. Lewis, Ph.D.  
**Panel:**  
 Nick Atkinson, Ph.D., Recipharm  
 Maureen Hardwick, Ph.D., IPAC  
 Ryan Hulse, Ph.D., Honeywell  
 Philip Kuehl, Ph.D., Lovelace Biomedical  
 John N. Pritchard, Ph.D., Inspiring Strategies  
 Jag Shur, Ph.D., Nanopharm

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12:00 p.m. **SESSION 4 ENDS**

12:00 p.m. - **Posters and Exhibition** *International Ballroom*  
 2:00 p.m. **"Grab and Go" Lunch**

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2:00 p.m. - **SESSION 5: WORKSHOPS** *Lobby and Lower Lobby Level Meeting Rooms*  
 5:00 p.m.  
 The following companies will host 45-minute interactive presentations on new technologies related to aerosol drug delivery. Meeting participants may select and attend THREE of these sessions.

*Refreshments will be available throughout the afternoon*

2:00 p.m. **Workshop Selection #1**

3:00 p.m.. **Workshop Selection #2**

4:00 p.m. **Workshop Selection #3**

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	US And EU Drug-device Combination Product Regulations in the OINDP Field	Royal Dublin B
	Development of High Dose Powders for Inhalation	Olympic A
	Sustainable pMDI Filling and Flammable Propellant Handling	Congressional A
	Future Challenges Facing Metered Dose Inhalers: Sustainability & The Effective Delivery of Complex Molecules	Congressional B
	Developing Biologics for Respiratory Delivery – Real World Lessons and Examples	Royal Dublin A
	Sustainable pMDIs – Is Nirvana Within Reach?	Augusta A
	HFA-152a Roadmap to Commercialization	Augusta B
	From Concept to Product: A Novel Dry Powder Treatment for Lung Cancer	Olympic B
	DeRisking Pharmaceutical Nasal Development Programs	Colonial A
	Microdosing Inhalation Powders: Enabling DPI Prototypes for Early Product Development	Royal Melbourne A
	Automated pMDI Handling for Dose Content Uniformity Testing and Aerodynamic Particle Size Distribution	Royal Melbourne B
	Soft Mist Inhalers (SMIs): Addressing Unmet Needs in Inhaled Product Development	Colonial B
5:00 p.m	<b>SESSION 5 ENDS</b>	
5:00 - 7:00 p.m	<b>Posters and Exhibition Evening Reception</b> <i>Bringing Science, Innovation and People Together</i>	International Ballroom
7:30–9:00 p.m	<b>AAPS Inhalation &amp; Nasal Community</b>	ChampionsGate
	<b><i>Inhaled Flecainide: Snatching Success from the Jaws of Defeat. The Story of Flexibility, Ingenuity, and a Little Luck</i></b> Mick Hurrey, Ph.D., InCarda Therapeutics	

8:00 a.m.	<b>Continental Breakfast</b>	<i>Rotunda &amp; Ballroom Commons</i>
	<b>NETWORKING AND RECREATION BREAK</b> Participants can play golf, tennis, visit the spa or relax.	
2:00 p.m. - 3:00 p.m.	<b>SESSION 6:</b> <b>Aqueous Advances: Renewed Interest in Nebulizer Therapy</b>	<i>National Ballroom</i>
	Moderator: John S. Patton, Ph.D.	
2:00 p.m.	<b><i>Next Generation Nebulized Therapy: Opportunities for New Treatments and Devices</i></b> John N. Pritchard Ph.D., Inspiring Strategies, Leicester, United Kingdom	
2:30 p.m.	<b><i>Fast Track to Phase 1: Rethinking Nebulizers in Early Phase Development</i></b> Paul M. Young Ph.D., Ab Initio Pharma, Sydney, Australia and  Matthew Reed Ph.D., Coelus, Albuquerque, New Mexico	
3:00 p.m.	<b>SESSION 6 ENDS • REFRESHMENTS</b>	<i>Rotunda &amp; Ballroom Commons</i>
3:30 p.m. - 5:00 p.m.	<b>SESSION 7: Designing DPIs - Perfecting Powders</b>	<i>National Ballroom</i>
	Moderator: Kimberly Shepard, Ph.D.	
3:30 p.m.	<b><i>An In Silico Modeling Framework to Predict Particle Dynamics in Dry Powder Inhalers</i></b> Yu Feng Ph.D., Oklahoma State University, Stillwater, Oklahoma	
4:00 p.m.	<b><i>Targeting Lung Tumors using a Novel Inhaled Excipient Enhanced Growth Gemcitabine Dry Powder Formulation</i></b> Bryce Beverlin II Ph.D., Quench Medical, Saint Paul, Minnesota	
4:30 p.m.	<b><i>Improved Targeting of Dry Powder Formulations of Inhaled Corticosteroids to Children</i></b> Jeffrey Weers Ph.D., Respira Therapeutics, San Francisco, California	
5:00 p.m.	<b>SESSION 6 ENDS</b>	
6:30 p.m.	<b>Cocktail Reception</b>	<i>Ballroom Commons</i>
7:30 p.m.	<b>Dinner and Dancing</b> <b><i>Sponsored by Our Conference Supporters</i></b>	<i>International Ballroom</i>

7:30 a.m.	<b>Continental Breakfast Registration</b>	<i>Rotunda &amp; Ballroom Commons International Ballroom Foyer</i>
9:00 p.m. - 12:00 p.m.	<b>SESSION 8: Regulatory, Science and Technology Innovation. Enabling Novel and Improved OINDP Design, Development and Manufacturing</b> Coordinated with International Pharmaceutical Aerosol Consortium on Regulation & Science (IPAC-RS) <b>Co-Chairs:</b> Vijay Sethuraman, Ph.D., Genentech Jennifer Wylie, Ph.D., Merck	<i>National Ballroom</i>
9:00 a.m..	<b>User Centric Device Design: Designing for Behavior Change</b> Paul Upham, B.Sc., Genentech, San Francisco, California	
9:30 a.m..	<b>Carbon Neutral: TRELEGY ELLIPTA from Concept to Delivery</b> Richard K. Henderson, Ph.D., GlaxoSmithKline, Brentford, United Kingdom	
10:00 a.m.	<b>REFRESHMENTS</b>	<i>Rotunda &amp; Ballroom Commons</i>
10:30 a.m.	<b>Perspectives on the Evolving Regulatory Landscape for Inhaled and Nasal Products</b> Prasad Peri, Ph.D., Teva Pharmaceuticals, West Chester, Pennsylvania	
11:00 a.m.	<b>A Critical Assessment of the Application of Advanced Data Analytics in Inhaled and Nasal Product Development</b> Will Ganley, Ph.D., Nanopharm, an Aptar Pharma Company, Newport, United Kingdom	
11:30 a.m.	<b>Explore with Experts: Regulatory, Science and Technology Innovation: Enabling Novel and Improved OINDP Design, Development and Manufacturing</b> <b>Co-Chairs:</b> Vijay Sethuraman Ph.D., and Jennifer Wylie, Ph.D. <b>Panel:</b> Will Ganley, Ph.D., Nanopharm Richard K. Henderson, Ph.D., GlaxoSmithKline Prasad Peri, Ph.D., Teva Pharmaceuticals Paul Upham, B.Sc., Genentech	
12:00 p.m	<b>SESSION 8 ENDS</b>	
12:00 p.m. - 2:00 p.m.	<b>Luncheon</b> <i>Sponsored by Our Conference Supporters</i>	<i>Ballroom Commons</i>
2:00 p.m.	<b>END OF RESPIRATORY DRUG DELIVERY 2022</b>	