

# RDD 2023 EUROPE

*Bringing the Respiratory World Together*



**May 2-5, 2023**

Palais des Congrès Antipolis  
Antibes (Nice), France

[rddonline.com/rddeurope2023](https://rddonline.com/rddeurope2023)

**Aptar**  
pharma

**RDD Online**  
Respiratory Drug Delivery

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*Bringing the Respiratory World Together*



Antibes (Nice), France, May 2-5, 2023

CONFERENCE CO-ORGANIZERS



CONFERENCE SUPPORTERS

**Honeywell**

**Koura**  
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Small Molecules

**Recipharm**

TUESDAY • MAY 2 • 2023

3:00 - 6:00 PM	<b>Registration</b>	<i>Congress Center Level 2</i>
6:00 - 7:30 PM.	<b>Cocktail Reception</b> <i>Sponsored by Our Conference Supporters</i>	<i>Foyer Méditerranée Level 3</i>

7:30 AM	<b>Registration &amp; Welcome Coffee</b>	<i>Congress Center Level 2</i>
9:00 AM	<b>Welcome and Introduction</b> <i>Richard N. Dalby, Ph.D.</i> <i>Professor, School of Pharmacy</i> <i>University of Maryland, Baltimore, Maryland, USA</i>	<i>Auditorium Level 3</i>
9:15 AM	<b>KEYNOTE PRESENTATION</b> <i>Sponsored by our Conference Supporters</i>  Moderator: Joanne Peart, Ph.D.  <b>Multi-Ancestry Genome-Wide Association Analyses Implicate Genes and Pathways Influencing Pulmonary Diseases</b>  <i>Martin D. Tobin, Ph.D.</i> <i>Professor of Genetic Epidemiology and Public Health</i> <i>University of Leicester, Leicester, United Kingdom</i>	
10:15 AM	<b>POSTERS &amp; EXHIBITION</b> <i>Light Refreshments Served</i>  <i>Posters &amp; Exhibit Tables will be available for viewing between 9:30 a.m. and 6:00 p.m.</i>	<i>Congress Center Level 2</i>
11:00 AM - 12:00 PM	<b>SESSION 1: From Bench to Bedside</b> <b>New Approaches to Treating Respiratory Diseases</b>  Moderator: Paul M. Young, Ph.D.	<i>Auditorium Level 3</i>
11:00 AM	<b>A Critical Assessment of Inhaled Antibody Therapies</b> <i>Jenny K W Lam Ph.D.</i> <i>University College London, United Kingdom</i>	
11:30 AM	<b>Towards The Clinical Translation of Inhaled Rifampicin for Tuberculosis</b> <i>Shyamal C. Das, Ph.D.</i> <i>University of Otago, Dunedin, New Zealand</i>	
12:00 PM	<b>SESSION 1 ENDS • POSTERS &amp; EXHIBITION</b> <i>Lunch Provided</i>	<i>Congress Center Level 2</i>

2:00 - 6:00 PM

**SESSION 2: WORKSHOPS**

*Congress Center Level 3*

Sponsor: *Aptar Pharma*  
 Moderator: Gerallt Williams, Ph.D.

2:00 PM

**Workshop Selection #1**

3:15 PM

**Workshop Selection #2**

4:30 PM

**Workshop Selection #3**

The following companies will each sponsor 60-minute interactive presentations on new technologies and services related to nasal and pulmonary drug delivery. Meeting participants may select and attend **THREE** of these sessions.

*Refreshments will be available throughout the afternoon.*



Accelerating and De-Risking the Development of Low Global Warming Potential (GWP) pMDIs

*Louis Armstrong C1*



Synergies of Inhalation Product Development and Spray Characterization

*Ray Charles E1*



Functional Respiratory Imaging: A Tool to Understand Regional Airway Exposure to Inhaled Drugs as Part of the Regulatory Process for Complex Generics

*Ella Fitzgerald A1*



HFO-1234ze(E): Adopting A Low-GWP Propellant for Metered Dose Inhalers

*Ella Fitzgerald A3*



Integrated Development for Capsule-Based DPIs – Solving New Challenges

*Miles Davis B3*



Navigating New Technologies for Inhaled Product Development to Meet the Challenges of Small and Large Molecules

*Miles Davis B2*



From Rapid Feasibility to Sustainable Products: Identifying the Right Inhalation Delivery System for Your Drug

*Sidney Bechet D1*



Dry Powder Dosing of APIs: An Alternative Filling Technique for pMDIs

*Miles Davis B1*



Spray-Drying Process Considerations for Inhaled Biotherapeutic Dry Powders

*Sidney Bechet D2*



*In Vitro* Epithelial Models to Aid Nasal & Pulmonary Product Development

*Louis Armstrong C2*



An Overview of Lipid Nanoparticle Based mRNA Formulations for Inhaled Delivery

*Ella Fitzgerald A2*



Addressing Analytical Challenges in Inhaled Product Development

*Ella Fitzgerald A4*

6:00 PM

**SESSION 2 ENDS**

6:30 - 8:00 PM



*AC Hotel Ambassadeur*

**AAPS Inhalation and Nasal Community**

The Journey of Biologics to Get to the Lungs

*John S. Patton, Ph.D.*

*Kindeva Drug Delivery*

7:30 AM	<b>Registration &amp; Welcome Coffee</b>	<i>Congress Center Level 2</i>
8:30 AM	<b>POSTERS &amp; EXHIBITION</b> <i>Posters &amp; Exhibit Tables will be available for viewing between 8.30 a.m. and 6.00 p.m.</i>	<i>Congress Center Level 2</i>
9:00 - 10:00 AM	<b>SESSION 3: Navigating Nasal Vaccines</b>  Moderator: Regina Scherließ, Dr.rer.nat.	<i>Auditorium Level 3</i>
9:00 AM	<b>Intranasal Vaccination: Rationale, Progress and Challenges</b> <i>Julie D. Suman, Ph.D.</i> <i>Aptar Pharma, Baltimore, USA</i>	
9:30 AM	<b>Dual Nasal and Pulmonary Targeting to Optimize Mucosal Absorption: Exploring Methods, Devices and Formulations</b> <i>Orest Lastow, Ph.D.</i> <i>Iconovo, Lund, Sweden</i>	
10:00 AM	<b>SESSION 3 ENDS • POSTERS &amp; EXHIBITION</b> <i>Light Refreshments Served</i>	<i>Congress Center Level 2</i>
10:30 AM - 12:00 PM	<b>SESSION 4: Posters on the Podium</b>  Moderators: Daniela Traini, Ph.D. and Hui Wang, Ph.D.  <i>Five poster authors have been selected to summarize their work and answer questions during a fast-paced interactive podium session.</i>	<i>Auditorium Level 3</i>
10:30 AM	<b>Evaluation of a Novel Porcine Trachea Cell Airway Model for the Screening of Excipient Toxicity used in Biopharmaceutical Inhalation Products</b> <i>Rebecca Rittersberger, Pharmacist</i> <i>University of Applied Sciences Biberach, Germany</i>	
10:45 AM	<b>Go with the Flow: Evaluation of a Perfused Calu-3 Model Using a Micro-Physiological System for Inhaled Drug Discovery</b> <i>Adeel Ahmed, B.Sc.</i> <i>University of Hertfordshire, Hatfield, United Kingdom</i>	

- 11:00 AM **Benchmarking of Particle Engineering Strategies for Nasal Powder Delivery: Characterization of Nasal Deposition using the Alberta Idealized Nasal Inlet**  
*Patricia Henriques, Pharm.D.*  
*University of Coimbra, Coimbra, Portugal*
- 11:15 AM **L-Leucine as a Dispersibility Enhancer in Fully Crystalline Spray-Dried Systems**  
*Mani Ordoubadi, Ph.D.*  
*University of Alberta, Edmonton, Canada*
- 11:30 AM **HFO-1234ze(E): Flammability Characterization for Metered Dose Inhaler Manufacturing**  
*Gregory Smith, Ph.D.*  
*Honeywell International, Buffalo, USA*
- 11:45 AM **Presentation of VCU RDD Peter R. Byron Graduate Student Award**  
*Michael Hindle, Ph.D.*  
*Professor, School of Pharmacy*  
*Virginia Commonwealth University, Richmond, Virginia, USA*

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12:00 PM **SESSION 4 ENDS • POSTERS & EXHIBITION** *Congress Center Level 2*  
*Lunch provided*

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2:00 - 5:30 PM **SESSION 5: Building a Sustainable Future** *Auditorium Level 3*

Co-Chairs: Joanne Peart, Ph.D. and  
 Stephen W. Stein, M.Sc.

2:00 PM **A Sustainability Roadmap for Inhalation Products**  
*Greg Anderson, M.Sc.*  
*PharmaCentric Solutions, Graveley, United Kingdom*

2:30 PM **Designing Inhalers for Reuse, Remanufacture and Recycling: Circularity in Medical Devices**  
*Henry Blower, M.Eng., and Dan Cowen, M.Sc.*  
*Cambridge Consultants, Cambridge, United Kingdom*

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3:00 PM **POSTERS & EXHIBITION** *Congress Center Level 2*  
*Light Refreshments Served*

3:30 PM **Accelerated Development of MDIs with Low GWP Propellants in a QbD Era: Practical, Regulatory and Scientific Considerations**

*Loy Britto Ph.D.*

*Healthy Airways, Georgetown, Texas USA*

4:00 PM **Optimizing Spray Formation in Solution and Suspension Low GWP Metered Dose Inhalers**

*Daniel J. Duke, Ph.D.*

*Monash University, Melbourne, Australia,*

*and Benjamin Myatt, Ph.D.*

*Kindeva Drug Delivery, Loughborough, United Kingdom*

4:30 PM **Co-Suspension Aerosphere Technology Enabling the Pharmaceutical Transition to Non HFA Pressurized Metered Dose Inhalers With Reduced Environmental Impact**

*David Lechuga-Ballesteros Ph.D.*

*AstraZeneca, Durham, USA*

5:00 PM **Explore with Experts:  
The Sustainable Inhaler Challenge**

*Co-Chairs:*

*Joanne Peart and Stephen W. Stein*

*Panel:*

*Greg Anderson, PharmaCentric Solutions*

*Henry Blower and Dan Cowen, Cambridge Consultants*

*Loy Britto, Healthy Airways*

*Daniel J. Duke, Monash University*

*Benjamin Myatt, Kindeva Drug Delivery*

*David Lechuga-Ballesteros, AstraZeneca*

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5:30 PM **SESSION 5 ENDS**

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7:30 PM **Gala Dinner "An Evening of Glamour"**

*Bastide du Roy, Antibes*

Sponsored by  **Aptar**  
pharma

*Please assemble in front of the Palais des Congrès Antipolis at 6:30 p.m. Buses will depart from the Palais des Congrès at 6:45 p.m., for the drive to Bastide du Roy. Return by bus between 10:30 p.m. and 1:00 a.m.*

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7:30 AM	<b>Registration &amp; Welcome Coffee</b>	<i>Congress Center Level 2</i>
8:30 AM	<b>POSTERS &amp; EXHIBITION</b> <i>Posters &amp; Exhibit Tables will be available for viewing between 8.30 a.m. and 12.30 p.m.</i>	<i>Congress Center Level 2</i>
8:30 - 10:00 AM	<b>SESSION 6: Inspiring Dry Powder Inhalation</b>  Moderator: Michael Hindle, Ph.D.	<i>Auditorium Level 3</i>
8:30 AM	<b>Addressing Challenges of High Dose Powder Delivery: Formulation and Device Considerations</b> <i>Eunice Costa, Ph.D.</i> <i>Hovione, Loures, Portugal</i>	
9:00 AM	<b>Shaping the Future of Inhaled Powders: Spray Drying siRNA Lipid Nanoparticles for Dry Powder Pulmonary Delivery</b> <i>Olivia Merkel, Ph.D.</i> <i>Ludwig-Maximilians-University of Munich, Munich, Germany</i>	
9:30 AM	<b>Inhalation Blend Microstructure: Identifying Key Metrics to Address Q3 Equivalence using Semi-automated X-Ray Microscopy</b> <i>Parmesh Gajjar, Ph.D.</i> <i>University of Manchester</i> <i>Manchester, United Kingdom, and</i> <i>Darragh Murnane, Ph.D.</i> <i>University of Hertfordshire, Hatfield, United Kingdom</i>	
10:00 AM	<b>SESSION 6 ENDS • POSTERS &amp; EXHIBITION</b> <i>Light Refreshments Served</i>	<i>Congress Center Level 2</i>

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10:30 AM - 12:00 PM **SESSION 7: Advanced Inhalation: Data Driven Design** *Auditorium Level 3*

Moderator: Richard N. Dalby, Ph.D.

10:30 AM **Mixing Energy as an Adjustment Tool for  
Aerodynamic Behavior of an Inhaled Product:  
*In Vitro* and *In Vivo* Effects**

*Kyrre Thalberg, Ph.D.*  
*Lund University, Lund, Sweden and*  
*Satu Lähelmä, M.Sc.*  
*Orion Corporation, Espoo, Finland*

11:00 AM **Alternative Bioequivalence Approaches:  
Combining *In Vitro* and *In Silico* Models to Demonstrate  
Bioequivalence of Orally Inhaled Drug Products**

*Will Ganley, Ph.D.*  
*Nanopharm, an Aptar Pharma Company, Cwmbran, United Kingdom*

11:30 AM **Current US Regulatory Thinking for Alternative  
Bioequivalence Approaches for Generic Orally Inhaled Drug Products  
(Delivered via Teleconference)**

*Bryan Newman, Ph.D.*  
*US Food and Drug Administration, Silver Springs, USA*

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12:00 Noon **SESSION 7 ENDS**  
*Lunch provided*

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2:00 PM **End of RDD Europe 2023**

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