

SMI.LONDON

Pullman London St Pancras

25 June 2024



www.smi.london

Soft Mist Inhaler; Make It Better

SMI.London 2024 is the second conference dedicated to soft mist inhalers. During the event you will learn to make, develop, use, file, launch soft mist inhalers, and discover their place in an inhaled therapy portfolio.

There is only one event dedicated to soft mist inhaler in the world, This is IT. We are glad to see you today in London and build the future of soft mist inhalers together.

In the UK, the number of SMI prescription is already outpacing nebuliser ones. It is only a matter of time before SMIs are on par with DPIs and gradually replace pMDIs with a true low carbon footprint pedigree. This will be a group effort and we all have a role to play to achieve this.

Merxin Ltd and the founding partners have done a great job of inviting some of the most exciting speakers to the event. SMI.London 2024 is curated to illustrate how SMIs are taking their place alongside other

inhalers and what benefits they are bringing. Today we will explore aerosol science and applications.

The speakers at SMI.London 2024 are key opinion leaders with extensive experience in the field of Inhaled Drug Delivery. We are most grateful they accepted to speak and chair sessions at SMI.London 2024.

SMI.London 2024 is a place to learn and to meet each other. If you do not know someone, go and say hello. We have a speed networking session of 20 minutes at the beginning of the day to help you break the ice. This is only a start, keep breaking ice during the day.

The event is only possible thanks to the support of the Founding Partners, the Exhibitors and our Media Partners.

The summary of the conference will be available after the event at WWW.SMI.LONDON

Have a great day. See you next year?

Meet the Founding Partners of SMI.London:



H&T PRESSPART



Come and meet our Exhibitors:



We are grateful for the support of our Media Partners:



8:00 **Registration, refreshments and networking**

Chair of the session: Dr. Jag Shur, Founder, Theela Science Ltd

9:00

Welcome Back To SMI.London: What happened Over The Last 12 months?

Dr. Philippe Rogueda,
Chief Business Officer,
Merxin Ltd

A quick review of the scientific literature.

A survey of markets dynamics.

What is the latest gossip?

9:20

Speed networking

Talk to your neighbours. Greet people you have never met before.

9:45

Plenary Lecture: Soft Mist Inhalers, A Comparison With Nebulizers

Dr. Darragh Murnane,
Professor of
Pharmaceutics,
University of
Hertfordshire

Aerosolization from nebulizers and soft mist inhalers – what are the formulation approaches?

Lung deposition using aqueous droplet aerosols.

Dose delivery characteristics and the benefits of device efficiency not just total dose.

Preferences and user concerns.

Suitability for therapies of the future.

10:30 **Coffee break and networking**

11:00

Administration Of Soft Mist Via Respiratory Supports - Nasal Delivery

Dr. Wei-Ren Ke,
Assistant Professor,
National Taiwan
University School of
Pharmacy

The utilization of soft mist inhalers (SMI) has significantly expanded, accompanied by a growing demand for their use in respiratory support modalities, including High-Flow Nasal Cannula (HFNC) and mechanical ventilators.

While both pressurized metered-dose inhalers and SMIs are categorized as metered-dose devices, their distinct spray characteristics, such as velocity and duration, differentiate their application in respiratory support scenarios.

The administration of soft mist through invasive mechanical ventilation is viable; optimally, the soft mist should be delivered 15 cm from the Y-piece and actuated at the conclusion of the expiration phase of inspiration.

The usage of HFNC has significantly risen since the COVID-19 pandemic. However, the lack of commercially available adapters for SMI use during HFNC therapy restricts treatment options for inpatients.

The optimal adapter connecting the SMI and HFNC was developed and assessed using in vitro and in silico methods. Results showed that reducing HFNC flow rates significantly improved soft mist delivery efficiency.

11:30

**Test Method For
A Check Valve
For High Pressure
Atomization In A Soft
Mist Inhaler**

Mr. Andre Widmann,
Development
Engineer Device
Services, Harro
Höfliger

Functionally relevant tasks of micropump and check valve to enable medication administration.

Root cause for malfunction of device dosage delivery.

Test methodology to allow a 100% test of the valve function on a subassembly of the SMI.

Dedicated test setup to control flow and blocking function of the high-pressure check valve as well as result interpretation of time, flow and pressure.

12:00

**What's Your Target?
Customizing Lung
Delivery With
Electrospray**

Dr. Mehmet Uzumcu,
Chief Scientific and
Technology Officer,
Gilbert

What is electrospray (EHDA) and how does it work?

Critical parameters for controlling and optimizing performance?

What unique benefits can electrospray offer?

Where can it be best applied?

12:30

Lunch, exhibition and networking

Chair of the session: Chris Vernal, Commercial Director, Intertek

14:00

**Characterizing
Plume Development
Using Tandem
Aerodynamic
Particle Sizers**

Mr. Lance Jiang,
Aerosol CDT PhD
Researcher, University
of Bristol

Plume generation is a dynamic process; the tandem aerodynamic particle sizer (TAPS) method can aid in understanding the plume development.

Raising relative humidity could cause particles to grow and potentially alter the deposition profile.

Single particle characterization techniques can provide valuable information that can be translated into understanding plume dynamics.

The radial growth factor ratio can be used to quantify the magnitude of change in size for single particles and size distribution of plumes at varied conditions.

An increase in ethanol concentration leads to changes in the overall size distribution and plume development patterns.

14:15

**A 'Whole Aerosol'
Approach for
Aqueous Droplet
Inhalations**

Mr. Aurelien Martin,
PhD Student,
University of
Hertfordshire

Introduction to Particle Size Distribution (PSD).

Quick review of current regulatory guidance.

Impact of temperature and relative humidity on PSD via Laser Diffraction.

Impact of temperature and relative humidity on PSD via Impaction.

14:30

The Lifetime Of A Droplet: The Impact Of Droplet Microphysics And Aerosolisation Methods

Dr. Dan Hardy,
Founder, Microsol Ltd

Comparisons of the key timescales relevant to SMI droplets and drug delivery.

Exploration of the microphysical processes occurring within droplets.

Discussion the microphysics involved in delivering biologicals via droplets.

Comparisons of aerosolisation methods and devices.

15:00

Tea break and networking

Chair of the session: Dr. Jenny Lam, Associate Professor Pharmaceutics, University College London

15:30

Transforming Respiratory Care With Soft Mist Biologics

Dr. Daniela Traini,
Professor, Macquarie Medical School,
Macquarie University

Overview of the current inhaled biologics market, and the pipeline of inhaled therapies options.

Review of recent trials of inhaled biologics in SMIs.

Device considerations for inhaled biologics.

The suitability of soft mist inhalers for delivering biologics to the lungs.

16:00

Oldies but Goldies: Repurposing Heparin for Lung Diseases

Dr. Ayca Yıldız-Peköz,
Professor,
Department of Pharmaceutical Technology, Istanbul University

Repurposing of Heparin for viral lung diseases.

Demonstration of antiviral indication of Heparin.

Review of clinical studies of Heparin in SMI.

Development of animal models for the new generation SMIs.

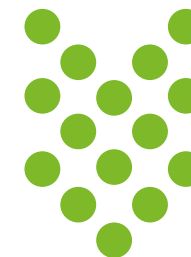
How SMIs enable lower dose higher efficacy of antivirals.

16:30

Final remarks & panel discussion

17:00

Close of the Day



**Have a
great day.
See you
next year?**

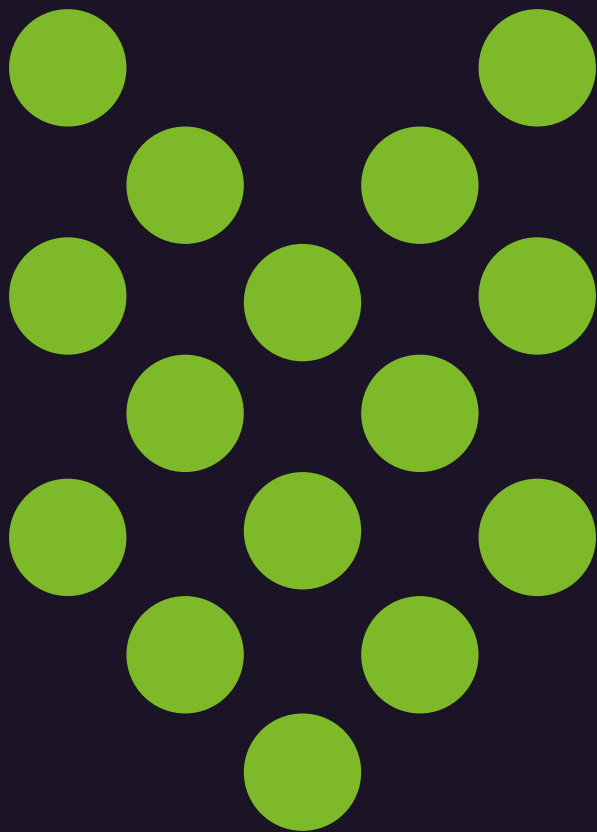
**SMI.London 2024, an event planned and
coordinated by Merxin Ltd**

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**Wi-Fi : Conference-Pullman
Password : Meeting1**

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