

AdheResp® Platform Technology



Mature and reliable mesh technology with Ni-Pd mesh membranes



Bluetooth connectivity technology and NFC activation to monitor adherence



Flexible customization platform and professional advice for product development

We also support feasibility and customization aerosol performance studies in our state-of-the-art laboratories, including

- Aerodynamic particle size distribution (cascade impactor)
- Droplet particle size distribution (laser diffraction particle size analyzer)
- Total drug substance delivered (breath simulator)
- Delivery rate and residue tests

Standard Platform Specifications

Model	HCM-ADP-01
Dimensions	Approx. 91 mm (L) x 55.5 mm (W) x 133 mm (H)
Weight	Approximately 170 g (including battery)
Battery	Li-ion (up to 300 min in one charge – USB-C port)
Power consumption	Approximately 1.2W
Battery voltage	3.5-4.2V
Min. fill volume	0.5 mL
Max. fill volume	8.0 mL
Nebulization rate	≥ 0.25 mL/min (tested in continuous output)

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Smart Breath-Actuated Mesh Nebulizer

Customizable mesh nebulizer platform for combination product development



The ideal delivery platform for your inhaled combination product development



The AdheResp® Smart Breath-Actuated Mesh Nebulizer is the exceptional delivery platform to develop your inhaled combination product



Breath Actuation
Suitable for children and adults (tidal breathing)




Connectivity
Bluetooth connectivity for treatment data transmission

Lock and Key
Activation system that allows the use of the device with a specific medication

Easy to Clean
Practical design for disassembling to allow ease of cleaning

Tactile and Visual Feedback
LED indicators and vibration feedback

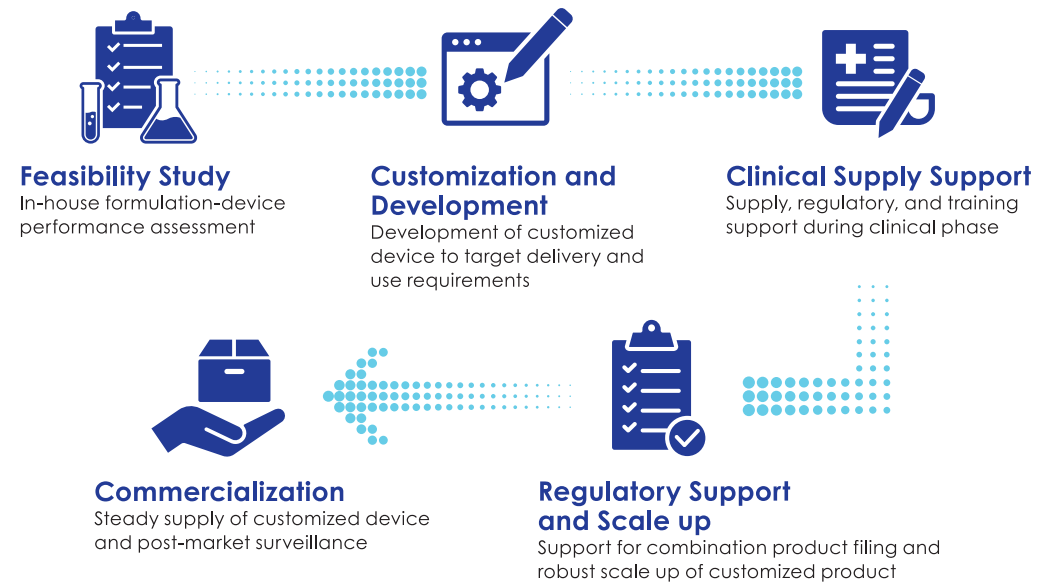
Deliver a wide range of formulations, including difficult-to-deliver drugs such as biologics and suspensions

Solutions ¹	Suspensions ²	Biologics ³
Terbutaline Sulfate 2 mL / 5 mg	Fluticasone Propionate 2 mL / 2 mg	Interferon Beta-1b 1 mL / 0.15 mg
		
Delivered dose: 88% Delivery rate: 442 µg/min MMAD: 3.47µm	Delivered dose: 72% Delivery rate: 139 µg/min DV50: 3.47µm	Delivered dose: 86% Delivery rate: 16.8 µg/min DV50: 4.59µm

Sources:
1 Drug Delivery to the Lungs Conference. Volume 32, 2021: 119-122
2 ONdrugDelivery. Issue 127, Nov. 2021: 38-41.
3 Respiratory Drug Delivery 2022. Volume 1, 2022: 235-240.



We offer an integrated development path for your drug-nebulizer development



Feasibility Study
In-house formulation-device performance assessment

Customization and Development
Development of customized device to target delivery and use requirements

Clinical Supply Support
Supply, regulatory, and training support during clinical phase

Commercialization
Steady supply of customized device and post-market surveillance

Regulatory Support and Scale up
Support for combination product filing and robust scale up of customized product

Together we develop the optimal drug-nebulizer product for your inhaled formulation, using the different customization levels of the AdheResp® platform

Hardware

- Indicators
- Medication container capacity
- Aerosol chamber volume
- PCB assembly

Mesh

- Mesh selection for pore size range

Firmware

- Triggering span
- Liquid detection
- Activation count and length
- Bluetooth connectivity