

# Inhalable Biologics Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

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## Abstracts

The Global Inhalable Biologics Market was valued at USD 3.8 billion in 2024 and is estimated to grow at a CAGR of 16.7% to reach USD 17.4 billion by 2034. This growth is largely driven by the rising incidence of both chronic and acute respiratory illnesses, including asthma, cystic fibrosis, chronic obstructive pulmonary disease (COPD), and pulmonary infections. Factors such as increasing pollution levels, an aging global population, tobacco use, and genetic predispositions are accelerating the prevalence of these conditions, thereby intensifying the need for effective therapeutic options. Regulatory bodies like the U.S. Food and Drug Administration (FDA) and the European Medicines Agency (EMA) are actively supporting the development and approval of inhalable biologics to meet these unmet medical needs.

Government initiatives, partnerships between public sectors and biopharmaceutical companies, and substantial investments in research and development are further encouraging market growth by improving the accessibility and affordability of these treatments. Collectively, these elements are paving the way for significant opportunities within this dynamic market. Inhalable biologics encompass the creation, manufacturing, and delivery of biologic therapies specifically designed for respiratory administration. These therapies are delivered through a variety of devices such as dry powder inhalers (DPIs), nebulizers, soft mist inhalers, and metered dose inhalers (MDIs).

The proteins and peptides segment led the market in 2024, with a valuation of USD 1.9 billion. These biological molecules are favored for their high potency, specificity, and biological effectiveness when administered via inhalation, offering a non-invasive alternative to traditional injections. The rapid therapeutic onset and ability to provide localized treatment make proteins and peptides highly attractive for managing a range

of chronic illnesses, particularly respiratory and metabolic disorders. Their efficacy in treating conditions like COPD, asthma, and cystic fibrosis has driven consistent demand. Additionally, the growing prevalence of respiratory ailments continues to fuel the need for inhalable proteins and peptides.

The dry powder inhalers segment held a 17.1% CAGR in 2024. DPIs enjoy significant market share due to their excellent stability, as biologics can be formulated in a dry state, avoiding the need for cold chain storage required by liquid formulations. This characteristic makes DPIs especially valuable for manufacturers targeting global distribution, including regions with limited refrigeration infrastructure. DPIs also offer a convenient, portable, and user-friendly option compared to nebulizers and MDIs, leading to improved patient adherence, especially for long-term treatment of chronic diseases. The capacity of DPIs to deliver therapeutic biologics deeply into the lungs - such as monoclonal antibodies, vaccines, and peptides - boosts their therapeutic effectiveness and supports their widespread adoption.

U.S. Inhalable Biologics Market accounted for USD 1.4 billion in 2024 and is growing steadily at a CAGR of 16.7%. The increasing pollution levels in the U.S. are contributing to a rise in respiratory problems like asthma, allergies, and nasal congestion. Heightened consumer awareness about air pollution's detrimental effects on respiratory health is driving demand for inhalable biologics as preventive and therapeutic options. The U.S. FDA plays a pivotal role by encouraging the development and approval of inhalable biologics through regulatory frameworks and incentive programs such as the Orphan Drug Designation. This regulatory environment, combined with growing patient demand and innovation, is propelling market growth in the country.

Leading companies competing in the Global Inhalable Biologics Market include AstraZeneca, Mannkind, United Therapeutics, Chiesi Pharmaceuticals, Merxin, Boehringer Ingelheim, Kamada Pharmaceuticals, Teva Pharmaceutical, AbbVie, CanSino Biologics, and F-Hoffman Roche. These key players continue to drive innovation and market expansion globally. To secure and enhance their market positions, companies in the inhalable biologics sector emphasize continuous research and development focused on improving drug delivery technologies and biologic formulation stability. They invest in next-generation inhaler devices that maximize drug deposition efficiency and patient compliance while minimizing side effects. Strategic collaborations and partnerships with regulatory agencies, research institutions, and healthcare providers help accelerate product approvals and expand market reach.

## **Companies Mentioned**

AbbVie, AstraZeneca, Boehringer Ingelheim, CanSino Biologics, Chiesi  
Pharmaceuticals, F-Hoffman Roche, Kamada Pharmaceuticals, Mannkind, Merxin,  
Teva Pharmaceutical, United Therapeutics

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