Brand Name: Breztri Aerosphere

Generic: budesonide, glycopyrrolate, formoterol fumarate

Type: small molecule

Year Accepted/Phase: 2020

# Mechanism:

Budesonide is a corticosteroid that reduces inflammation in the airways.

**Glycopyrrolate** is a LAMA that helps open the airways by relaxing the muscles around them.

**Formoterol Fumarate** is a LABA that helps keep the airways open for a longer period by relaxing the muscles around them.

## **Chemical Structure:**

# budesonide glycopyrrolate formoterol

$$\begin{array}{c} HO \\ O \\ HO \\ H \\ H \\ H \\ H \\ \end{array}$$

## Indication:

Breztri Aerosphere is indicated for the maintenance treatment of chronic obstructive pulmonary disease (COPD), including chronic bronchitis and/or emphysema, to reduce exacerbations and improve lung function.

#### Clinical trials:

#### **KRONOS Trial (Phase III)**

Pubmed: https://pubmed.ncbi.nlm.nih.gov/30232048/

**Purpose:** Evaluate the efficacy and safety of Breztri Aerosphere compared to dual therapies (glycopyrrolate/formoterol and budesonide/formoterol) and monotherapy (budesonide) in patients with moderate to very severe COPD.

Dates: Conducted from 2016 to 2018.

**Results:** The KRONOS trial showed that Breztri Aerosphere significantly improved lung function compared to dual therapies and monotherapy. Patients treated with Breztri had greater improvements in trough forced expiratory volume in one second (FEV1) and reduced the rate of moderate or severe COPD exacerbations.

**Impact:** The positive results from the KRONOS trial provided evidence supporting the use of Breztri Aerosphere as a triple therapy option for COPD, highlighting its superior efficacy in improving lung function and reducing exacerbations.

#### **ETHOS Trial (Phase III)**

**Pubmed:** https://pubmed.ncbi.nlm.nih.gov/32579807/

**Purpose:** Assess the efficacy and safety of Breztri Aerosphere compared to dual therapies in patients with moderate to very severe COPD and a history of exacerbations.

Dates: Conducted from 2016 to 2019.

**Results:** The ETHOS trial demonstrated that Breztri Aerosphere significantly reduced the annual rate of moderate or severe COPD exacerbations compared to dual therapies (glycopyrrolate/formoterol and budesonide/formoterol). Additionally, Breztri showed significant improvements in lung function and health-related quality of life.

**Impact:** The results of the ETHOS trial reinforced the efficacy of Breztri Aerosphere in reducing COPD exacerbations and improving lung function and quality of life, supporting its approval and use in clinical practice.