

# Alpha1 MZ Foundation - Information & Research

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## News & Research Update

Aug 24, 2024

Dear Subscribers,

Below is an update on a new oral medication development targeted toward the lungs.

Alvelestat (MPH966) is developed by Mereo BioPharma in the United Kingdom and is targeted for potentially treating severe Alpha-1 Antitrypsin Deficiency-associated Lung Disease.

As we know, Alpha1 Antitrypsin neutralizes the activity of the Neutrophil Elastase. Neutrophil Elastase is essential for fighting infections in the lungs, but it can also destroy your healthy lung tissue. After Neutrophil Elastase has had time to fight an infection, Alpha1 Antitrypsin shuts it off (**inhibits**) so it won't damage your lungs.

This new medication, Alvelestat, does something similar by inhibiting neutrophil elastase and, as such, slowing down lung damage for persons with an Alpha1 Antitrypsin Deficiency.

“Alvelestat is an **oral drug** being investigated for the treatment of Alpha-1 Antitrypsin Deficiency-associated Lung Disease. Alvelestat acts to inhibit the neutrophil elastase enzyme, and Mereo BioPharma believes that it has the potential to help protect people with AATD by slowing progressive lung damage. While AATD may affect both the lungs and the liver, Alvelestat's mechanism of action only addresses lung disease, which is the most common effect of AATD in adults.”

During their Phase 2 study, Mereo BioPharma evaluated Alvelestat as well as placebo over a 12-week period, examining three primary biomarker endpoints linked to AATD lung disease: blood neutrophil elastase activity, A $\alpha$ -val360, and the elastin breakdown product, desmosine. The result was that Alvelestat demonstrated significant and consistent reductions vs placebo in all three biomarkers.

Mereo BioPharma's latest press release, dated August 2024, indicates that they will start their Phase 3 study of Alvelestat by the end of the year.

**And, like always, enjoy the ride !!**

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