Phase II/III Randomized Double-Blind Comparison of Alpha-1 Antitrypsin (Kamada-AAT) with Active Comparator in Alpha-1 Antitrypsin Deficient Subjects

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Introduction

Alpha-1 Antitrypsin Deficiency (AATD) is a genetic disease that can cause lung damage and emphysema due to uncontrolled proteolytic activity of neutrophil elastase. The current standard of care for AATD is intravenous augmentation with plasma alpha-1 antitrypsin (AAT) to reach a circulating concentration of at least 11 µM. Kamada has developed a high purity, liquid, ready-to-use human plasma derived AAT. The aim of this study was to demonstrate non-inferiority of Kamada-AAT in achieving antigenic and functional AAT levels when compared to an equivalent comparator product on the market.

Study Design

Multi-Center, double-blind, randomized (2:1) with a partial cross-over.

Study Method

The study consisted of a 24 wk treatment phase and an additional 4 wk f/u. Of the participating 48 subjects, a subset of 13 subjects underwent bronchoalveolar lavage at the beginning of the study and again between wk 10-12. The treatment phase was divided into two periods. The first 12 wk period was a double-blind phase with Kamada-AAT vs. the comparator and was intended to demonstrate the primary endpoints. The second 12 wk period (wks 13-24), was open-label with all subjects receiving Kamada-AAT and intended for collection of additional data, including safety.

Results

In the Kamada-AAT group the mean levels of antigenic AAT and of functional AAT attained were 14.6 µM and 12.0 µM respectively. Four SAEs, none related to the study drug were reported (cholangitis, COPD exacerbation, pulmonary emboli and pneumothorax). AEs considered-related to the study drug were similar to those reported in product inserts of other commercial AAT products.

Conclusion

Treatment with Kamada-AAT is safe and well tolerated. The required serum levels of functional and antigenic AAT, as set by standard medical practice, were achieved and maintained with Kamada-AAT.

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Table 1: Trough Circulating Levels of Antigenic and Functional API (Average of Weeks 7-12)

Antigenic API (µM)		Functional API (µM)	
Kamada-API (N=33)	Active Comparator (N=16)	Kamada-API (N=33)	Active Comparator (N=16)
14.6 ± 2.0	13.5 ± 2.6	12.0 ± 1.8	11.7 ± 2.6

Data are shown as means ± SD

Figure 1: Trough Circulating Levels of Mean (SD) Antigenic API from Baseline to Week 12

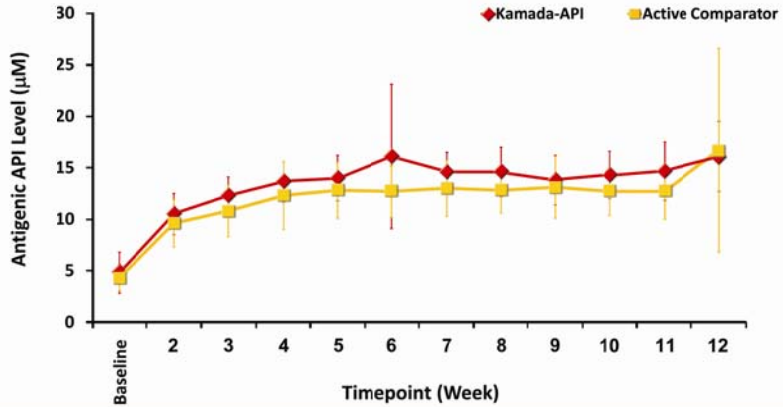

Figure 2: Trough Circulating Levels of Mean (SD) Functional API from Baseline to Week 12