

# KAMADA INVESTOR PRESENTATION

NASDAQ & TASE: KMDA

March 2017



# Forward Looking Statement

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This presentation is not intended to provide investment or medical advice. It should be noted that some products under development described herein have not been found safe or effective by any regulatory agency and are not approved for any use outside of clinical trials.

This presentation contains forward-looking statements, which express the current beliefs and expectations of Kamada's management. Such statements involve a number of known and unknown risks and uncertainties that could cause Kamada's future results, performance or achievements to differ significantly from the results, performance or achievements expressed or implied by such forward-looking statements. Important factors that could cause or contribute to such differences include risks relating to Kamada's ability to successfully develop and commercialize its pharmaceutical products, the progress and results of any clinical trials, the introduction of competing products, the impact of any changes in regulation and legislation that could affect the pharmaceutical industry, the difficulty of predicting U.S. Food and Drug Administration, European Medicines Agency and other regulatory authority approvals, the regulatory environment and changes in the health policies and structures of various countries, environmental risks, changes in the worldwide pharmaceutical industry and other factors that are discussed in Kamada's prospectus related to this offering.

This presentation includes certain non-GAAP financial information, which is not intended to be considered in isolation or as a substitute for, or superior to, the financial information prepared and presented in accordance with GAAP. The non-GAAP financial measures may be calculated differently from, and therefore may not be comparable to, similarly titled measures used by other companies. A reconciliation of these non-GAAP financial measures to the comparable GAAP measures is included in an appendix to this presentation. Management uses these non-GAAP financial measures for financial and operational decision-making and as a means to evaluate period-to-period comparisons. Management believes that these non-GAAP financial measures provide meaningful supplemental information regarding Kamada's performance and liquidity.

Forward-looking statements speak only as of the date they are made, and Kamada undertakes no obligation to update any forward-looking statement to reflect the impact of circumstances or events that arise after the date the forward-looking statement was made. You should not place undue reliance on any forward-looking statement and should consider the uncertainties and risks noted above, as well as the risks and uncertainties more fully discussed under the heading "Risk Factors" of Kamada's 2016 Annual Report on Form 20-F filed with the U.S. Securities and Exchange Commission.

# Kamada - Company Profile (KMDA)

## Commercial Stage Biotech

- Growing Biopharma company generating revenue and profits from 10 proprietary products
- Leader in Alpha-1 Antitrypsin (“AAT”) products globally, both commercialized and in development, and specific immunoglobulins
- Glassia®, for AAT deficiency is the first and only liquid, ready-to-use intravenous AAT product approved by FDA. Marketing by Baxalta/ Shire in US and by a network of distributors in 7 additional countries
- Fully Integrated Manufacturing and Distribution

## Rich Product Pipeline

- Inhaled AAT - submitted MAA in EU and released Phase 2 US study topline results
- Attractive pipeline of intravenous AAT is being developed in 3 Orphan Indications
- KamRAB for anti-rabies prophylaxis treatment (PDUFA date Aug 17) expected to be launched in U.S. through collaboration with Kedrion

## Financial Summary

- Market cap: ~ \$260 M <sup>(1)</sup>
- 2016 revenues = \$77.5 M
- Guidance: 2017 revenues \$100 M
- Cash: \$28 M, no debt <sup>(2)</sup>
- Founded in 1991. Public on TASE in 2005; IPO on Nasdaq in 2013.
- Shares Outstanding = 36.4 million. Employees = 377 <sup>(3)</sup>

Notes: 1. Market data as of February 24, 2017. 2. As of December 31, 2016 3. As of December 31, 2016.

# Kamada Investment Highlights

- **Globally Positioned Biopharmaceutical Company focused on Orphan Diseases and Plasma-Derived Protein Therapeutics**
- **\$100M of revenues expected in 2017**
- **Flagship Product Glassia® Approved for Alpha-1 Antitrypsin (AAT) Deficiency Disease**
  - Unique and Differentiated Product Profile Represents an Exciting Growth Opportunity
- **Advanced R&D Pipeline Focused on Various Orphan Indications**
- **Significant Opportunity for Novel Inhaled AAT for AAT Deficiency and Intravenous AAT Pipeline in Graft vs. Host Disease, Lung Transplant Rejection, Type-1 Diabetes**
- **Strategic Partnerships with Industry Leaders, Validating Kamada's Portfolio** → Baxalta/Shire, Chiesi, Kedrion and Pari
- **Integrated, Efficient and Scalable Best-in-class Patented Platform Technology**
  - Patents and know-how act as substantial barrier to entry
  - FDA approved facility
- **Strong Financial Profile with Increasing Profitability**
  - Expect to generate positive cash flow in 2017



# Diversified Product Portfolio with Extended Global Reach

## Diverse Portfolio of Predominantly Plasma-Derived Protein Therapeutics

Proprietary Products Segment  2016 Revenue: \$56.0M	<b>Respiratory</b>	<b>Glassia®</b>	Alpha-1 Antitrypsin (human)
	<b>Immunoglobulin</b>	<b>KamRAB™</b>	Anti-rabies immunoglobulin (human)
		<b>KamRho (D) IM</b>	Rho(D) immunoglobulin (human)
<b>KamRho (D) IV</b>		Rho(D) immunoglobulin (human)	
<b>Snake Antiserum</b>		Anti-snake venom	
<b>Other Products</b>	<b>Heparin Lock Flush</b>	Heparin sodium	
	<b>Kamacaine 0.5%</b>	Bupivacaine HCl	
	<b>Human Transferrin</b>	Transferrin (Diagnostic grade)	

Distribution Segment*  2016 Revenue: \$21.5M	<b>Respiratory</b>	<b>Bramitob Foster</b>	Tobramycin Beclomethasone+Formoterol
	<b>Immunoglobulins</b>	<b>IVIG 5%</b>	Gamma globulins (IgG) (human)
		<b>Varitect</b>	Varicella zoster immunoglobulin (human)
		<b>Hepatect CP</b>	Hepatitis B immunoglobulin (human)
<b>Megalotect</b>		CMV immunoglobulin (human)	
	<b>Zutectra</b>	Hepatitis B Immunoglobulins S.C	
<b>Critical Care</b>	<b>Heparin sodium Injection</b>	Heparin sodium	
	<b>Albumin</b>	Human serum Albumin	
<b>Other</b>	<b>Factor VIII</b>	Coagulation Factor VIII (human)	
	<b>Factor IX</b>	Coagulation Factor IX (human)	
	<b>Ixiaro</b>	Japanese encephalitis	

## Global Presence with Exposure to Emerging Markets



Countries where Kamada operates

\*Kamada distributes products directly in Israel through its own sales force

## Growing Proprietary Products Segment Through Glassia®

# AAT Deficiency: Relatively Common, Potentially Lethal, Often Undiagnosed

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Genetic/Hereditary condition causing decreased levels of AAT in blood and tissues



Affects at least 100,000 people in the US and a similar number in Europe



Predisposes to lung and liver diseases

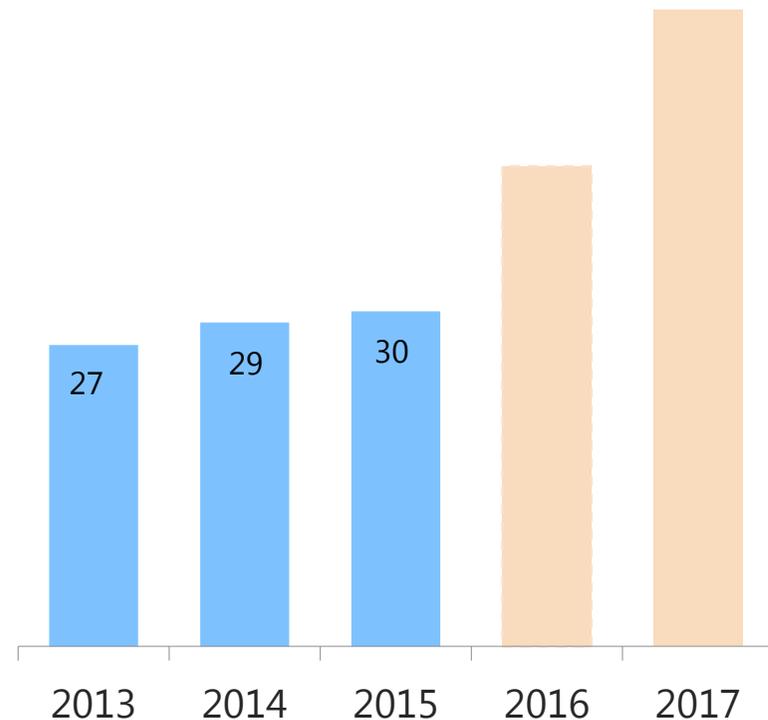
- AAT deficiency-associated lung disease is characterized by airway obstruction and destructive changes in the lungs (Emphysema)

# Glassia® is a Differentiated Product

## Key Product Advantages

- Glassia® is the first and only liquid, ready-to-use, IV plasma-derived AAT product
  - ✓ No reconstitution required
  - ✓ Reduces treatment time
  - ✓ Reduces risk of contamination and infection
- Kamada's highly purified liquid product is manufactured through a proprietary process
- Glassia® is sold in the U.S. by Baxalta, a leading plasma therapeutics company (now part of Shire)
- Patient count on Glassia has increased 25%/yr. in each of years 2014, 2015 and 2016, growing our market share
- Significantly faster infusion rate was approved by the U.S. FDA (2014)
- Self-infusion approved May 2016

## AATD (IV) Product Sales w/o Milestone Revenues (in \$M)



Glassia® is sold in 8 countries, with majority of sales in the U.S.

# Growth of Glassia® Driven by Strategic Partnership with Baxalta (part of Shire)

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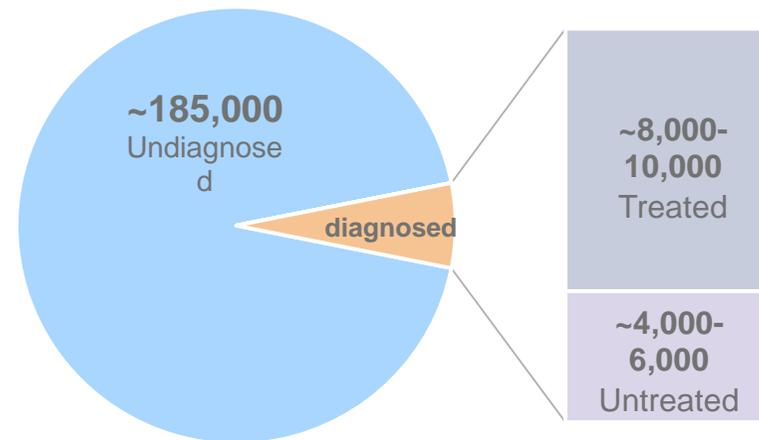
- Commencement: Sales to Baxalta started in September 2010
- Agreements: Distribution, technology license, and supply of fraction IV
- Product: AAT IV (Glassia®), including all future AAT IV indications in the territories below
- Territories: U.S., Canada, Australia and New Zealand
- Agreement recently extended in October 2016:
  - Baxalta to distribute Glassia® produced by Kamada through 2020 and thereafter Glassia® produced by Baxalta
  - Minimum revenues of \$237M between 2017 through 2020 (compared to a remaining minimum commitment for 2016-2018 of \$97M prior to last amendment)
  - Starting in 2021 Baxalta will pay royalties on sales of Glassia® produced by Baxalta

**Baxalta** 

# Significant Opportunity to Expand the AATD Market

- Patients suffering from AAT Deficiency (“AATD”) remain under-identified and under-treated
- Only ~6% of cases treated in the U.S. and ~2% in EU
- Current market estimated at \$800M WW
- US Market is growing by 10% annually, mainly through expanding diagnostics sponsored by the drug companies
- Simple blood test for diagnosis expected to continue to impact demand
- Greater AAT use in Europe and other geographies could further accelerate market growth
- Chronic therapy creates sustainable product revenue opportunity

**AATD Prevalence: ~200,000**  
**Yet Fewer than 5% of Potential Patients in the U.S. and Europe are Treated**



Average annual cost of treatment estimated at ~\$80-\$100K per patient

Source : Alpha 1 Foundation, MRB and Company estimates

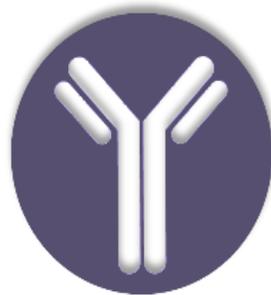
# AAT Serves as An Exciting Potential Therapy for Multiple Indications

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*AAT is a safe plasma-derived protein with known & newly discovered therapeutic roles*



***Anti-Inflammatory***



***Immune-modulatory***



***Tissue Protective***



***Antimicrobial***

# High Value Pipeline Focused on Orphan Indications

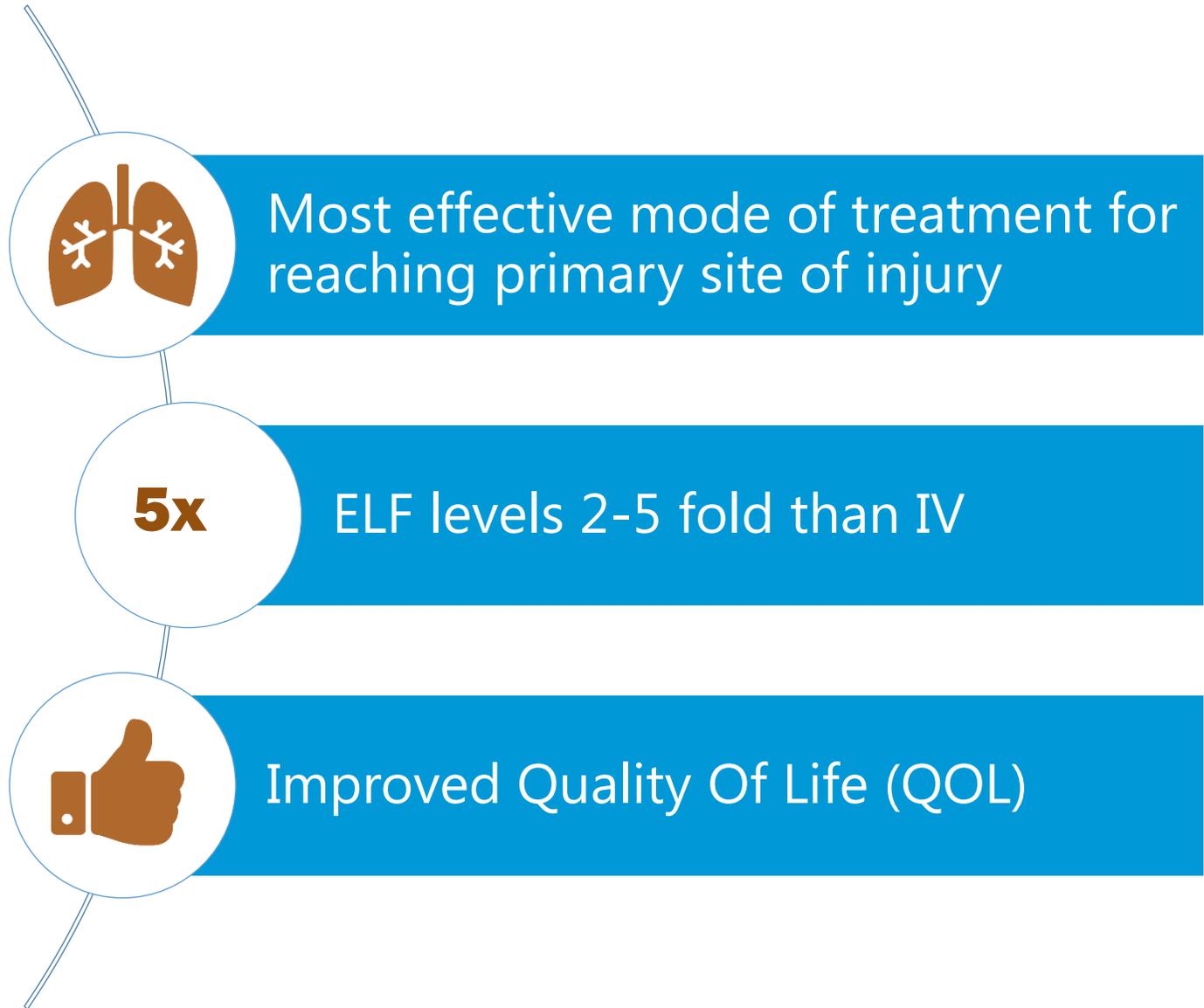
Product	Indication	Phase I	Phase II	Phase III	Market	Partners
Intravenous AAT	AAT Deficiency	FDA Approved (2010)				U.S.: 
D1-AAT (IV)	Type 1 Diabetes*	POC Study Completed		Double Blind, Ph II In Process		U.S.: 
G1-AAT (IV)	GVHD*	Phase I/II In Process		Phase II/III initiating		U.S.: 
L1-AAT (IV)	Lung Transplant	Phase II In Process				U.S.: 
Inhaled AAT	AAT Deficiency*	EU: Completed, MAA Submitted			U.S.: Phase II Completed	EU: 
KamRAB (IM)	Prophylaxis for Rabies	US : Completed, BLA submitted				U.S.: 

\* Orphan Drug Designation



## Inhaled AAT to Treat Alpha-1 Antitrypsin Deficiency (AATD)

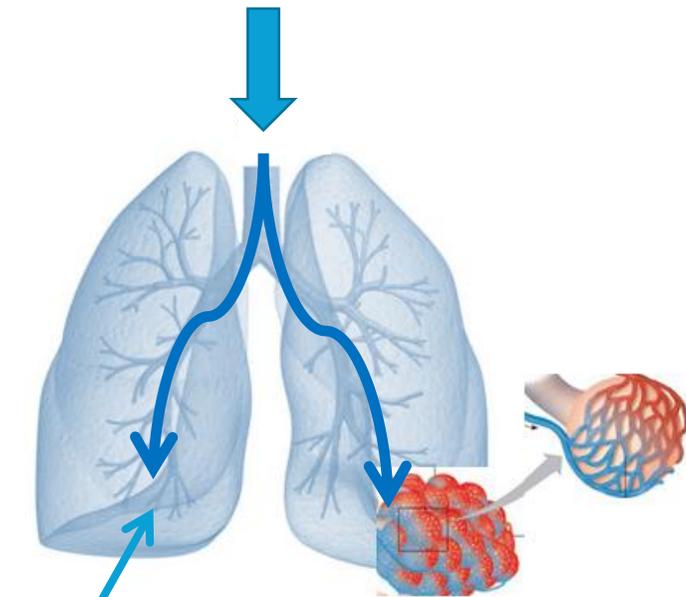
## Benefits of Inhaled AAT



ELF = Epithelial Lining Fluid

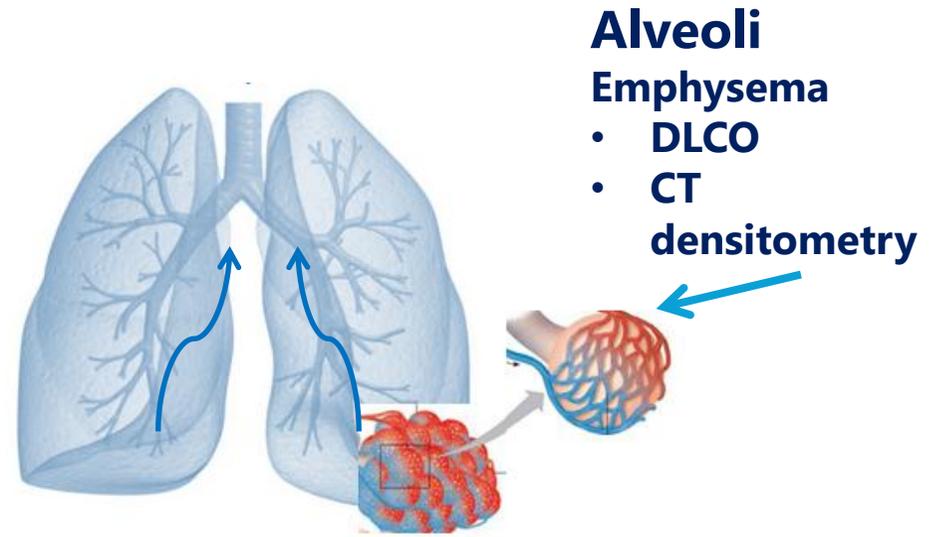
# Inhalation Enables Delivery of AAT 5x Higher Than Intravenous

**Inhaled AAT** ~ 50% of the dosage  
reaches **airway tree** and alveoli



**Airway  
Obstruction**

- FEV1/SVC
- FEV1



**Alveoli  
Emphysema**

- DLCO
- CT  
densitometry

**Intravenous AAT** ~ 2% of the dosage  
reaches alveoli and **airway tree**

# Inhaled AAT for AATD: Completed Pivotal Phase II/III Trials in Europe and Phase II in the U.S.

	EU Phase II / III trial - Completed	US Phase II - Completed
<b>Description</b>	<ul style="list-style-type: none"> <li>• Over 160 AATD subjects, majority are treatment-naïve</li> <li>• Double blind, placebo controlled, randomized</li> <li>• Multi-center international study: Western EU (in 7 countries) and Canada</li> <li>• 80% power to detect a difference between the two groups at 1 year</li> <li>• Powered for 20% difference between the two groups</li> <li>• Power is based on number of events collected during the study</li> </ul>	<ul style="list-style-type: none"> <li>• Randomized; Sample size of 36 subjects</li> <li>• Double blind, placebo controlled, randomized</li> </ul>
<b>Route &amp; Dosage Form</b>	<ul style="list-style-type: none"> <li>• Inhalation of human AAT, 160mg total, twice daily, ~10-15 minutes using eFlow® device</li> </ul>	<ul style="list-style-type: none"> <li>• Inhalation of human AAT; two dosage groups (80mg and 160mg daily); eFlow® device</li> </ul>
<b>Clinical Endpoints</b>	<ul style="list-style-type: none"> <li>• Exacerbation events (Primary: time to first moderate/severe, Secondary (among others): rate, severity of first event; Safety: Lung function)</li> </ul>	<ul style="list-style-type: none"> <li>• Primary: Concentration of AAT in ELF</li> <li>• Secondary: safety and tolerability, Concentration AAT in serum, ELF inflammatory analytes</li> </ul>
<b>Duration</b>	<ul style="list-style-type: none"> <li>• 50 week treatment in DB period; daily treatment</li> <li>• 50 week open label extension ; daily treatment</li> <li>• Study completed</li> </ul>	<ul style="list-style-type: none"> <li>• 12 weeks double blind</li> <li>• 12 weeks open label extension</li> <li>• Topline released August 16</li> </ul>

# Inhaled AAT Phase II/III Trial: Summary of Results

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## Results demonstrate:

1. Primary and secondary endpoints did not demonstrate statistical significant difference.
2. **Efficacy in lung function** (statistically significant)
3. **Change in the nature of exacerbations** - Reduction in number of Type 1- exacerbations (trend) and reduction in dyspnea score (statistically significant) for first exacerbation
4. **Safe and tolerable** drug

## Kamada submitted MAA in March 2016 on the basis of:

1. **Orphan** designated drug
2. **Demonstrated efficacy in lung function**
3. **Unmet patient need** - Clinical primacy in efficacy data for Inhaled AAT and AATD in general
4. EMA confirmed review of **post-hoc analysis** and **“totality of the data”**, irrespective of not meeting primary endpoint
5. Precedence for approved drugs of similar nature (ODD, post-hoc analyses and existing patient unmet medical need)

# Inhaled AAT Phase II/III Trial Results\*: Spirometry Measures (MMRM\*\*)

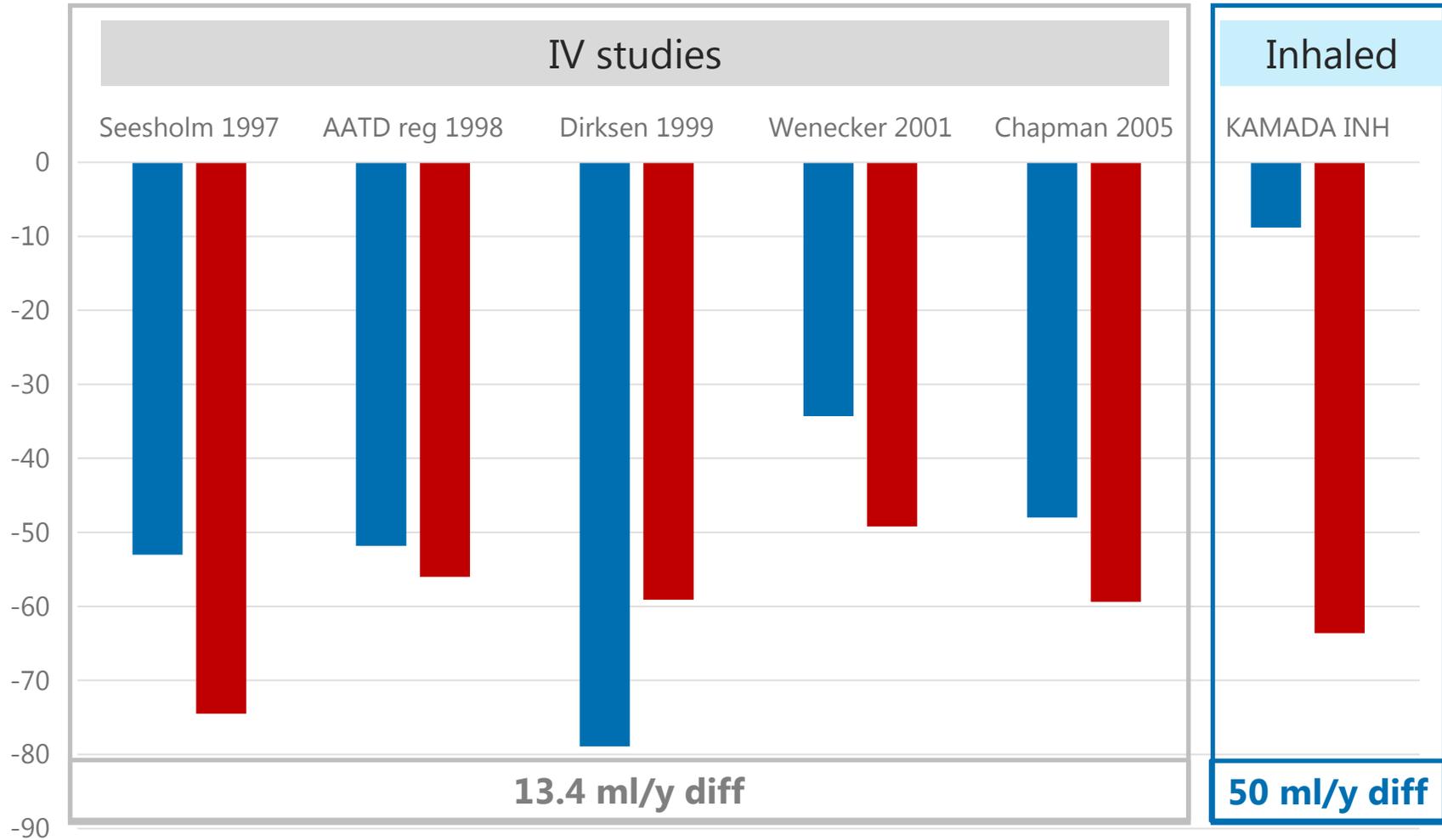
Lung Function	Least Squares Means (SEM) (Changes at Week 50 from Baseline)		P-Value** (Changes at Week 50)	Least Squares Means (SEM) method: Overall treatment effect		P-Value** (Overall Effect)
	AAT (N= 84)	Placebo (N= 81)		AAT (N= 84)	Placebo (N= 81)	
FEV <sub>1</sub> (L)	-12mL	-62mL	0.0956	+15mL	-27mL	<b>0.0268</b>
FEV <sub>1</sub> (% of predicted)	-0.1323	-1.6205	0.1032	0.5404	-0.6273	0.0658
FEV <sub>1</sub> /SVC (%)	0.6183	-1.0723	<b>0.0132</b>	0.6230	-0.8715	<b>0.0074</b>

\*Safety population

\*\* MMRM = Mixed Model Repeated Measure

FEV = Forced Expiratory Volume. SVC = Slow Vital Capacity.

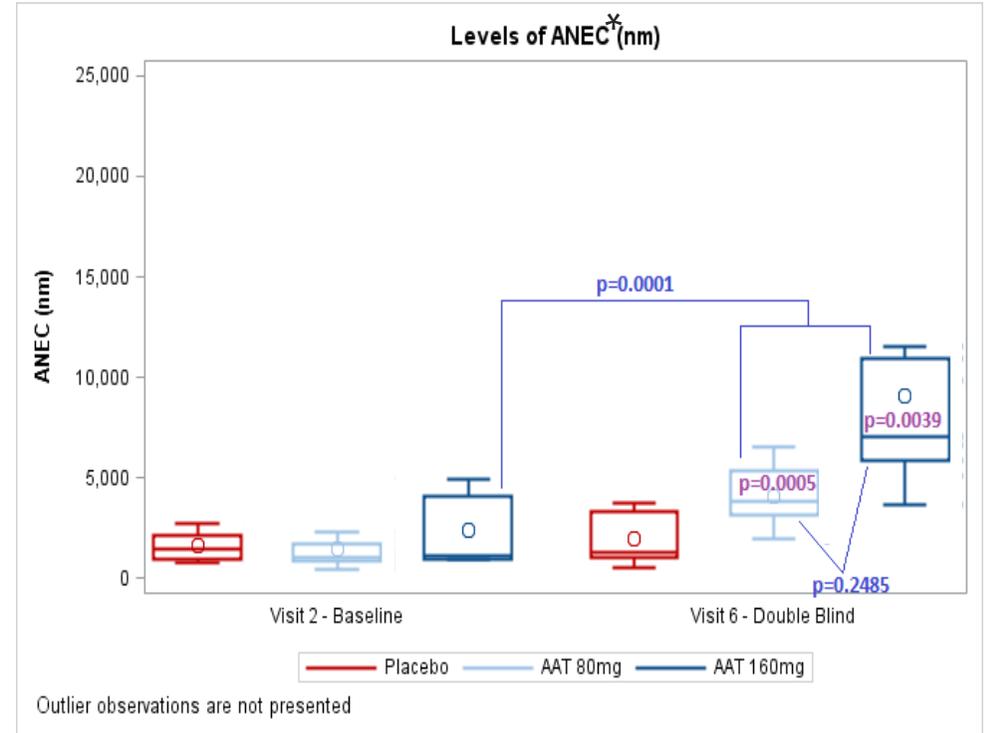
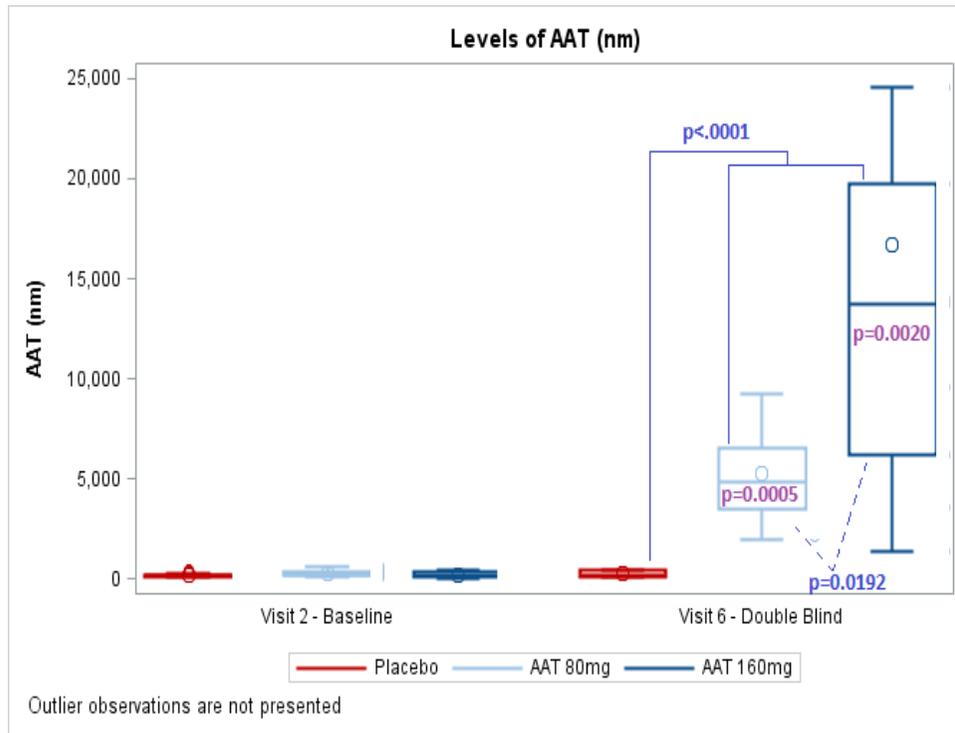
# Inhaled AAT slowed FEV1 deterioration better than former IV trials



Chapman KR, Stockley RA, *COPD*:6:177-184

■ AAT ■ Placebo

# Inhaled AAT Phase II Topline Result: ELF AAT Antigenic Level & Inhibitory Capacity Increased Significantly



- Inhaled AAT is the most effective mode of treatment for reaching the primary sites of potential lung injury, and restoring AAT inhibitory capacity
- Trial demonstrated strong safety profile in AATD patients

\*ANEC- Anti-Neutrophil Elastase inhibitory capacity

# Inhaled AAT: Moving Forward

## EMA: EU Front

- MAA submitted (centralized procedure) March 2016
- Day 120 comments received, response expected early 2017
- Expecting mid-2017 approval



EUROPEAN MEDICINES AGENCY

## FDA: U.S. Front

- Approach FDA with results to obtain guidance on the clinical/ regulatory pathway for licensing the IH AAT by Kamada in the U.S.
- Expecting guidance from FDA H1/2017 and approved IND for registration trial H2/2017



- Alpha-1 Foundation Survey Confirms Inhaled-AAT as a Preferred Treatment Approach<sup>(2)</sup>
- Inhaled AAT opportunity is estimated by Kamada at \$1-2 billion (1.5-2.0x larger than current IV AAT augmentation market of \$900 MM)

Notes: 1. <http://www.fda.gov/BiologicsBloodVaccines/NewsEvents/WorkshopsMeetingsConferences/ucm435242.htm>

2. <http://www.ncbi.nlm.nih.gov/pubmed/23537112>

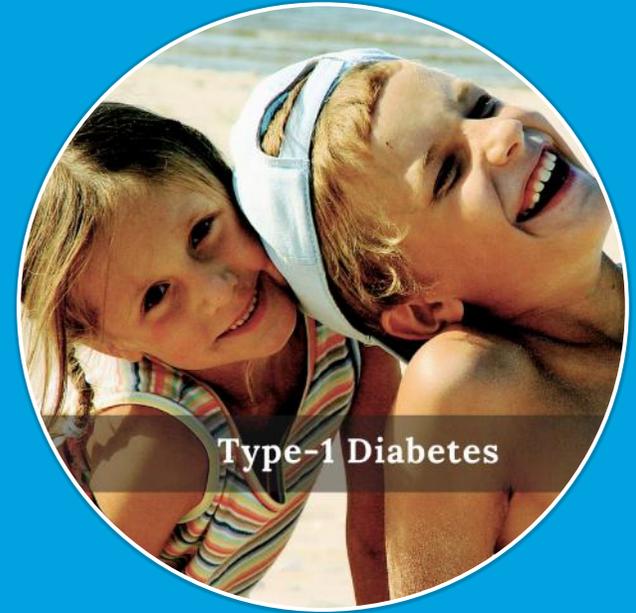
# Immune-Modulatory Indications



Graft Versus Host Disease

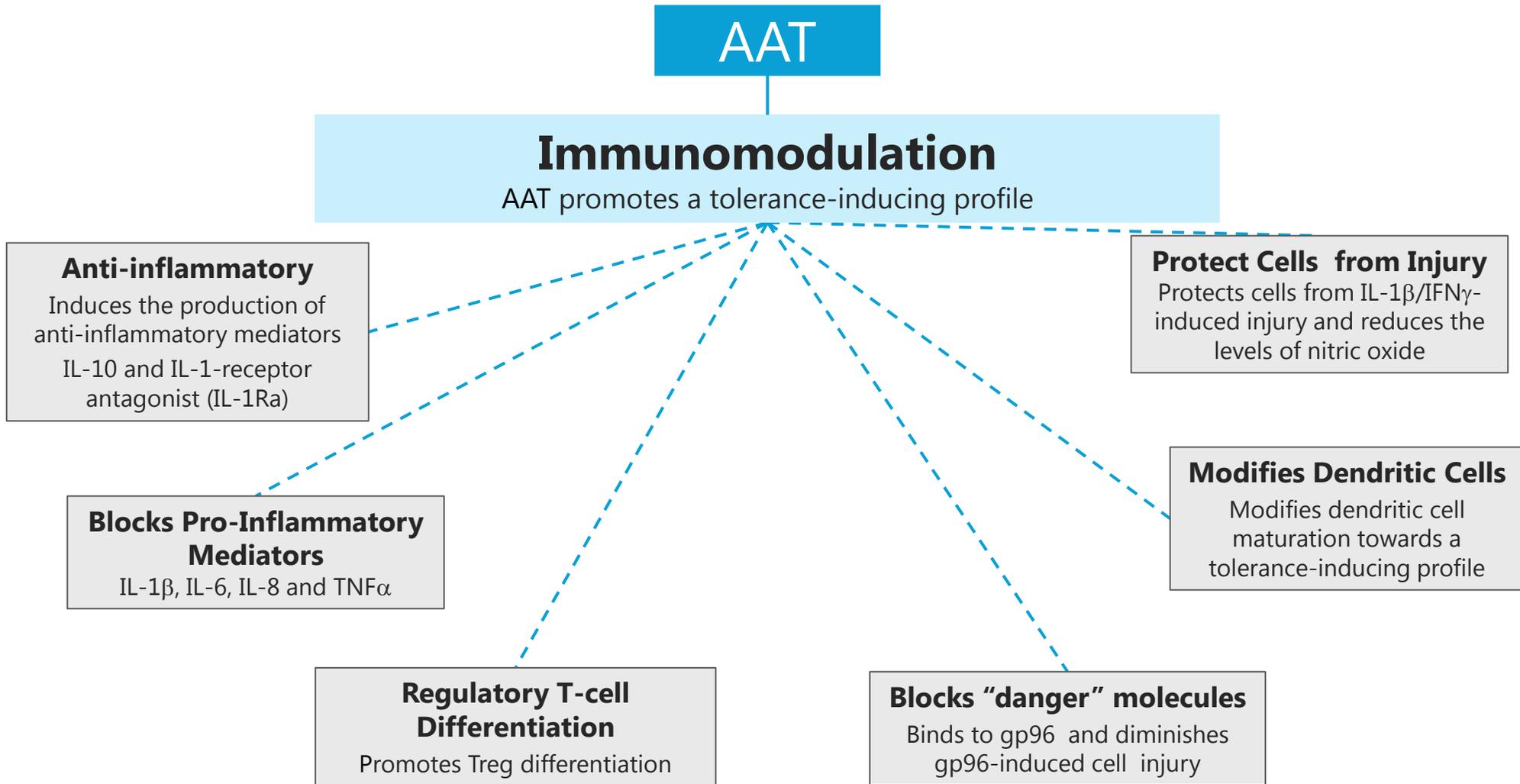


Lung Transplantation



Type-1 Diabetes

# Mechanistic Evidence - Alpha1-Antitrypsin, a Therapeutic Approach





## AAT to Treat Graft Versus Host Disease

# Graft Versus Host Disease (GVHD): A Major Complication in Stem Cell Transplantation

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## Deadly side effects

20%

of deaths are caused  
by GVHD  
complications

50%

are non responsive  
to steroids

70%

mortality in patients  
with grade III/IV GVHD

## Searching for an effective treatment

- Standard of care prophylaxis exhibits poor efficacy/severe AE's
- No FDA-approved specific drug for GVHD indication – An Unmet Medical Need

*Estimated market size: ~ \$700 million*

# Proof-of-Concept Study with AAT (IV) for Graft-Versus-Host Disease

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*Phase I/II study open label of  
24 patients with steroid-resistant  
GVHD following allogeneic bone-  
marrow stem cell transplant*

**Dose:** 4 dose groups - 15 day regimen. Doses given on days: 1, 3, 5, 7, 9, 11, 13 and 15

**Primary End Points:** % of patients at each dosing cohort who experience no toxicity and in whom GVHD is stable or improved

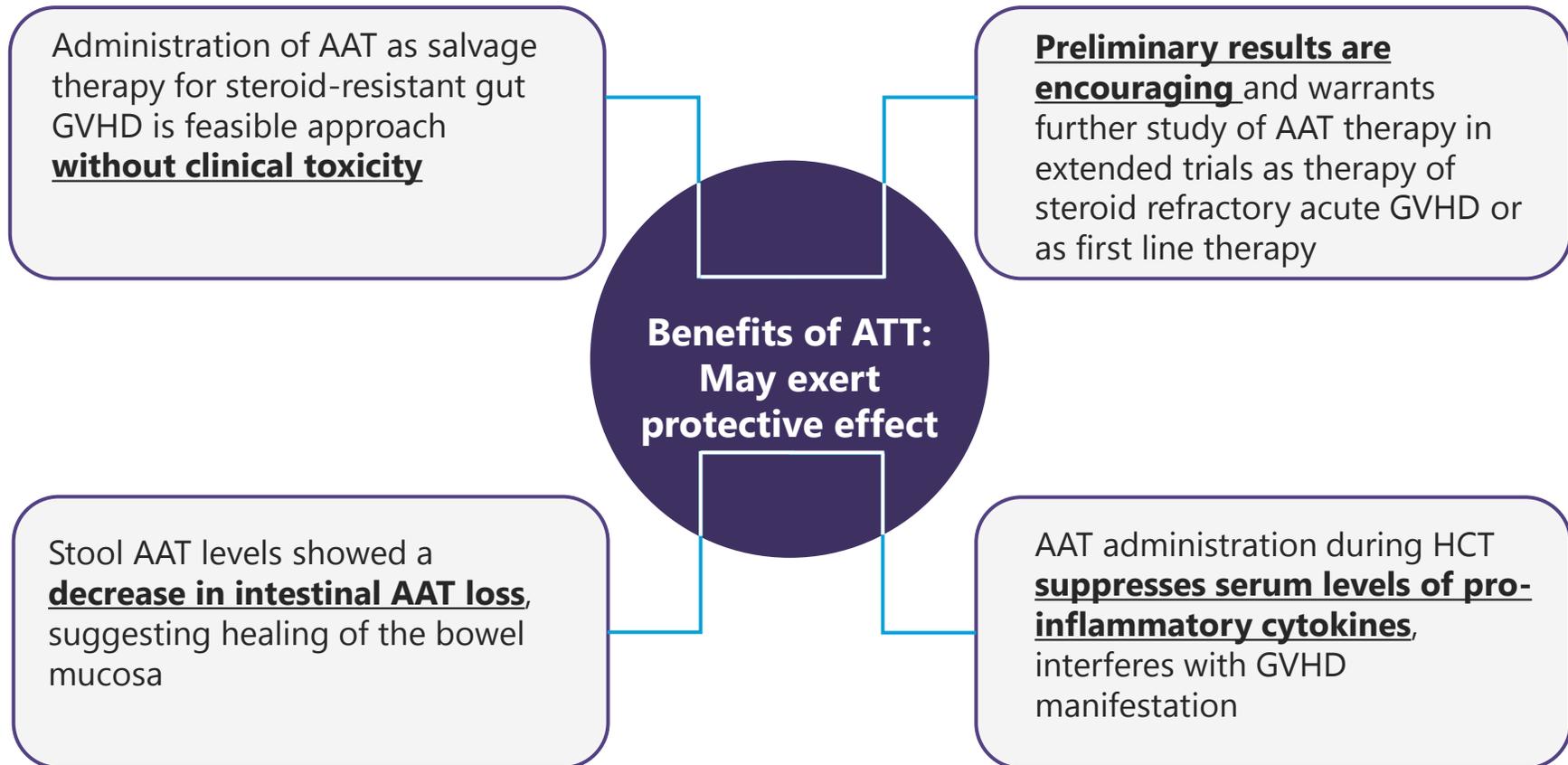
**Secondary End Points** - AAT levels, cytokine levels, infection rate, progression of GVHD, SAEs

*In cooperation with Baxalta/Shire; conducted at the Fred Hutchinson Cancer Research Center in Seattle, Washington*

**Study may serve as a potential platform,  
to expand the use of AAT beyond GVHD to other transplantations,  
based on a similar mechanism of action**

# AAT May Exert a Protective Effect on the Bowel Mucosa in Gut GVHD

*Study results have indicated that AAT may exert healing of the bowel mucosa in gut GVHD slowing/stopping the disease progression and re-modulation of the immune attack*



# Images from Phase I/II Clinical Study Interim Report

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## Before

Duodenitis Suspect severe  
upper and lower GVHD



## After 8 doses of AAT

Moderate mucosal denudement  
and edema noted throughout  
the duodenum



# Initiating Phase II/III Study with AAT (IV) for GVhD in Collaboration with Shire

*Pivotal phase II/III study, randomized, two-part, multi-center, placebo controlled, with AAT (IV) for the treatment of acute Graft-Versus-Host Disease*

**Study objective:** to evaluate the safety and efficacy of AAT (IV) as an add-on biopharma-co-therapy to standard-of-care steroid treatment as the first-line treatment in subjects with acute GvHD with lower GI involvement

**Design:** A two-part Phase 2/3 study

- Part 1 will evaluate the safety, efficacy and PK in approximately 20 subjects
- Part 2 will compare the safety and efficacy of AAT (IV) vs. placebo in a total of approximately ~150 randomized subjects

**Primary Endpoint:**

Proportion of patients achieving Overall Response (OR)\* by Day 28



\*OR is defined as Complete Response (CR) and Partial Response (PR); GvHD CR is complete resolution of all signs and symptoms of acute GvHD in all organs without intervening salvage. GvHD PR is improvement of one stage in one or more organs involved in GvHD without progression in other organs.

# Advancing the GvHD Opportunity

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## US (in collaboration with Shire):

Initiated Pivotal phase II/III study, randomized, two-part, multi-center, placebo controlled, with AAT (IV) for the treatment of acute Graft-Versus-Host Disease.

## EU (independent):

Positive Scientific Advice from EMA for the proposed development program. Received guidance for the design of the planned Phase 2/3. Intend to submit and receive approval for a CTA in 2017. Will conduct European study in parallel with US study.



# AAT to Treat Lung Transplant Rejection

# Lung Transplant Rejection - Attractive Opportunity To Deliver A Differentiated Therapy

## Lungs have the highest rate of rejection among transplanted solid organs

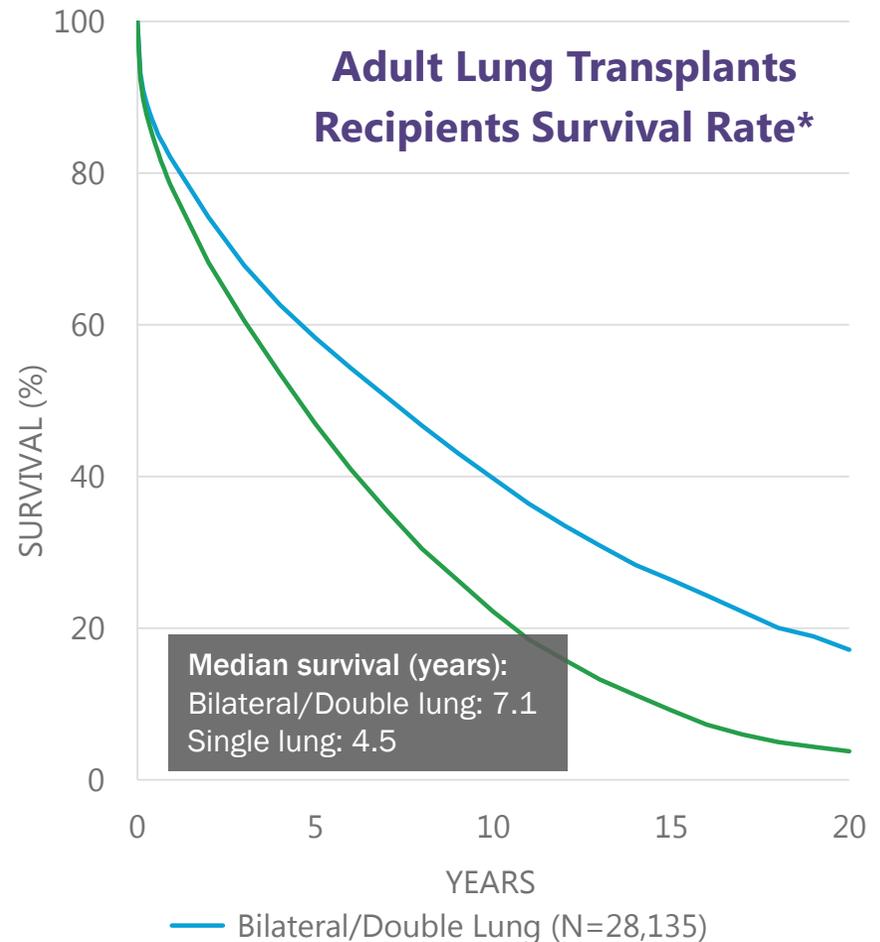
- ~33% will experience acute rejection within the first year
- ~50% will develop chronic rejection within the first 5 years

## No new treatment options have been made available for years

- Physician feedback indicates strong need for improved post-transplant therapies over existing options (toxicity, immunosuppressive)

## Kamada initiated the first clinical trial designed to prevent lung transplant rejection

Potential market size: ~ \$400-500 million



\*JHLT. 2015 Oct; 34(10): 1264-1277

# On Going Phase II Study With AAT IV For Prevention Of Lung Transplant Rejection

*Phase II: Prospective, open label, standard of care (SOC) controlled, randomized, parallel group single center study*

In collaboration with Baxalta/Shire,  
Led by Prof. Mordechai Kramer,  
Rabin Medical Center

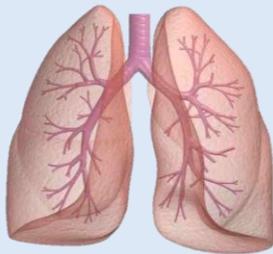
**Study objective:** To assess the safety of AAT IV administration and the effect on rate and severity of acute and chronic lung rejection as well as pulmonary infections, in subjects undergoing first lung transplantation

**Design:** 30 lung transplant recipients randomized 2:1 to receive AAT IV on top of standard-of-care (SOC) or SOC alone, for 48 weeks plus 12 months of follow-up period

## **Primary Endpoints:**

**Safety** - Related adverse events (AEs)

**Efficacy** - Changes in FEV1 from baseline and overall effect, incidence and rate of acute lung rejection



“Preclinical data published in Blood suggest that IV AAT has an immunomodulatory and anti-inflammatory mechanism of action that would support its efficacy in the prevention of lung transplant rejection”  
(Prof. Mordechai Kramer)



# AAT to Treat Newly Diagnosed Type-1 Diabetes

# AAT (IV) is a Promising Potential Treatment for Newly Diagnosed Type -1 Diabetes Patients

Market Opportunity	Drug Impact	Benefits
<p><b>Type-1 Diabetes</b> occurs when the immune system attacks and destroys beta cells in the pancreas</p> <ul style="list-style-type: none"><li>• More than 10 million suffer from Type 1 diabetes globally</li><li>• 100,000 new patients/year diagnosed globally</li><li>• In the U.S. alone: 3 million patients, with 30,000 new patients diagnosed annually</li></ul>	<p><b>Studies have shown that AAT protects beta cell islets</b></p> <ul style="list-style-type: none"><li>• Delays the onset of autoimmune diabetes</li><li>• Reduces the incidence of diabetes</li><li>• Inhibits insulinitis and beta-cell apoptosis</li><li>• Decreases beta-cell inflammation</li></ul>	<p><b>Preservation of beta cells correlates with reduced risk of long-term complications</b></p> <ul style="list-style-type: none"><li>• DCCT* indicated that patients with C-peptide on MMTT <math>\geq 0.2</math> pmol/mL were less likely to develop retinopathy and hypoglycemia complications (Greenbaum et al 2012)</li><li>• Higher / sustained levels of C-peptide correlate with reduced incidences of the microvascular complications (Steffes et al 2013)</li></ul>

\*Diabetes Control and Complications Trial

# Newly Diagnosed Type-1 Diabetes Clinical Trial Ongoing

## *Phase II: Double-Blind, Randomized, Placebo- Controlled, Multicenter Study*

**Study objective:** To evaluate the efficacy and safety of human, Alpha-1 Antitrypsin (AAT) in the treatment of new onset Type 1 Diabetes

**Design:** Two doses, placebo controlled, randomized with ~70 pediatric and young adult patients

**Expected duration: One year**, enrollment complete, Last Patient Out expected January 2017  
→ Topline results expected mid-2017

**Endpoints:** In accordance with FDA / EMA guidance for clinical trials evaluating beta-cell preservation (C-peptide parameters, HbA1C, hypoglycemic events and insulin daily dose)

**Planned Extension:** Patients that completed the study will be eligible to enter into an Investigator Initiated study for an additional one year treatment



# KamRAB: Human Rabies Immune Globulin

Kamada's human rabies immune globulin is a post-exposure prophylaxis (PEP) for rabies

## U.S. Opportunity: Strategic agreement with Kedrion S.p.A for the clinical development and marketing of KamRAB in U.S.

- U.S. pivotal Phase II/III clinical trial met primary endpoint of non-inferiority when measured against an IgG reference product
- Biological License Application submitted and accepted for review by FDA; PDUFA date Aug 29, 2017
- U.S. launch expected by 2017
- In the U.S., there are **~40,000 post-exposure prophylaxis treatments** administered each year, representing **~\$100 million market opportunity**
- Currently, only one significant provider of anti-rabies immunoglobulin exists

## Product marketed by Kamada in 10 countries currently

- Our product has been marketed since 2003, over 1 million vials sold to date
- WHO estimates ~10 million people worldwide require medical treatment against rabies each year after being exposed to an animal suspected of rabies infection



# Financials



**KAMADA**  
High Quality Pharmaceuticals

# Compelling Investment Driven by Multiple Pillars of Growth

## Existing Anchor Products

- Profitable unit
- Sales in 15 countries
- Predictable, stable business

**(\$0.5B)\***

## Glassia® (AAT-IV) in U.S.&ROW

- Estimated only ~5% of cases treated in U.S.
- Annual therapy costs ~\$80K – \$100K per patient
- Partnered with Baxalta solely for IV products in the U.S. (agreement also covers Canada, Australia and New Zealand)
- Key geographies retained

**(100K pts., \$0.75-1B)\***

## Inhaled AAT for AATD in Europe & US

- Estimated only ~2% of cases treated in Europe
- Estimated only ~5% of cases treated in US
- Orphan drug designation in US and EU
- Partnered with Chiesi for Inhaled AAT for AATD in Europe only
- Distribution (no technology out-licensed in Europe)
- Unencumbered asset in U.S.

**(200K pts., \$1-2B)\***

## New Geographies

- Potential to sell existing and new products into new geographies
- Rabies Ig to U.S. and additional territories
- Capital-efficient strategy minimizes outlay required by Kamada

**(\$0.5B)\***

## Additional Unencumbered Pipeline Products

- **G1-AAT (IV):** GVHD phase I/II in process **(\$0.5-1B)\***
- **L1-AAT (IV):** Lung transplant rejection entering phase I/II **(\$0.5B)\***
- **D1-AAT (IV):** Type-1 diabetes in Phase I/II **(100K pts., \$3.5-5B)\***

(All AAT (IV) are unencumbered outside of U.S., Canada, Australia and New Zealand)

## The Kamada Pillars

### Existing Anchor Products

+

### Glassia® (AAT-IV) in U.S.

+

### Inhaled AAT for AATD in Europe & U.S.

+

### New Geographies

+

### Additional Unencumbered Pipeline Products

\* Estimated market potential

# Strong Financial Profile with Revenue Growth and Expanding Profitability

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- **Stable, profit generating revenue stream from marketed products**
- **Revenue Guidance: \$100 M in 2017**
- **Strategic partnership model results in efficient operating expenses**
  - Baxalta/Shire purchase obligations provide predictable revenue through 2020 and royalties thereafter
  - Kedrion partnership for Rabies Ig expected to increase revenues and profitability from 2018 and beyond
- **Better product mix expected to improve gross margin**
- **Pipeline products expected to accelerate revenue growth**
  - Profits from marketed products to partly fund clinical development programs
- **Low capital expenditures to support infrastructure investments in order to meet future demand**
- **Preferred tax treatment under Israeli law**
- **Cash of \$28.6 M (as of December 31, 2016)**



# Sustained Revenues and Gross Profits are Funding R&D

\$ M	FY2014	FY2015	FY2016	% change
Proprietary Products	44	43	56	30%
Distribution	27	27	21	(22%)
<b>Total Revenues</b>	<b>71</b>	<b>70</b>	<b>77</b>	<b>10%</b>
<b>Gross Profit</b>	<b>15</b>	<b>16</b>	<b>22</b>	<b>37%</b>
R&D	(16)	(17)	(16)	
S&M and G&A	(10)	(11)	(11)	
<b>Net Loss</b>	<b>(13)</b>	<b>(11)</b>	<b>(7)</b>	<b>(36%)</b>
<b>Adjusted EBITDA<sup>1</sup></b>	<b>(5)</b>	<b>(6)</b>	<b>(1)</b>	

**2017 Guidance: Revenues \$100 M, Profitable**

**Note**

1. See 20F for a reconciliation of Adjusted EBITDA to IFRS Net Profit (Loss)

# Future Milestones and Value Creation

	Milestone Date	
FDA guidance for Inhaled AAT for AATD regulatory path	1H-2017	
Response to EMA comments for Inhaled AAT for AATD	1H-2017	
Approved IND for registration trial of Inhaled AAT for AATD in US	2H-2017	
Approved CTA for registration GvHD trial in EU	2H-2017	
Interim report for Phase II/III part 1 for GvHD trial	2H-2017	
Final report for Phase II for type-1 diabetes trial	Mid-2017	
Interim report for Phase II for lung transplant trial	2H-2017	
<b>Rabies product launch in the U.S. (if approved)</b>	<b>2H-2017</b>	
<b>Inhaled AAT for AATD launch (EU) (if approved)</b>	<b>2H-2017</b>	
<b>Achieve \$100 million in annual revenues</b>	<b>2017</b>	
<b>Strategic agreement</b>	<b>2017</b>	
<b>Double* the number of Glassia patients WW</b>	<b>2018</b>	

\* Compared to number of patients in 2014

# Kamada Investment Highlights

Globally Positioned Biopharmaceutical Company focused on Orphan Diseases and Plasma-Derived Protein Therapeutics



- **\$100 M of revenues expected by 2017**
- **Flagship Product Glassia® Approved for Alpha-1 Antitrypsin (AAT) Deficiency Disorder**
  - Unique and Differentiated Product Profile and Represents an Exciting Growth Opportunity
- **Advanced R&D Pipeline Focused on Various Orphan Indications**
- **Significant Opportunity for Novel Inhaled AAT for AAT Deficiency and Intravenous AAT Pipeline** in Graft vs. Host Disease, Lung Transplant Rejection, Type-1 Diabetes
- **Strategic Partnerships with Industry Leaders, Validating Kamada's Portfolio** → Baxalta/Shire, Chiesi, Kedrion and Pari
- **Integrated, Efficient and Scalable Best-in-class Patented Platform Technology**
  - Patents and know-how act as substantial barrier to entry
  - Facility FDA approved
- **Strong Financial Profile with Increasing Profitability**
  - Expect to generate positive cash flow in 2017

**THANK YOU**

[www.kamada.com](http://www.kamada.com)



**KAMADA**  
High Quality Pharmaceuticals

# Next Generation → AAT Inhaled

- Inhaled directly to the Lungs
- Clinical trial in Europe completed
- Registration file submitted to EMA
- Expecting mid 2017 approval

“ The study results demonstrated primarily that the overall treatment effect on lung functions, is of significant clinical value. This study is the first study ever that is indicative of inhaled AAT's ability to potentially reduce lung inflammation as expressed by its preservation of lung function and the changes shown in symptoms.”

Prof. Jan Stolk, MD, Department of Pulmonology, Leiden Medical Center, Principal Investigator of the Phase 2/3 clinical trial and Chairman of the Alpha 1 International Registry (AIR)



# Fewer symptoms in first EX - AAT vs. Placebo

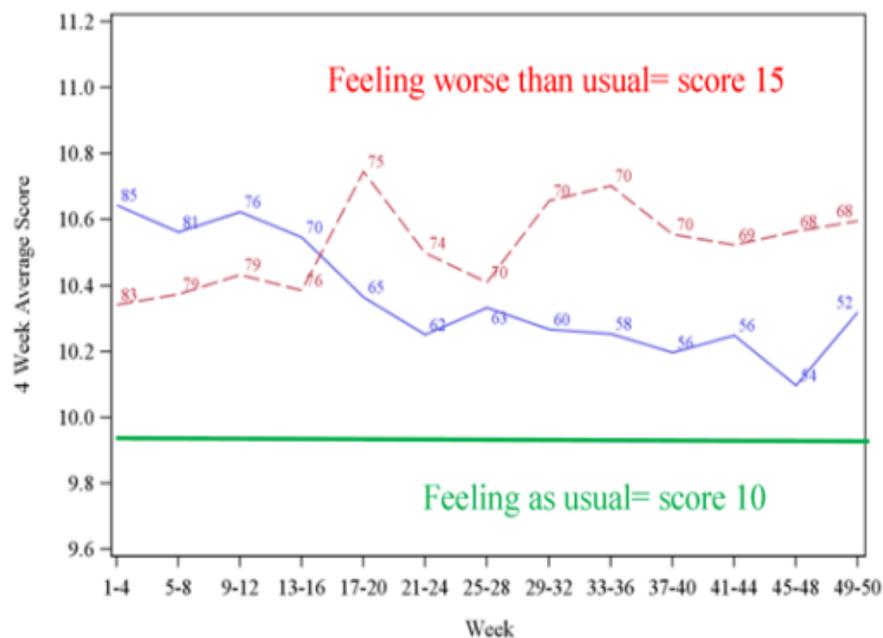
## Less Type I (3 symptoms) and more type II (2 symptoms)

Type/Category	AAT	Placebo	P Value
	N=85	N=83	
Type I	16 (18.8%)	26 (31.3%)	0.0614
Type II	23 (27.1%)	12 (14.5%)	0.0444
Type III	34 (40.0%)	33 (39.8%)	0.9746
None	12 (14.1%)	12 (14.5%)	0.9498

# Improved daily score

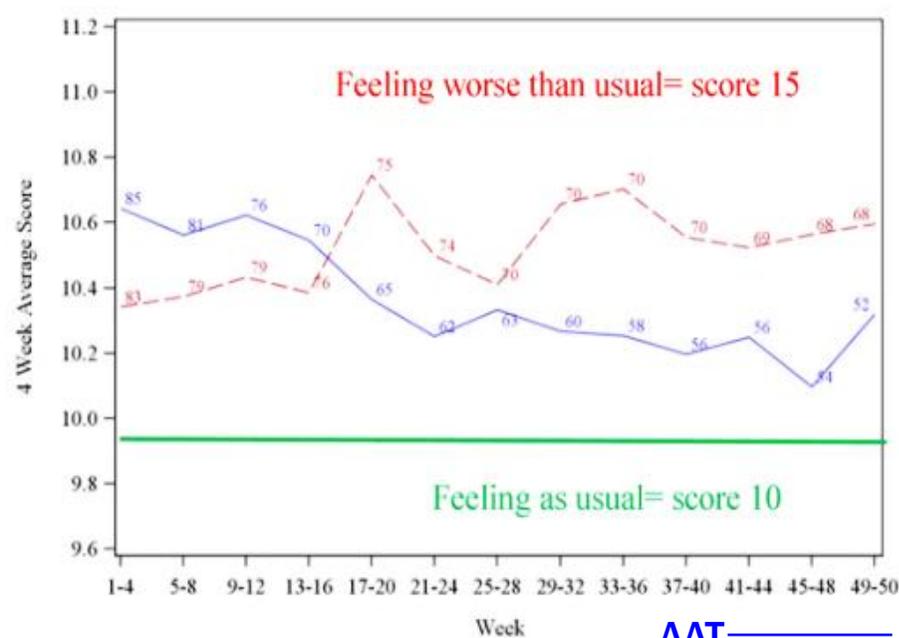
AAT patients tended to have better  
Dyspnea score

Dyspnea 4 Week Moving Average Graphs



AAT patients tended to have better  
Well-Being score

Well Being 4 Week Moving Average Graphs



AAT ———  
Placebo - - - -

# In the Words of the Key Opinion Leaders

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## EU Phase 2/3:

**“The study results demonstrated primarily that the overall treatment effect on lung functions, is of significant clinical value. This study is the first study ever that is indicative of inhaled AAT’s ability to potentially reduce lung inflammation as expressed by its preservation of lung function and the changes shown in symptoms.”**

Prof. Jan Stolk, MD, Department of Pulmonology, Leiden University Medical Center, Principal Investigator of the Phase 2/3 clinical trial and acting Chairman of the Alpha 1 International Registry (AIR)

**“These new analyses confirm the clinically-meaningful lung function improvement seen with inhaled AAT patients in this study. These results are impressive and underscore the initial findings from this study. In my opinion, inhaled AAT has shown to be an efficacious treatment for this orphan disease.”**

Prof. Kenneth Chapman, M.D., Director of the Canadian Registry for the Alpha-1 Antitrypsin Deficiency (Asthma and Airway Centre in Toronto Western Hospital, University of Toronto) and an investigator in the Phase 2/3 clinical trial.

**“The study analysis suggests exciting results that may lead to wider acceptance of the inhaled route of administration of alpha-1 antitrypsin augmentation therapy, which could be a real breakthrough for AATD patients.”**

Robert A. Sandhaus, Ph.D., M.D., FCCP, Founder and Director of the Alpha1-Antitrypsin Deficiency Program at National Jewish Health in Denver, Colorado, and the Clinical Director of the Alpha-1 Foundation

## US Phase 2:

**“The results of this study are extremely compelling. Based on the results of this study, it is clear that inhaled AAT is the most effective mode of treatment for reaching the primary sites of potential lung injury, and restoring AAT inhibitory capacity. I look forward to the start of a pivotal study in the U.S. to confirm these results.”**

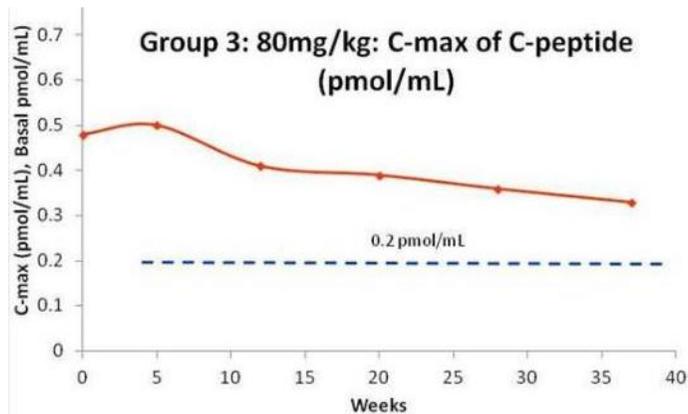
Professor Mark Brantly, MD, the Primary Investigator in this study who serves as a Vice Chair of Research, Department of Medicine, Chief Division of Pulmonary, Critical Care and Sleep Medicine, Professor of Medicine, Molecular Genetics and Microbiology at the University of Florida College of Medicine and Alpha One Foundation Research Professor.



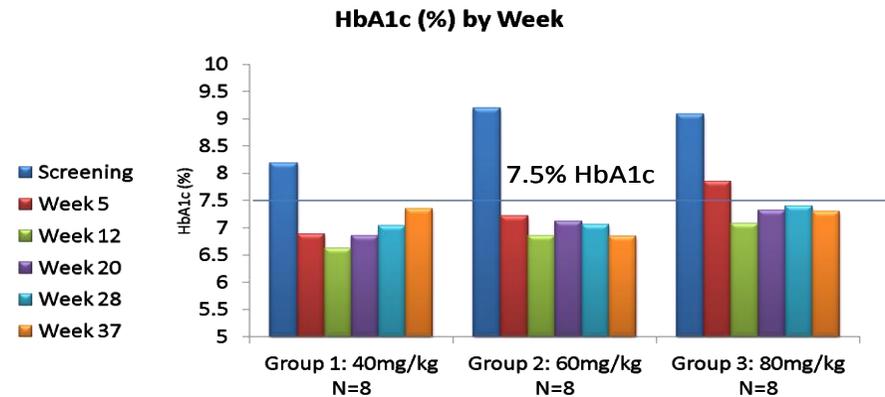
# Clinical Development for Newly Diagnosed Type-1 Diabetes: New Exciting Prospects

*Phase I/II Open Label Study to evaluate the safety, tolerability and efficacy of AAT on beta cell preservation and glycemic control on newly diagnosed T1D pediatric patients (N=24)*

End-of-study slope analysis of C-peptide[max] and C-peptide[AUC] revealed no significant changes from baseline



HbA1C data indicated that almost all patients reached glycemic control



- AUC% for C-peptide decreased 23% from baseline vs. ~40-50% expected decrease after 12-15 months from diagnosis<sup>1</sup>
- Specific diabetes antibody levels decreased in all groups from baseline to study completion, a decrease that may indicate an immune modulatory effect
- At end-of-study, 38% of patients decreased insulin dose
- All subjects completed the study. No Serious AEs occurred. AEs were mild and mostly infusion-related (fatigue, headache)

1. Greenbaum et al 2012