

EACH  
LIFE IS  
UNIQUE



KAMADA

# KAMADA INVESTOR PRESENTATION

NASDAQ & TASE: KMDA

September 2017

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# FORWARD LOOKING STATEMENT



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, obtaining or maintaining 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-IFRS 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 IFRS. The non-IFRS financial measures may be calculated differently from, and therefore may not be comparable to, similarly titled measures used by other companies. In accordance with the requirement of the SEC regulation a reconciliation of these non-IFRS financial measures to the comparable IFRS measures is included in an appendix to this presentation. Management uses these non-IFRS financial measures for financial and operational decision-making and as a means to evaluate period-to-period comparisons. Management believes that these non-IFRS 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 as well as in Kamada's most recent Form 6-K filed with the U.S. Securities and Exchange Commission.



## COMMERCIAL STAGE BIOPHARMA

Growing Biopharma company, with a portfolio of revenue and profits-generating proprietary products, including two FDA-approved products

Leader in Alpha-1 Antitrypsin ("AAT") globally, both commercialized and in development, and specific immunoglobulins (IgG)

Glassia®, for AAT deficiency is the first and only liquid, ready-to-use intravenous AAT product approved by FDA. Marketed by Shire in the US and by a network of distributors in 7 additional countries

Fully Integrated Manufacturing and Distribution

## RICH PRODUCT PIPELINE

Inhaled AAT - completed Phase 2 and phase 2/3. Plan to initiate additional phase 3 in 2018

Attractive pipeline of intravenous AAT is being developed in 3 Orphan Indications

KedRAB for anti-rabies prophylaxis treatment, approved by the FDA in August 2017 expected to be launched in the US through collaboration with Kedrion

## FINANCIAL SUMMARY

Market cap: ~ \$190 M <sup>(1)</sup>

Cash: \$26.9 M, no debt <sup>(2)</sup>

2016 revenues = \$77.5 M

Guidance: 2017 revenues \$100 M

Founded in 1991.

Public on TASE in 2005; IPO on Nasdaq in 2013.

Shares Outstanding = 40.2 million.  
Employees = 377 <sup>(3)</sup>



# 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 Type-1 Diabetes, Graft vs. Host Disease, Lung Transplant Rejection

- **Strategic Partnerships with Industry Leaders, Validating Kamada's Portfolio** → Baxalta/Shire, Chiesi, Kedrion and Pari

- **Integrated, Efficient and Scalable 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<br><br>2016 Revenue: \$56.0M | <b>Respiratory</b>    | <b>Glassia®</b>  | Alpha-1 Antitrypsin (human)   |
|   | <b>Immunoglobulin</b> | <b>KamRAB/KedRAB<br/>KamRho (D) IM<br/>KamRho (D) IV<br/>Snake Antiserum</b> | Anti-rabies immunoglobulin (human)<br>Rho(D) immunoglobulin (human)<br>Rho(D) immunoglobulin (human)<br>Anti-snake venom  |
|   | <b>Other Products</b> | <b>Heparin Lock Flush<br/>Kamacaine 0.5%<br/>Human Transferrin</b>           | Heparin sodium<br>Bupivacaine HCl<br>Transferrin (Diagnostic grade)   |
| Distribution Segment*                                     | <b>Respiratory</b>    | <b>Foster®</b>   | Maintenance therapy of asthma/COPD  |
|   | <b>Immunoglobulin</b> | <b>IVIG 5%<br/>Varitect<br/>Hepatect CP<br/>Megalotect<br/>Zutectra</b>      | Gamma globulins (IgG) (human)<br>Varicella zoster immunoglobulin (human)<br>Hepatitis B immunoglobulin (human)<br>CMV immunoglobulin (human)<br>Hepatitis B Immunoglobulins S.C |
|   | <b>Other Products</b> | <b>Heparin sodium<br/>Albumin</b>  | Heparin sodium<br>Human serum Albumin   |
|   | <b>Critical Care</b>  | <b>Factor VIII<br/>Factor IX<br/>Ixiaro</b>                                  | Coagulation Factor VIII (human)<br>Coagulation Factor IX (human)<br>Japanese encephalitis   |

## GLOBAL PRESENCE WITH EXPOSURE TO EMERGING MARKETS



● Countries where Kamada operates

**Growing Proprietary  
Products Segment  
Through Glassia®**

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

# AAT DEFICIENCY

Relatively Common, Potentially Lethal, Often Undiagnosed



AAT  
Level



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

US ●



● EU



**Affects about  
100,000 people  
in the US and a  
similar number  
in Europe**

AAT  
Deficiency

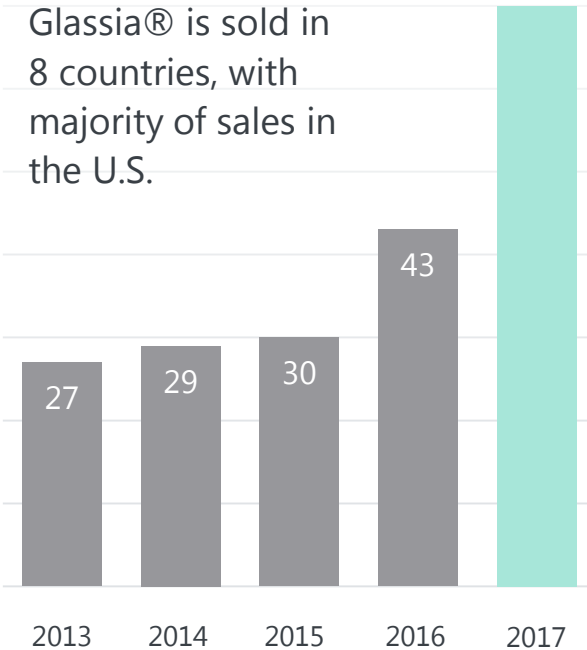


**Predisposes to lung  
and liver diseases**

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



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



## Key Product Advantages



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

- 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 by FDA May 2016

# GROWTH OF GLASSIA® DRIVEN BY STRATEGIC PARTNERSHIP WITH BAXALTA (PART OF SHIRE)



## Commencement

Sales to Baxalta started in Sep. 2010

## Agreements

Distribution, technology license, and supply of fraction IV

## Agreement extended in October 2016

Baxalta to distribute Glassia® produced by Kamada through 2020 (Revenues to Kamada from sales of vials) and thereafter Glassia® produced by Baxalta (Royalties Revenues to Kamada).

## Product: AAT IV (Glassia®)

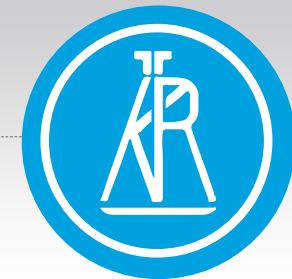
Including all future AAT IV indications in the territories

## Territories

U.S., Canada, Australia and New Zealand

Minimum revenues of \$237M expected between 2017 through 2020

Starting in 2021 Baxalta will pay royalties on sales of Glassia® produced by Baxalta

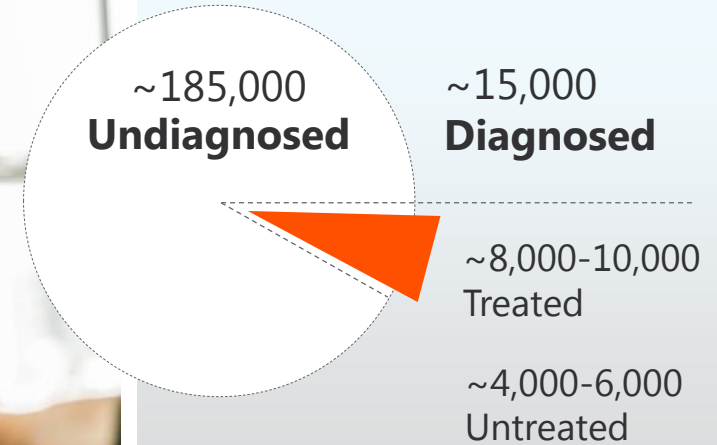




# SIGNIFICANT OPPORTUNITY TO EXPAND THE AATD MARKET



- Patients suffering from AAT Deficiency (“AATD”) remain under-identified and under-treated
- Only ~7-8% of cases treated in the U.S. and ~2-3% in EU
- US Market is estimated to be growing by approx. 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
- Average annual reimbursement of treatment estimated at ~\$80-\$100K per patient



- **AATD prevalence: ~200,000** yet fewer than an estimated 5% of potential patients in the U.S. and Europe are treated.
- **Current market estimated at \$1B WW.**

**KamRAB/KedRAB:  
Human Rabies  
Immune Globulin**



# KamRAB/KedRAB

## Human Rabies Immune Globulin



U.S.



WHO estimates ~10 million people worldwide require medical treatment against rabies each year after being exposed to an animal suspected of rabies infection

### U.S Market

- US Phase II/III study successfully completed in 2015
- FDA Approval August 2017
- Expected product launch: Beginning 2018

### Worldwide

- More than 1.4M Vials (420M IU) sold to date (2ml) = **280,000 people treated w/w**
- Major launches: India, Thailand, Israel, Russia, Mexico
- 100% domestic market share (Israel)
- Approved Supplier of the WHO

# KAMADA'S HUMAN RABIES IMMUNE GLOBULIN



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.

**KEDRION**  
BIOPHARMA

- U.S. pivotal Phase II/III clinical trial met primary endpoint of non-inferiority when measured against an IgG reference product
- **FDA Approval August 25<sup>th</sup>, 2017**
- U.S. launch expected beginning of 2018
- 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

# HIGH VALUE PIPELINE FOCUSED ON ORPHAN INDICATIONS



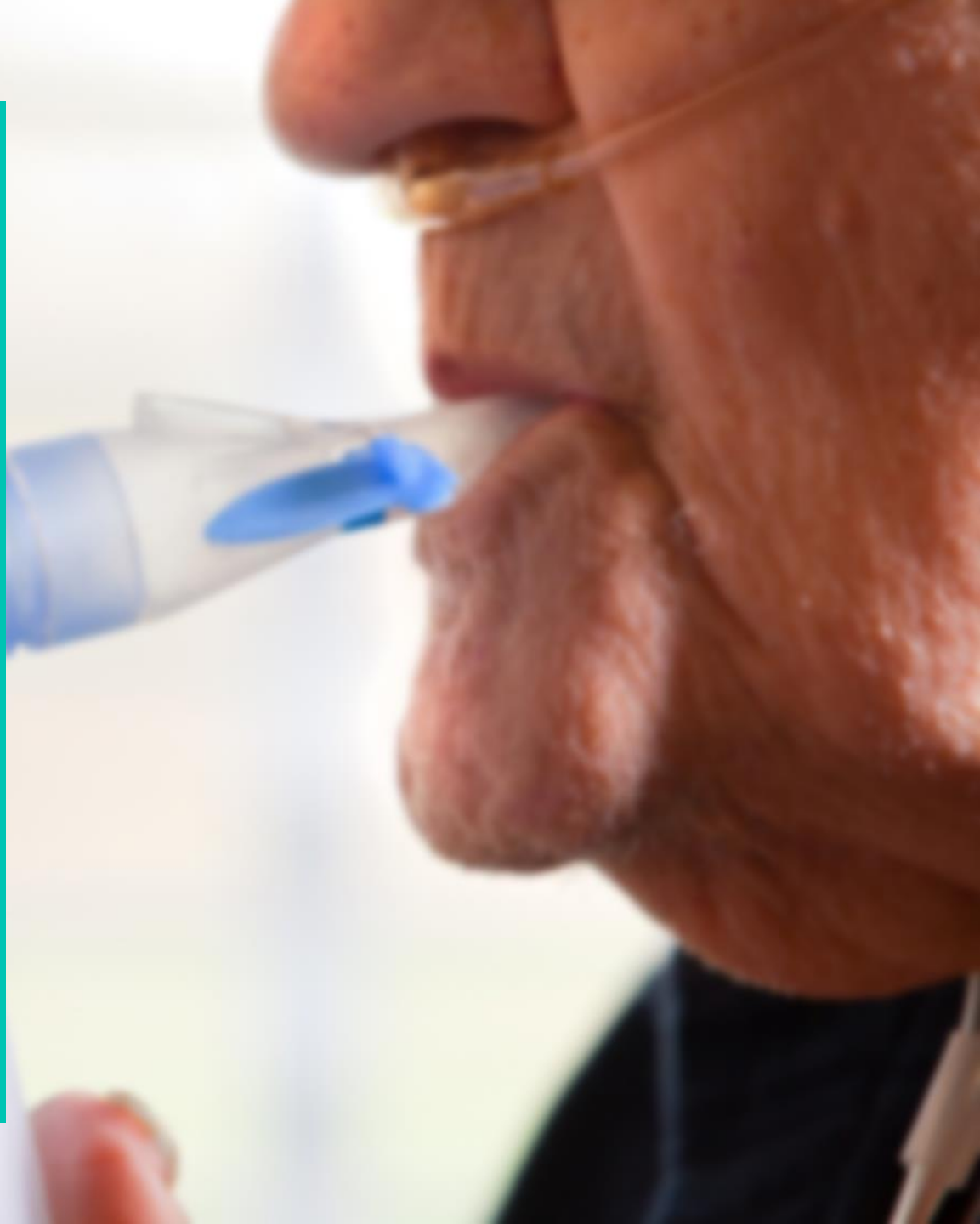
| PRODUCT                | INDICATION                         | PHASE I                      | PHASE II | PHASE III | MARKET | PARTNERS |
|------------------------|------------------------------------|------------------------------|----------|-----------|--------|----------|
| <b>INTRAVENOUS AAT</b> | AAT Deficiency                     | FDA Approved (2010)          |          |           |        | U.S.     |
| <b>D1-AAT (IV)</b>     | Type 1 Diabetes *                  | POC Study Completed          |          |           |        | U.S.     |
| <b>G1-AAT (IV)</b>     | Graft versus Host Disease (GvHD) * | Phase I/II Completed         |          |           |        | U.S.     |
| <b>L1-AAT (IV)</b>     | Lung Transplant                    | Phase II Ongoing             |          |           |        | U.S.     |
| <b>INHALED AAT</b>     | AAT Deficiency *                   | EU: Phase II/III Completed** |          |           |        | EU       |
| <b>KedRAB (IM)</b>     | Prophylaxis for Rabies             | FDA Approved (2017)          |          |           |        | U.S.     |

\* Orphan Drug Designation

\*\* MAA Withdrawn June 2017



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





**Improved Quality Of Life (QOL)**



**ELF levels 2-5 fold than IV**

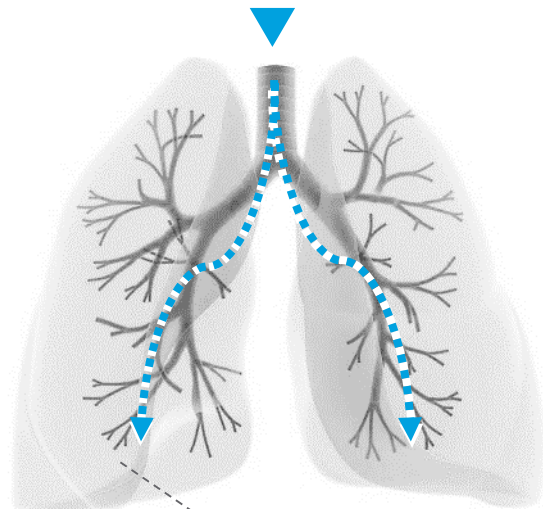


**Most effective mode of treatment for reaching primary site of injury**

# INHALATION ENABLES DELIVERY OF AAT 5X HIGHER THAN INTRAVENOUS

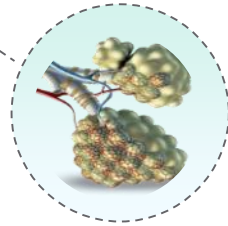


**Inhaled AAT** ~ 50% of the dosage reaches **airway tree** and alveoli

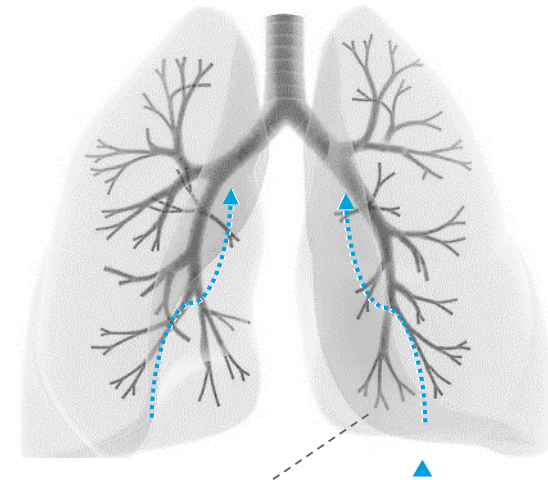


## Airway Obstruction

- FEV1/SVC
- FEV1

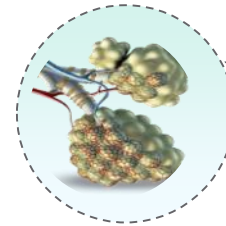


**Intravenous AAT** ~ 2% of the dosage reaches alveoli and **airway tree**



## Alveoli Emphysema

- DLCO
- CT densitometry



# INHALED AAT PHASE II/III TRIAL POST-HOC RESULTS



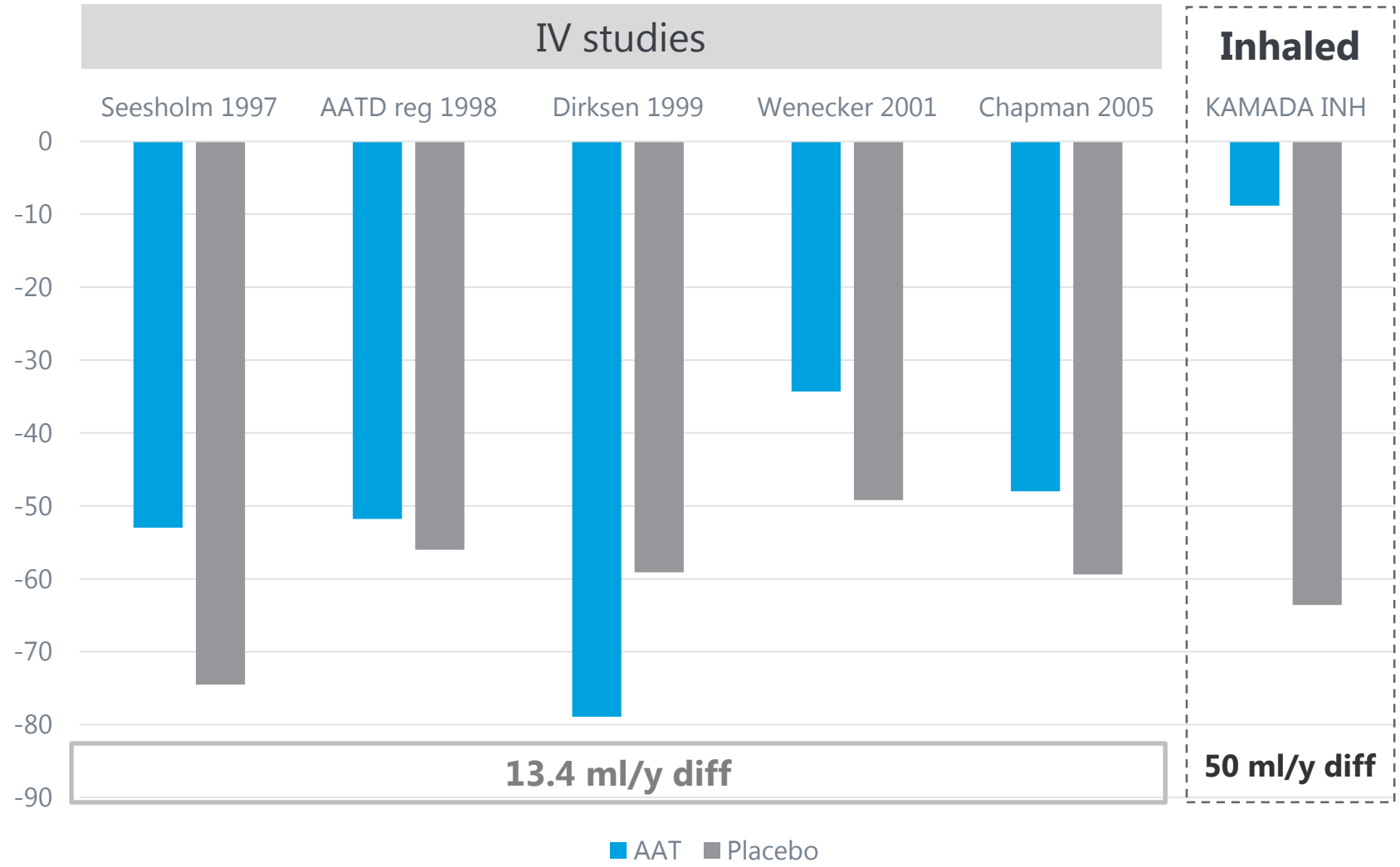
## Spirometry Measures (MMRM\*\*)

| 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



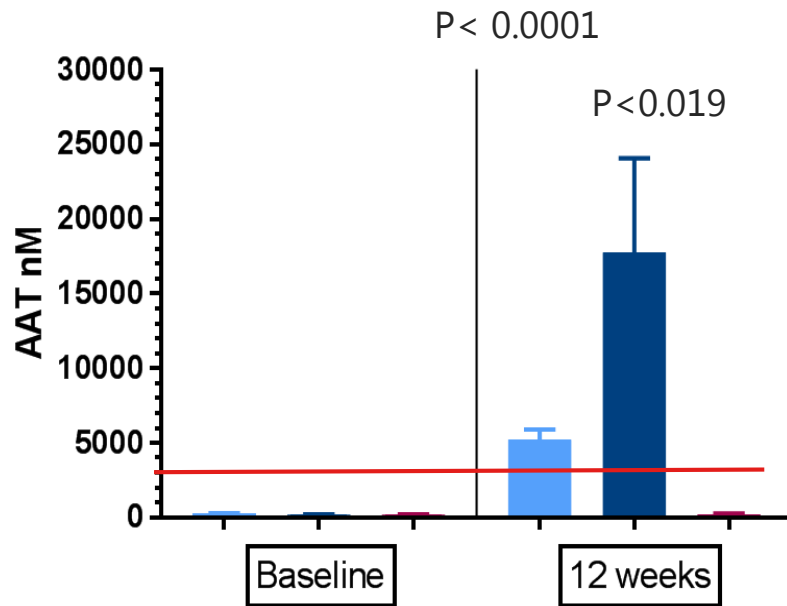


# INHALED AAT PHASE II U.S.

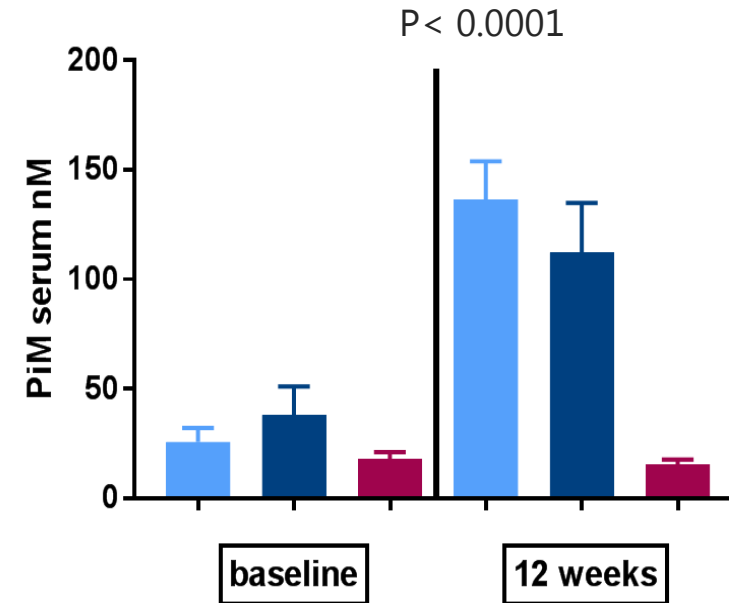
ELF AAT Antigenic Level & Inhibitory Capacity Increased Significantly



## ELF AAT Antigenic Level



## PiM serum level



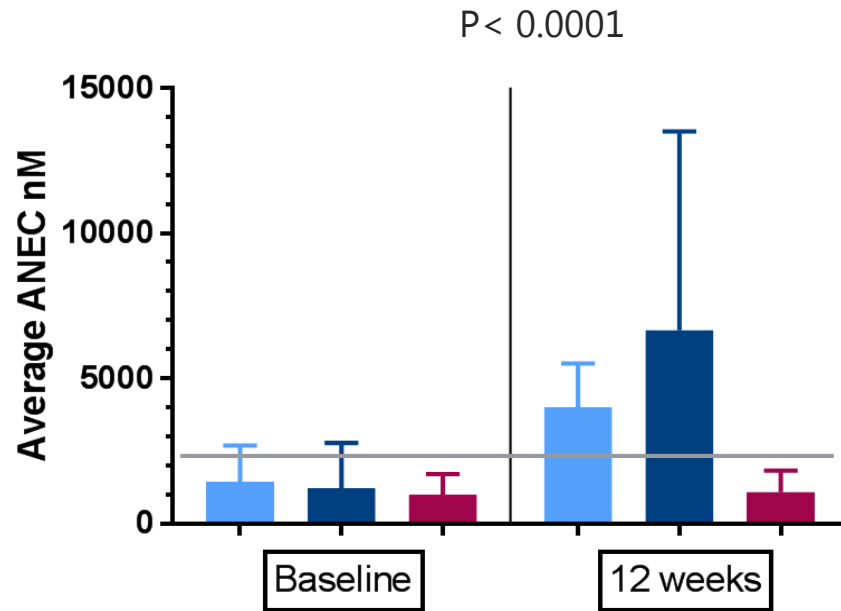
AAT ELF level is reasonably likely to predict clinical benefit

# INHALED AAT PHASE II U.S.

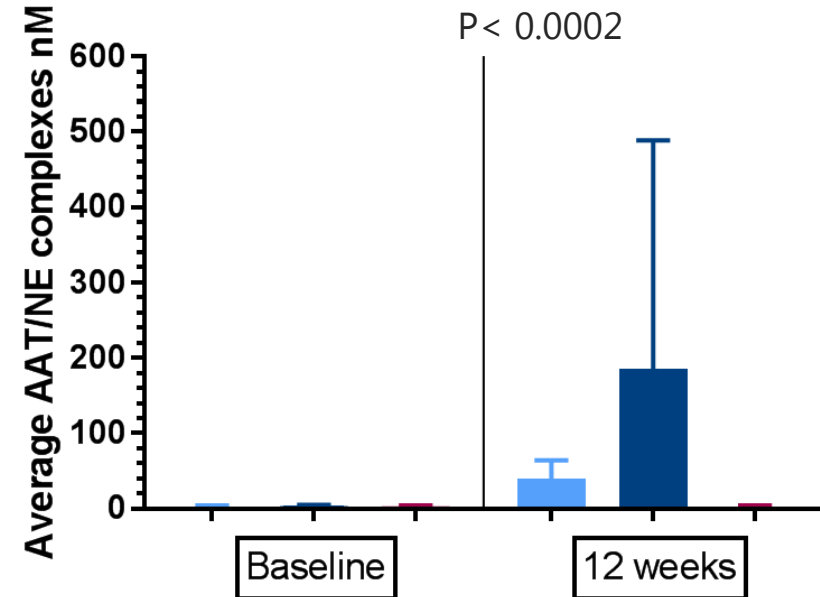
ELF AAT-NE complexes & Inhibitory Capacity Increased Significantly



## ANEC



## ELF AAT – NE Complexes



Inhaled AAT is the most effective means to restore AAT inhibitory capacity in the airways (ANEC & AAT-NE Complexes)

\*ANEC- Anti-Neutrophil Elastase inhibitory capacity



## 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 (larger than current IV AAT augmentation market of ~\$1 billion)

**EU  
EMA**



EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH

- MAA withdrawn, plan to resubmit MAA after US phase 3 study is completed (expected 2022-2023)
- Scientific Advice planed for H2 2017

**US  
FDA**



- In discussions with the FDA to obtain guidance on the clinical/ regulatory pathway for licensing the IH AAT by Kamada in the U.S.
- Planned Phase 3 Protocol submitted to FDA July 17. Additional questions were received from the FDA.
- Expecting to initiate a Phase III study in H2/2018, pending FDA approved IND

# IMMUNE-MODULATORY INDICATIONS



01

**Graft versus  
Host Disease**



02

**Lung  
Transplantation**



03

**Type-1  
Diabetes**

# AAT SERVES AS AN EXCITING POTENTIAL THERAPY FOR MULTIPLE INDICATIONS



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



**Anti-Inflammatory**



**Immune Modulatory**



**Tissue Protective**



**Antimicrobial**





**01**

## **AAT to Treat Graft versus Host Disease**

# GRAFT VERSUS HOST DISEASE (GVHD):

A Major Complication in Stem Cell Transplantation



## 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

*\*company estimate*

# AAT MAY EXERT A PROTECTIVE EFFECT ON THE BOWEL MUCOSA IN GUT GVHD



**Phase I/II POC Study** (12 patients) 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

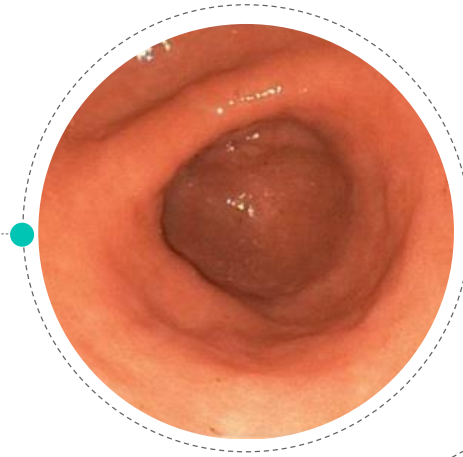
- Administration of AAT as salvage therapy for steroid-resistant gut GVHD may be a feasible approach without clinical toxicity
- Preliminary results are encouraging and warrants further study of AAT therapy in extended trials as therapy of steroid refractory acute GVHD or as first line therapy

**Benefits  
of ATT:  
May exert  
protective  
effect**

- Stool AAT levels showed a decrease in intestinal AAT loss, suggesting healing of the bowel mucosa
- AAT administration during HCT suppresses serum levels of pro-inflammatory cytokines, interferes with GVHD manifestation

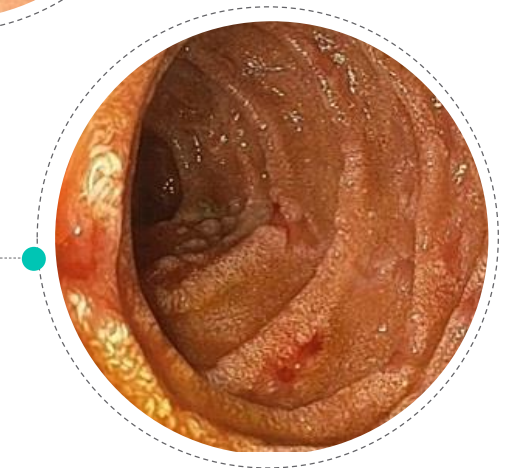
## BEFORE

Duodenitis Suspect severe  
upper and lower GVHD



## AFTER 8 DOSES OF AAT

Moderate mucosal denudement and edema  
noted throughout the duodenum





Approved IND for Pivotal phase II/III study with AAT (IV) for the treatment of acute Graft-Versus-Host Disease. Planning to combine the US & EU clinical programs.



Positive Scientific Advice from EMA for the proposed program. Received guidance for the design of the planned Phase II/III. Intend to submit and receive approval for a CTA in 2017 and launch the study in early 2018.





**02**

## **AAT to Treat Lung Transplantation**



# ADVANCING THE LUNG TRANSPLANTATION OPPORTUNITY



## 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

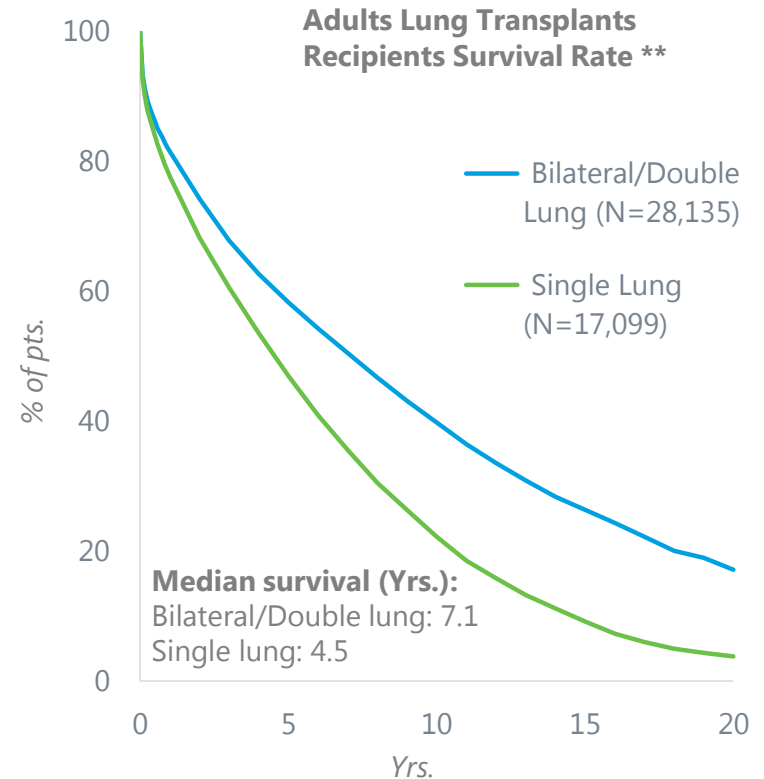


## No new treatment options have been made available for years

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



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



Potential Market Size\*: ~ \$400-500 MILLION

\*company estimate

\*\*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 Endpoint

- *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)



**03**

## **AAT to Treat Newly Diagnosed Type-1 Diabetes**

# AAT (IV) IS A PROMISING POTENTIAL TREATMENT FOR NEWLY DIAGNOSED TYPE-1 DIABETES PATIENTS



## MARKET OPPORTUNITY

### Type-1 Diabetes

Occurs when the immune system attacks and destroys beta cells in the pancreas

- More than 10 million suffer from Type 1 diabetes globally
- 100,000 new patients/year diagnosed globally
- In the U.S. alone: 3 million patients, with 30,000 new patients diagnosed annually

## DRUG IMPACT

### Studies have shown that AAT protects beta cell islets

- Delays the onset of autoimmune diabetes
- Inhibits insulinitis and beta-cell apoptosis
- Decreases beta-cell inflammation

## BENEFITS

### Preservation of beta cells correlates with reduced risk of long-term complications

- DCCT\* indicated that patients with C-peptide on MMTT  $\geq 0.2$  pmol/mL were less likely to develop retinopathy and hypoglycemia complications (Greenbaum et al 2012)
- Higher / sustained levels of C-peptide correlate with reduced incidences of the microvascular complications (Steffes et al 2013)

\*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**, Last Patient Out February 2017  
Topline results expected H2 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)

# Financials





# SUSTAINED REVENUES AND GROSS PROFITS ARE FUNDING R&D



## 2017 Guidance:

**Revenues ~\$100 M**  
 ~\$76-\$78 M in  
 proprietary Products  
 segment

~\$22-\$24 M in  
 Distribution segment

**Profitable**

| \$ 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*</b> | <b>(5)</b>  | <b>(6)</b>  | <b>(1)</b> |              |

\* See Appendix A for a reconciliation of Adjusted EBITDA to IFRS Net Profit (Loss)

# STRONG FINANCIAL PROFILE WITH REVENUE GROWTH AND EXPANDING PROFITABILITY



**Stable, profit-generating revenue stream from marketed products**

**Better product mix expected to improve gross margin**

**Strategic partnership model results in lower 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

**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**

# FUTURE MILESTONES AND VALUE CREATION



|  | Milestone Date |
|--|----------------|
| Inhaled AAT for AAT Deficiency:<br>Scientific Advice in EU for future study<br>IND for registration trial of inhaled AAT in US | 2H-2017        |
| Approved CTA for registration GvHD trial in EU   | 2H-2017        |
| Results for Phase II for type-1 diabetes trial   | 2H-2017        |
| Interim report for Phase II for lung transplant trial  | 2H-2017        |
| <b>Rabies product approval &amp; launch in the U.S.</b>  | <b>2H-2017</b> |
| <b>Achieve \$100 million in annual revenues</b>  | <b>2017</b>    |
| Strategic agreement: Out-licensing; In-licensing of new products / technologies  | 2017           |
| Initiating inhaled AAT for AATD phase III study in US  | 1H-2018        |
| Initiating GvHD phase II/III study   | 1H-2018        |
| <b>Double* the number of Glassia patients WW</b>   | <b>2018</b>    |

\* Compared to number of patients in 2014

# COMPELLING INVESTMENT DRIVEN BY MULTIPLE PILLARS OF GROWTH



## Existing Anchor Products

Profitable  
Sales in 15 countries  
Predictable, stable business  
**(\$0.5B)\***

## Glassia® (AAT-IV) in U.S. & ROW

Estimated only ~5% of cases treated  
Annual therapy costs ~\$80 - \$100K per patient  
Partnered with Shire solely for IV products in the U.S. (agreement also covers Canada, Australia and New Zealand)  
Key geographies retained by Kamada  
**(100K pts., \$0.75-1B)\***

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

Estimated only ~2-3% of cases treated in Europe  
Estimated only ~7-8% of cases treated in US  
Orphan drug designation in US and EU  
Partnered with Chiesi for Inhaled AAT for AATD in Europe only  
Have not out-licensed rights in US)  
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):** Planning to initiate GVHD phase II/III **(\$0.5-1B)\***  
**L1-AAT (IV):** Lung transplant rejection phase I/II in process **(\$0.5B)\***  
**D1-AAT (IV):** Type-1 diabetes in Phase II LPO **(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 U.S. & Europe  
+  
New Geographies  
+  
Additional Unencumbered Pipeline Products

\* Estimated market potential



**THANK YOU**  
[www.kamada.com](http://www.kamada.com)

**Amir London, CEO**

Kamada Investor Presentation





## **Appendix A: Reconciliation of Non-IFRS Measures**

Adjusted EBITDA is defined as net income (loss), plus income tax expense, plus financial expense, net, plus depreciation and amortization expense, plus non-cash share-based compensation expenses, plus or minus income or expense in respect of exchange and translation differences and derivatives instruments not designated as hedging, and plus one-time management compensation payment.

We present adjusted EBITDA because we use this non-IFRS financial measure to assess our operational performance, for financial and operational decision-making, and as a means to evaluate period-to-period comparisons on a consistent basis. Management believes this non-IFRS financial measure is useful to investors because: (1) they allow for greater transparency with respect to key metrics used by management in its financial and operational decision-making; and (2) they exclude the impact of non-cash items that are not directly attributable to our core operating performance and that may obscure trends in the core operating performance of the business.

Non-IFRS financial measures have limitations as an analytical tool and should not be considered in isolation from, or as a substitute for, our IFRS results. We expect to continue reporting non-IFRS financial measures, adjusting for the items described below, and we expect to continue to incur expenses similar to certain of the non-cash, non-IFRS adjustments described below. Accordingly, unless otherwise stated, the exclusion of these and other similar items in the presentation of non-IFRS financial measures should not be construed as an inference that these items are unusual, infrequent or non-recurring. Adjusted EBITDA is not a recognized term under IFRS and does not purport to be an alternative to any other IFRS measure. Moreover, because not all companies use identical measures and calculations, the presentation of adjusted EBITDA may not be comparable to other similarly titled measures of other companies.

|   | <b>2016</b>     | <b>2015</b>       | <b>2014</b>       |
|---|-----------------|-------------------|-------------------|
| Net income (loss)   | \$ (6,733)      | \$(11,270)        | \$(13,213)        |
| Income tax expense  | 1,722           | -                 | 52                |
| Financial expense, net  | (343)           | 471               | 1,682             |
| Depreciation and amortization expense   | 3,501           | 3,227             | 2,788             |
| Non-cash share-based compensation expenses  | 1,071           | 1,907             | 3,751             |
| Income (expense) in respect of translation differences and derivatives instruments, net | (127)           | (625)             | -                 |
| Expense (income) in respect of revaluation of warrants fair value                       | -               | -                 | -                 |
| One-time management compensation payment  | -               | -                 | -                 |
| Adjusted EBITDA   | <b>\$ (909)</b> | <b>\$ (6,290)</b> | <b>\$ (4,940)</b> |





**Inhaled directly to the lungs**

**Clinical trial in Europe completed**

“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  
II/III clinical trial and  
Chairman of the Alpha 1  
International Registry (AIR)

# INHALED AAT FOR AATD: COMPLETED PIVOTAL PHASE II/III TRIALS IN EUROPE AND PHASE II IN THE U.S.



|                                | EU Phase II / III trial - <b>Completed</b>  | US Phase II - <b>Completed</b>  |
|--------------------------------|---|---|
| <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>Study completed</li> </ul>   |

# FEWER SYMPTOMS IN FIRST EX - AAT VS. PLACEBO



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

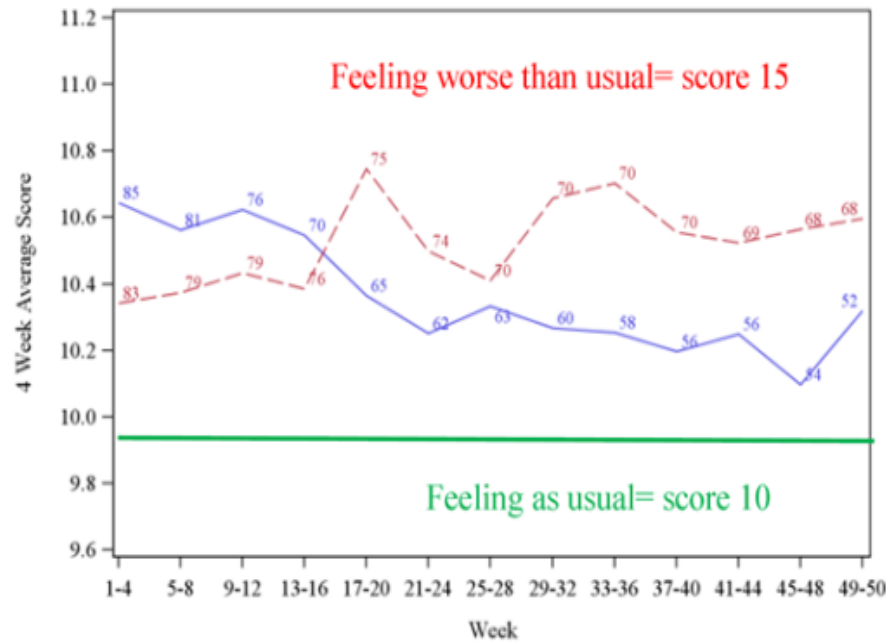
| Type/Category | AAT        | Placebo    | P Value |
|---------------|------------|------------|---------|
|               | N=85       | N=83       |         |
| Type I        | 16 (18.8%) | 26 (31.3%) | 0.0614  |
| Type II       | 23 (27.1%) | 12 (14.5%) | 0.0444  |
| Type III      | 34 (40.0%) |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

# IMPROVED DAILY SCORE



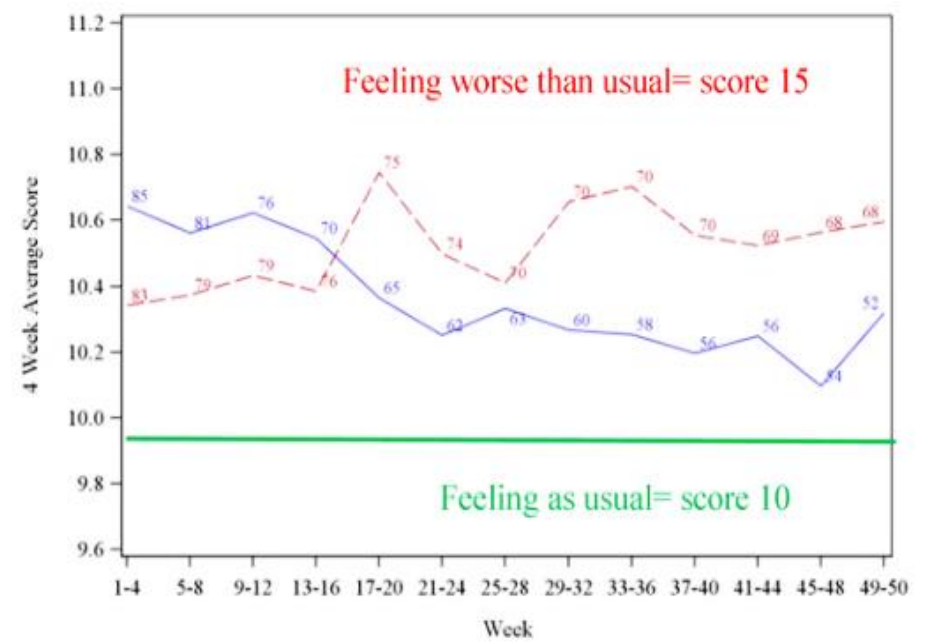
AAT patients tended to have better **Dyspnea score**

Dyspnea 4 Week Moving Average Graphs



AAT patients tended to have better **Well-Being score**

Well Being 4 Week Moving Average Graphs



— AAT  
— Placebo



## 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)

**“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

**“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.

## 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.



### AAT

## IMMUNE-MODULATION

AAT promotes a tolerance-inducing profile

### Anti-Inflammatory

Induces the production of anti-inflammatory mediators IL-10 and IL-1-receptor antagonist (IL-1Ra)

### Regulatory T-cell Differentiation

Promotes Treg differentiation

### Blocks Pro-Inflammatory Mediators

IL-1 $\beta$ , IL-6, IL-8 and TNF $\alpha$

### Modifies Dendritic Cells

Modifies dendritic cell maturation towards a tolerance-inducing profile

### Protect Cells from Injury

Protects cells from IL-1 $\beta$ /IFN $\gamma$ -induced injury and reduces the levels of nitric oxide

### Blocks "Danger" Molecules

Binds to gp96 and diminishes gp96-induced cell injury





### 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

#### Interim results

- Published January 2016

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

# PHASE II/III STUDY WITH AAT (IV) FOR GVHD



## 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

### Methods

- A two-part Phase II/III 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

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\*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.

# CLINICAL DEVELOPMENT FOR NEWLY DIAGNOSED TYPE-1 DIABETES: NEW EXCITING PROSPECTS



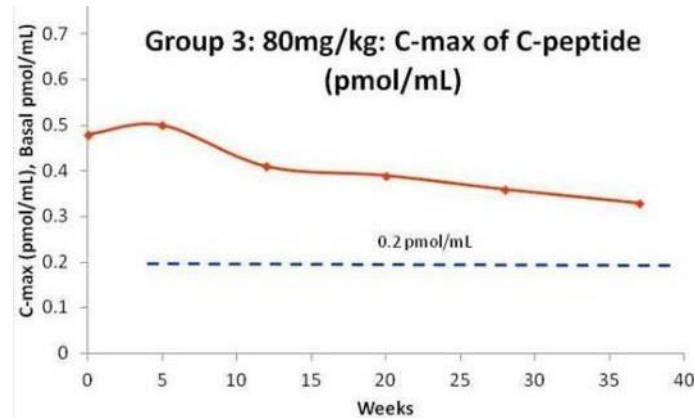
**Phase I/II:** Open Label Study to evaluate the safety, tolerability and efficacy of AAT on beta cell preservation and glycemic control on newly diagnosed T1D pediatric patients (N=24)

AUC% for C-peptide decreased 23% from baseline vs. ~40-50% expected decrease after 12-15 months from diagnosis<sup>1</sup>

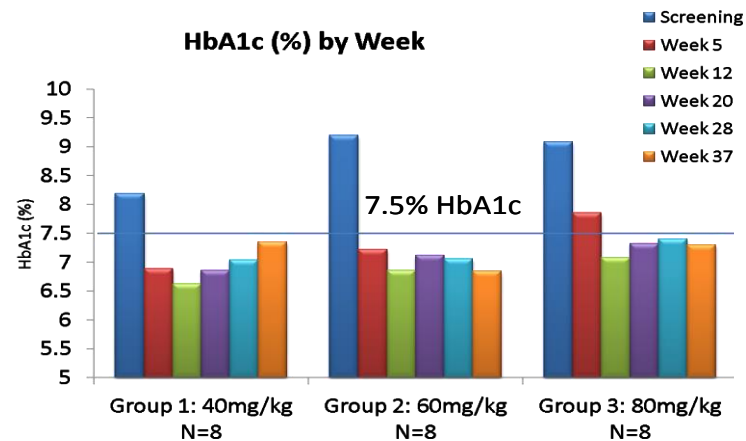
Specific diabetes antibody levels decreased in all groups from baseline to study completion, a decrease that may indicate an immune modulatory effect

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)



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