

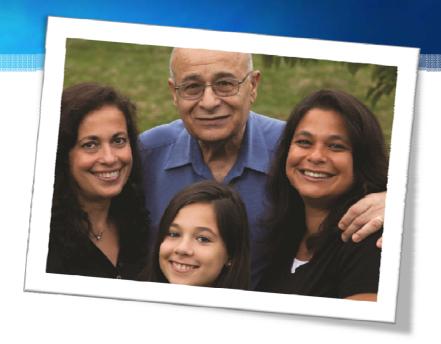
#### Safe Harbor

This presentation contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 relating to business, operations and financial conditions of Amicus including but not limited to preclinical and clinical development of Amicus' candidate drug products, and the timing and reporting of results from clinical trials evaluating Amicus' candidate drug products. Words such as, but not limited to, "look forward to," "believe," "expect," "anticipate," "estimate," "intend," "plan," "would," "should" and "could," and similar expressions or words, identify forwardlooking statements. Although Amicus believes the expectations reflected in such forward-looking statements are based upon reasonable assumptions, there can be no assurance that its expectations will be realized. Actual results could differ materially from those projected in Amicus' forward-looking statements due to numerous known and unknown risks and uncertainties, including the "Risk Factors" described in our Annual Report on Form 10-K for the year ended December 31, 2012. All forward-looking statements are qualified in their entirety by this cautionary statement, and Amicus undertakes no obligation to revise or update this presentation to reflect events or circumstances after the date hereof.



## **Company Mission**

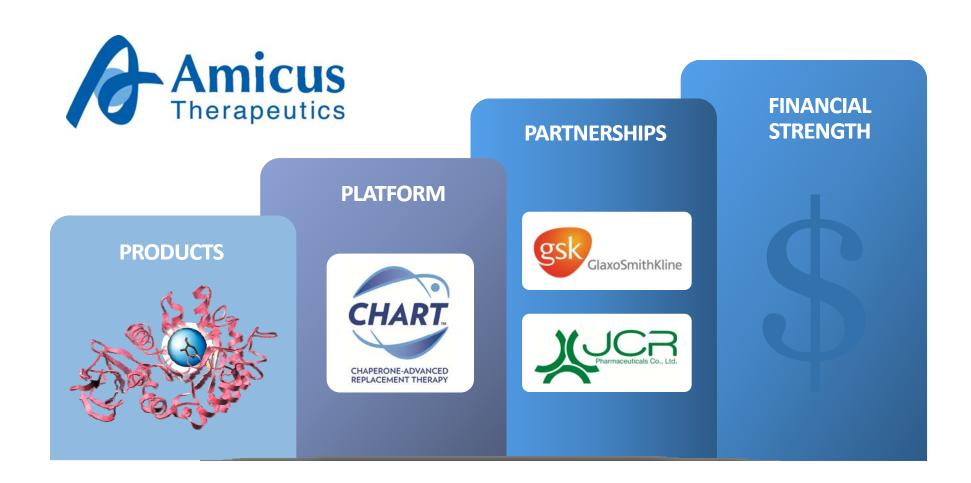




Amicus Therapeutics is a biopharmaceutical company at the forefront of developing next-generation medicines to treat a range of rare and orphan diseases, with a focus on improved therapies for Lysosomal Storage Disorders

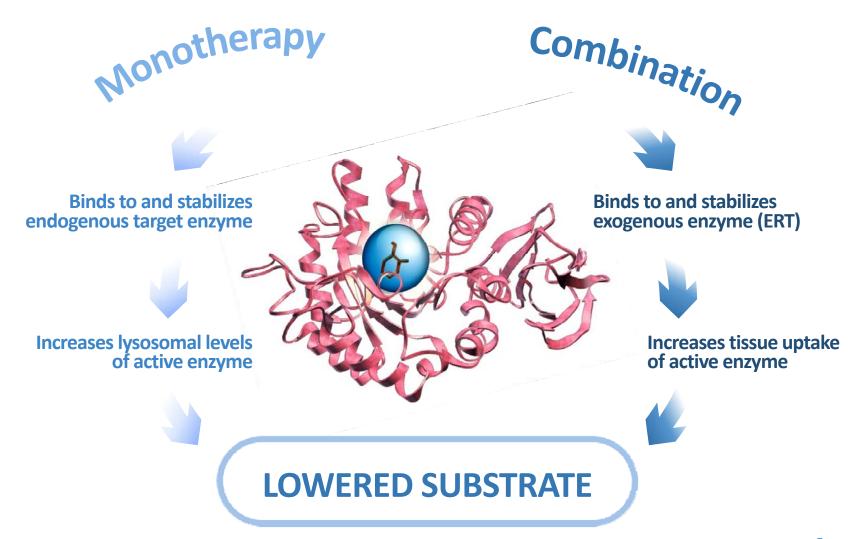


## 2013 Investment Highlights





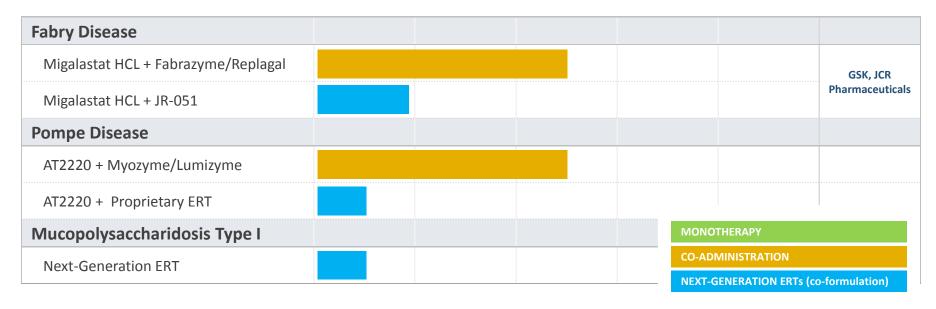
## Core Technology and Focus: Potential to Transform LSD Treatments





## **Advanced Product Pipeline**

INDICATION	PRE- CLINICAL	PHASE 1	PHASE 2	PHASE 3	MARKETING APPLICATION	PARTNER
Fabry Disease						
Migalastat HCL						GSK
Parkinson's						
AT3375						Michael J. Fox Foundation







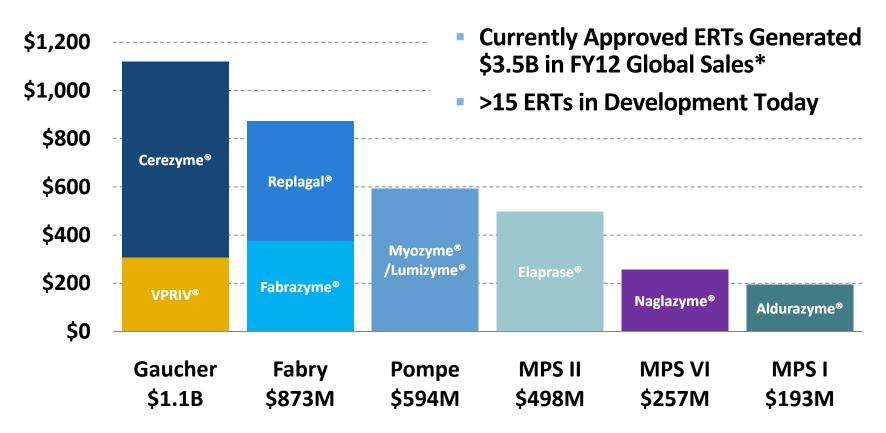
# Chaperone-ERT Combination Platform

for Lysosomal Storage Diseases



#### \$3.5B Current ERT Market for LSDs

#### FY12 Global Sales (\$M)



<sup>\*</sup>Source: 10-Ks from Shire, Sanofi, and BioMarin. Sales of Elelyso for Gaucher disease not shown.
Fabrazyme, Cerezyme, Myzoyme and Lumizyme are registered trademarks owned by Sanofi-Aventis. VPRIV, Replagal and Elaprase are registered trademarks owned by Shire.
Naglazyme and Aldurazyme are registered trademark owned by BioMarin



## LSD Products Today



- Enzyme Instability in Blood & Infusion Bag
- Dosing Limitations & Duration of Infusion
- Poor Enzyme Uptake into Tissues
- Immunogenicity



## CHART™:

## <u>Chaperone-Advanced</u> <u>Replacement Therapy</u>



CO-ADMINISTRATION (Chaperones + Marketed ERTs)

NEXT-GENERATION ERTs (IV Co-formulated Chaperones + Proprietary Enzymes)

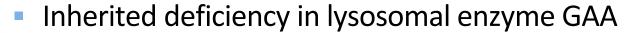
CHAPERONE-ADVANCED REPLACEMENT THERAPY

NEXT-GENERATION ERTs WITH IMPROVED DELIVERY REGIMEN



#### Pompe Disease Overview

#### Severe, Fatal Neuromuscular Disease



Glycogen accumulation

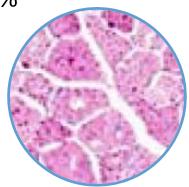
First and only approved ERTs (recombinant GAA):
 Myozyme/Lumizyme (\$594M in FY12 sales)

Standard infusion every-other-week

Infusion-associated reactions in ~50% of late-onset patients<sup>1</sup>

 Attenuated therapeutic response in infantile Pompe patients with high sustained antibody titer<sup>2</sup>

 High antibody titer shown to affect treatment in adults<sup>3</sup>



Elevated Glycogen in Muscle



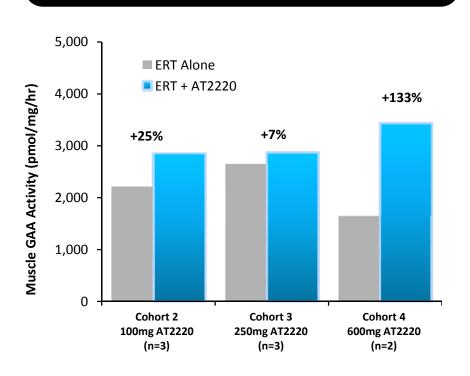
## Pompe Co-Administration: Phase 2 Study 010

Oral AT2220 Co-Administered with Myozyme/Lumizyme Also Leads to Consistent Increases in Plasma Enzyme Activity and Tissue Uptake<sup>1</sup>

#### **Plasma AUC rhGAA Activity**

#### 300.000 Plasma AUC rhGAA Activity (hr\*nmol/hr/mL) Cohort 1 (n=4) +110% (Cohort 4) Cohort 2 (n=6) 250.000 +70% (Cohort 2) Cohort 3 (n=6) Cohort 4 (n=7) +100% (Cohort 3) 200,000 150,000 +50% (Cohort 1) 100,000 50,000 0 **ERT Alone ERT + AT2220**

#### Muscle GAA Activity (Day 3)\*



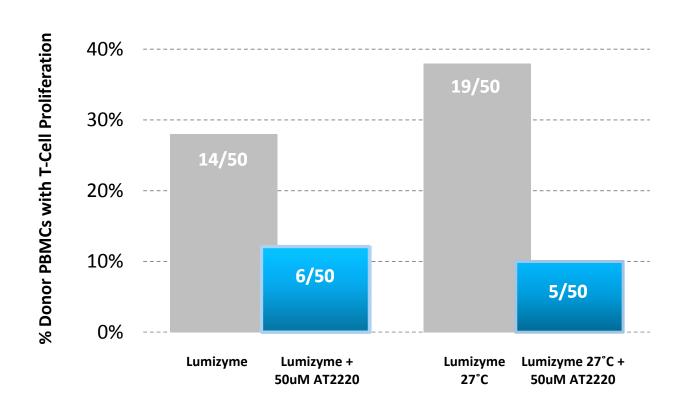
1Kishnani, et al., A Phase 2a Study to Investigate Drug-Drug Interactions between Escalating Doses of AT2220 (Duvoglustat Hydrochloride) and Acid Alfa-Glucosidase in Subjects with Pompe Disease, LDN WORLD 2013 \*Cohort 1 (AT2220 50 mg) muscle GAA activity not shown; 50 mg dose did not demonstrate meaningful change in tissue uptake (muscle)



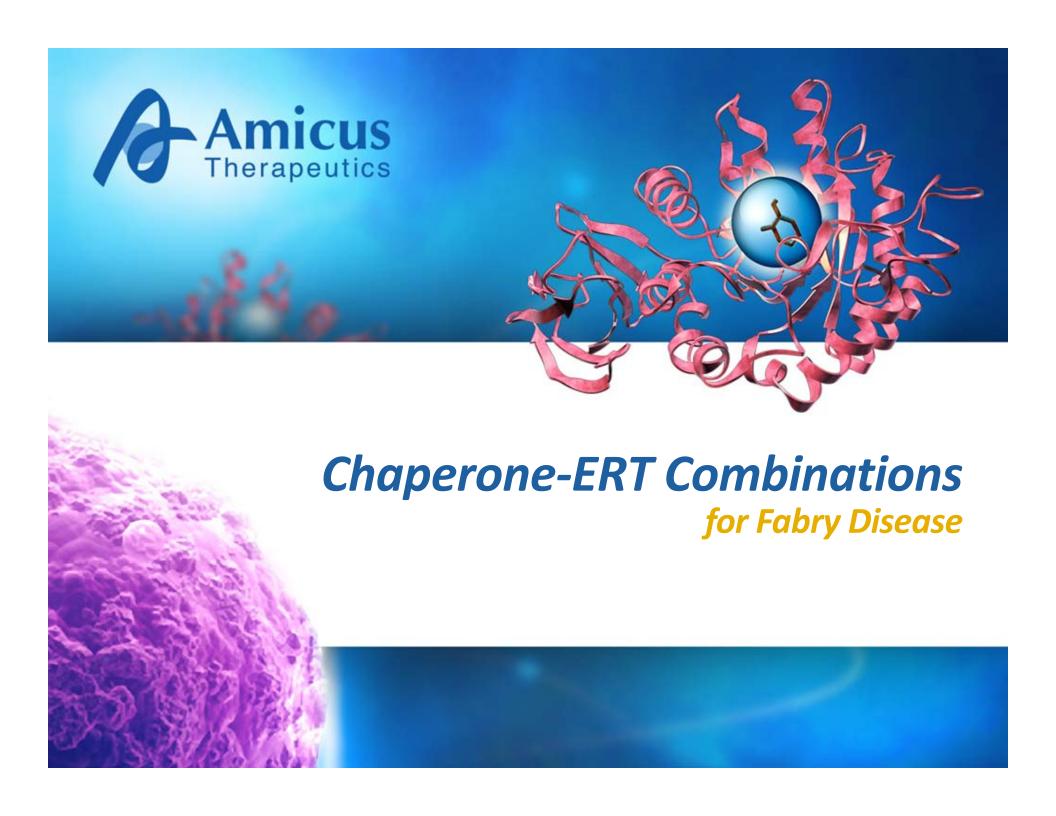
## Pompe Co-Administration: Potential to Mitigate ERT Immunogenicity

AT2220 Mitigates Human T-Cell Response Induced by Lumizyme ex vivo and May Significantly Reduce Immunogenicity of Lumizyme

#### T-Cell Proliferation in PBMCs from 50 Healthy Volunteers







## Fabry Disease Overview

#### Fatal, Progressive, Multi-System Lysosomal Storage Disease



X-linked

Renal failure, cardiac failure, stroke

5-10K diagnosed WW (51% female/49% male¹)

Recent neonatal screening results suggest prevalence of late onset form in 1:3000 or more<sup>2,3</sup>

FY12 ERT sales of \$873M WW

\$195M US (Fabrazyme conditional approval)

 \$678M ex-US (Fabrazyme and Replagal full approval)

Presence of antibodies
 [against α-Gal A] may reflect
 worse treatment outcome<sup>4</sup>



Kidne

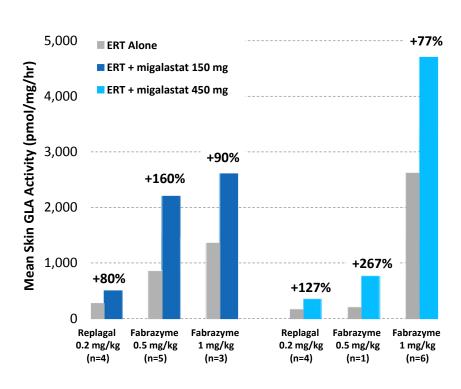
## Fabry Co-Administration: Phase 2 Study 013

Oral Migalastat HCl<sup>1</sup> Co-Administered with Fabrazyme or Replagal Led to Consistent Increases in Active Plasma Enzyme Levels and Tissue Uptake<sup>2</sup>

#### Plasma rhGLA Activity (Area Under Curve)

#### Fabrazyme 1 mg/kg 12,000 Fabrazyme 0.5 mg/kg 10,000 **+100%** Replagal 0.2 mg/kg Plasma AUC rhGLA Activity (hr\*nmol/hr/mL) 8,000 6,000 4,000 +190% 2,000 +340% **ERT Alone** ERT + 150mg Migalastat Fabrazyme 1 mg/kg 20,000 abrazyme 0.5 mg/kg 15,000 Replagal 0.2 mg/kg 10,000 5,000 0 **ERT Alone** ERT + 450 mg Migalastat

#### Mean Skin GLA Activity (Day 2)



<sup>&</sup>lt;sup>1</sup> Single oral dose 2 hours prior to ERT infusion; <sup>2</sup> Bichet, et al., A Phase 2a Study to Investigate the Effect of a Single Dose of Migalastat HCl, a Pharmacological Chaperone, on Agalsidase Activity in Subjects with Fabry Disease, LDN WORLD 2013.

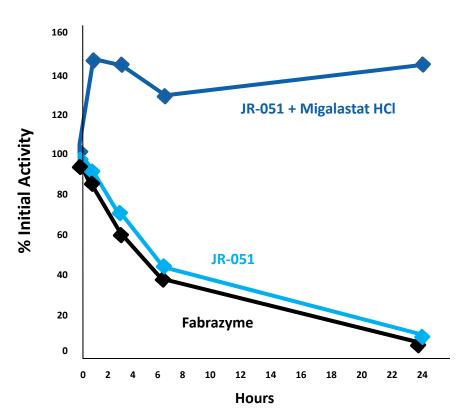


#### (Preliminary Results)

## **Fabry Co-Formulation:** Proprietary ERT JR-051\* + Migalastat HCl

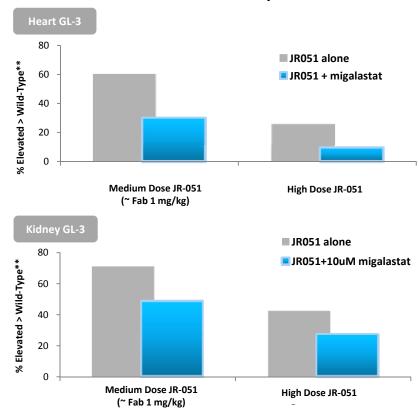
#### Stabilization of JR-051 ex vivo

Migalastat HCl Prevents Loss of Enzyme Activity in Blood



#### JR-051 +/- Migalastat HCl in GLA Knock-Out Mice (Repeat-Dose IV Administration)

Co-Formulation Results in Significantly Greater GL-3 Reduction than Previously Observed



<sup>\*</sup>JR-051 designed to be biosimilar to Fabrazyme; \*\*0 = wild-type, 100 = untreated KO mouse





# Next-Generation Therapies for Pompe Disease and Mucopolysaccharidosis Type I



## Next-Generation Pompe ERT: AT2220 + Proprietary rhGAA Enzyme

Leveraging CHART Platform with Internal Biologics Capabilities to Develop Next-Generation ERT

#### Proprietary rhGAA Enzyme





**Potential Improvements** 

AT2220 Small Molecule Stabilizer

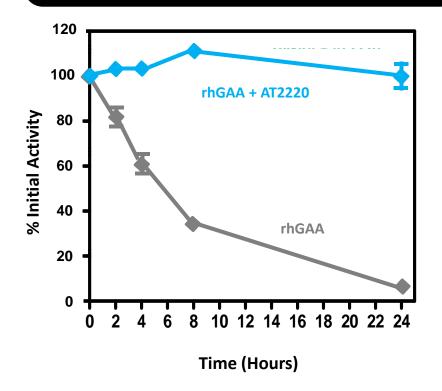
- Optimized glycosylation
- De-immunization
- Increased exposure and tissue uptake
- Reduced immunogenicity
- SubQ delivery



## Pompe Co-Formulation: AT2220 + Myozyme/Lumizyme (rhGAA)<sup>1</sup>

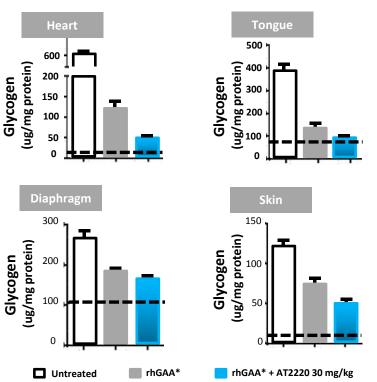
AT2220 Prevents Loss of Enzyme Activity in Blood and Co-Formulation Results in Significantly Greater Glycogen Reduction in Preclinical Studies

#### Stabilization of rhGAA ex vivo



#### rhGAA +/- AT2220 in GAA Knock-Out Mice

#### Repeat-Dose IV Administration





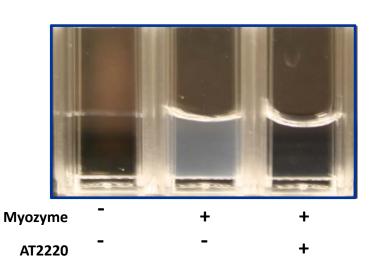


#### **Next-Generation Pompe ERT**

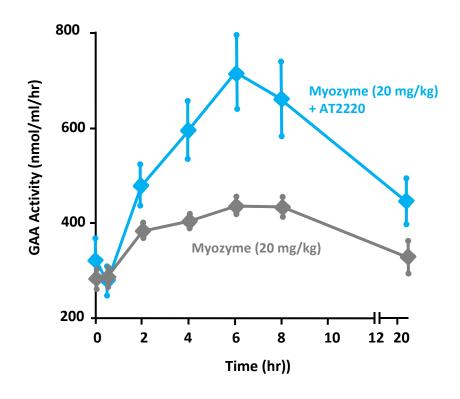
#### **SubQ Delivery Potential**

**Increased ERT Stability and Prevention of Aggregation** 

Increased Circulating Levels of Active rhGAA in Rats



Aggregation assessed after 4 weeks at 37°C





## Mucopolysaccharidosis Type I (MPS I)





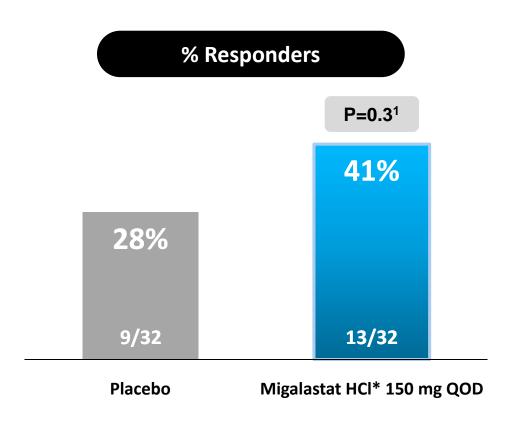
- Inherited deficiency in lysosomal enzyme alpha-Liduronidase (IDUA)
- Accumulation of complex carbohydrates (glycosaminoglycans, GAGs) dermatan sulfate and heparan sulfate
- Affects physical abilities, organ and system functioning, mental and skeletal development
- Estimated 3,000 diagnosed in US, EU and Japan<sup>1</sup>
- First and only approved ERT: rhIDUA, Aldurazyme® (\$193M in FY12 sales)
  - rhIDUA does not access CNS
  - Little effect on bone growth and heart valve disease
  - Significant number of patients develop antibodies that may negatively impact efficacy<sup>2</sup>





## Phase 3 Study 011: Top-Line Stage 1 (6-Month) Results

Primary Endpoint - Responder Analysis (ITT): ≥ 50% Reduction from Baseline in Kidney Interstitial Capillary GL-3



<sup>\*</sup> migalastat is not authorized for use and is an investigational product

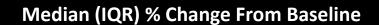


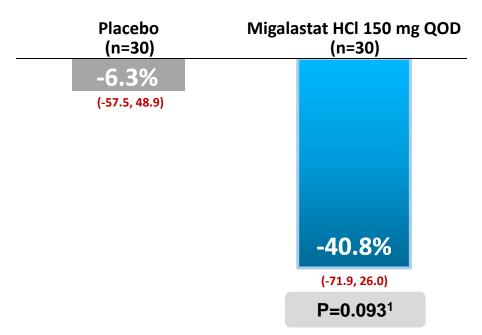
Difference=12.5% (95% CI: -13.4, 37.3). Migalastat HCl minus placebo in % responders. P-value based on exact Cochran-Mantel-Haenszel test stratified by gender. Subjects with baseline biopsy but missing month 6 biopsy counted as a failure.

## Phase 3 Study 011: Top-Line 6-Month Results

Secondary Analysis of Primary Endpoint (mITT\*)

Median Percent Change From Baseline in Kidney Interstitial Capillary GL-3





<sup>\*</sup> mITT: Subjects who had a baseline and at least one on-therapy assessment. Median baseline average number of inclusions per capillary (0.23 placebo, 0.18 Migalastat HCI)



<sup>&</sup>lt;sup>1</sup> p-value from ANCOVA based on ranked observations adjusting for baseline and sex

## Phase 3 Study 011: 6-Month Safety

#### **Most Common Treatment Emergent Adverse Events (≥ 10% of Subjects)**

Adverse event	Placebo (n=33)	Migalastat HCl (n=34)
Any Event	91%	91%
Headache	21%	35%
Fatigue	12%	12%
Nausea	12%	9%
Nasopharyngitis	15%	6%
Paresthesia	9%	12%

No Serious Adverse Events Deemed by Investigators to be Treatment-Related
No Withdrawals Due to Adverse Events



## Phase 3 Study 012

Ongoing 18-Month Open-Label Study Comparing Migalastat HCl (150 mg QOD) to ERT (Fabrazyme and Replagal) in Fabry Patients with Amenable Mutations\*

## THE ATTRACT STUDY

AT1001 Therapy Compared to Enzyme Replacement in Fabry Patients with AT1001-responsive Mutations: a Global Clinical Trial



- Switch to migalastat HCl or remain on ERT
- 60 total patients (1.5:1 randomization)
- No kidney biopsies
- Clinical outcome is renal function (lohexol GFR)
- Data anticipated 2H14



## Migalastat HCl Monotherapy: Development Strategy

Assembling Robust Dataset to Maximize Chances for U.S. Approval of Migalastat HCl Monotherapy for Fabry Patients with Amenable Mutations

- We remain fully committed to advancing migalastat HCl monotherapy, which we are developing with GSK
- Study 011 Stage 2 (12-month) top-line data expected 4Q13
- Study 012 top-line data anticipated 2H14
- FDA meeting anticipated 2H14 to discuss U.S. approval pathway



#### **Anticipated Milestones**

#### **Building Shareholder Value**

2H13

Top-Line 12-Month Data from Phase 3 Fabry Monotherapy Study 011
Initiation of Phase 2 Repeat-Dose Pompe Co-Administration Study

1H14

Initiation of Phase 1/2 Fabry Co-Formulation Study

Initial Data from Phase 2 Repeat-Dose Pompe Co-Administration Study

2H14

**Top-Line Data from Phase 3 Monotherapy Study 012** 

**FDA Meeting to Discuss Fabry Monotherapy Approval Pathway** 

Phase 1 Data from Phase 1/2 Fabry Co-Formulation Study



