Corporate presentation

January 2025

Mereo BioPharma

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Unlocking the potential of novel targets for rare diseases

Our mission is to improve the lives of people living with rare diseases

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Strategic principles guide our journey

- Acquire and develop programs in rare diseases with high prevalence – partner of choice for in-licensing
- Focus on our core competencies and experience in rare diseases
- Develop pipeline of rare disease programs which have already received significant investment and retain global or regional rights where possible (initially in Europe)
- Partner our programs where it makes strategic sense and target monetization of royalty streams for non-core programs

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A late-stage rare disease company with a capital efficient model

Achievements and fundamentals

Two rare disease programs in-licensed and progressed to pivotal stage:

- **Setrusumab** for Osteogenesis Imperfecta (OI) in Phase 3 under a partnership with rare disease leader Ultragenyx
- **Alvelestat** for Alpha-1 Antitrypsin Deficiency-associated Lung Disease (AATD-LD) successfully completed Phase 2, with Phase 3 endpoints agreed in principle with FDA and EMA

Financial discipline delivers cash runway into 2027 through key inflection points

- $80.5 million of cash and cash equivalents as of September 30, 2024
- Balance FTE headcount with outsourcing through key data milestones
- Leverage investigator-led studies to expand data sets

Management team with a proven track record in corporate development

Track record of value-creating partnerships

Potential to provide future milestone payments and royalties

- Both late-stage rare disease programs from large pharma following significant investment with success-based returns
  - Setrusumab acquired from Novartis
  - Alvelestat in-licensed from AstraZeneca
- Setrusumab partnered with Ultragenyx whilst retaining European rights
- Non-core programs – potential to provide milestones and royalties
  - Navicixizumab global rights licensed to Feng Biosciences
  - Leflutrozole licensed to ReproNovo

ultragenyx pharmaceutical

NOVARTIS

AstraZeneca

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Addressing patient populations with high unmet needs & significant market opportunities of >$1Bn[1]

	Osteogenesis Imperfecta	Alpha-1 Antitrypsin Deficiency
Disease Background	**Rare genetic bone condition** leading to problems including frequent fractures and skeletal deformities	**Rare genetic progressive lung disease** characterized by unregulated NE-driven lung destruction
Epidemiology	**~60,000 patients** across the US & Europe[2]	Severe deficiency patient estimates: **~50,000 in North America** and **~60,000 in Europe[3]**
Unmet Need	**No FDA/EMA approved therapy.** SoC (bisphosphonates) has not been shown to consistently reduce fractures	Augmentation therapy **lacks clarity on efficacy** and isn't reimbursed across all markets
Mereo's Unique Approach	**Setrusumab** A sclerostin-targeting antibody	**Alvelestat** An oral neutrophil elastase inhibitor

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1. Based on Cantor Fitzgerald estimates of Net Peak Sales in the US and EU5, and Global Data; 2. Based on internal forecast; 3. Blanco I et al. 2017. alpha-1 antitrypsin Pi*Z gene frequency and Pi*ZZ genotype numbers worldwide: an update. *Int J COPD*: 12 561-569;

Late-stage clinical pipeline with two rare disease programs

Product candidate	Phase 1	Phase 2	Phase 3	2025 Milestones
Setrusumab Osteogenesis Imperfecta			Orbit (5 - 25 yrs old) Cosmic (2 - 6 yrs old) ultragenyx pharmaceutical	Phase 3 data
Alvelestat* AATD-Lung Disease			THE UNIVERSITY OF ALABAMA AT BIRMINGHAM NIH National Center for Advancing Translational Sciences	Potential partnership Potential Phase 3 initiation

*Investigator-Sponsored Study in bronchiolitis obliterans syndrome also being performed under non-Mereo IND

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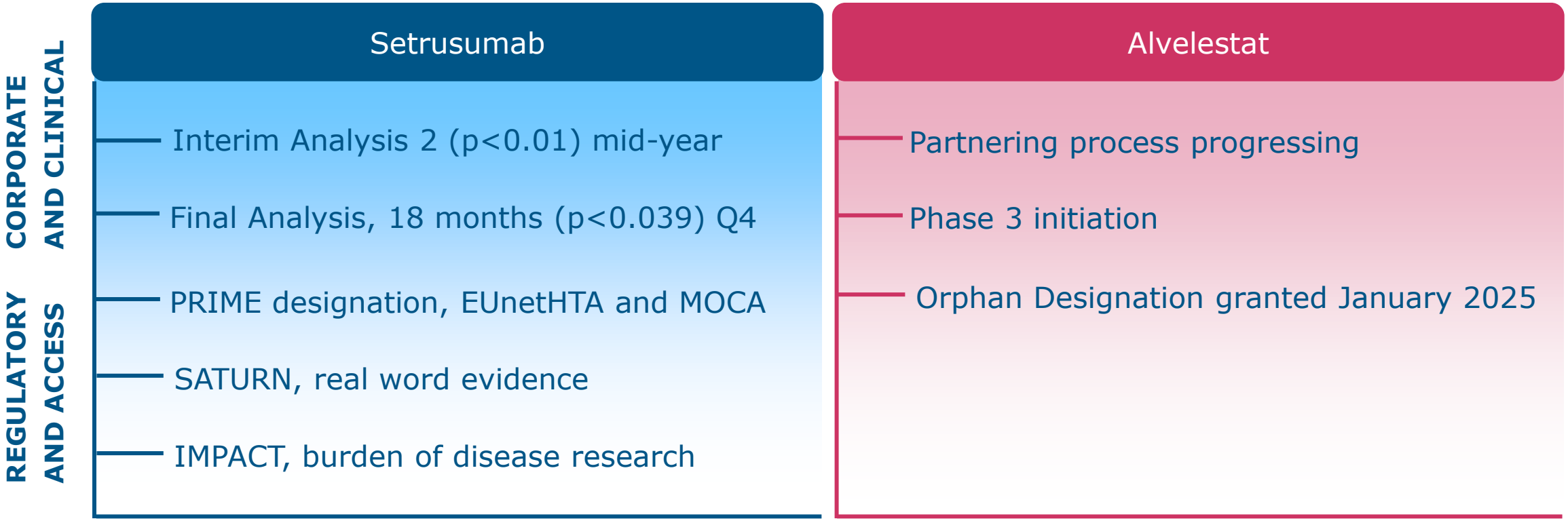
We have achieved key designations available for rare diseases

	Setrusumab for Osteogenesis Imperfecta	Alvelestat for AATD-associated Lung Disease
Orphan Drug Designation	✓	✓
Breakthrough Designation	✓ *Ultragenyx achieved in 2024*	–
Fast-track Designation	–	✓
PRV designation	✓	*Not relevant*
Orphan Designation	✓	✓
Prime Designation	✓	–
EUnetHTA advice	✓ *Official participant in pilot scheme (2019)*	–

Abbreviations: AATD: Alpha-1 Antitrypsin Deficiency; PRV: Priority Review Voucher

Mereo is in a strong position to execute through 2025

Financial discipline delivers cash runway into 2027. Mereo is in a strong position to execute through 2025, including critical pre-commercialization activities for setrusumab.



“It’s always a pleasure to come and speak with people who are actually making a difference on the ground and making a difference for people like myself and for others in the community. Because it is what you do that helps us to live the lives that we want and that we deserve.”

Thines Ganeshamoorthy, Trustee at the Brittle Bone Society, speaking at an event to mark Rare Disease Day 2023 at Mereo BioPharma.

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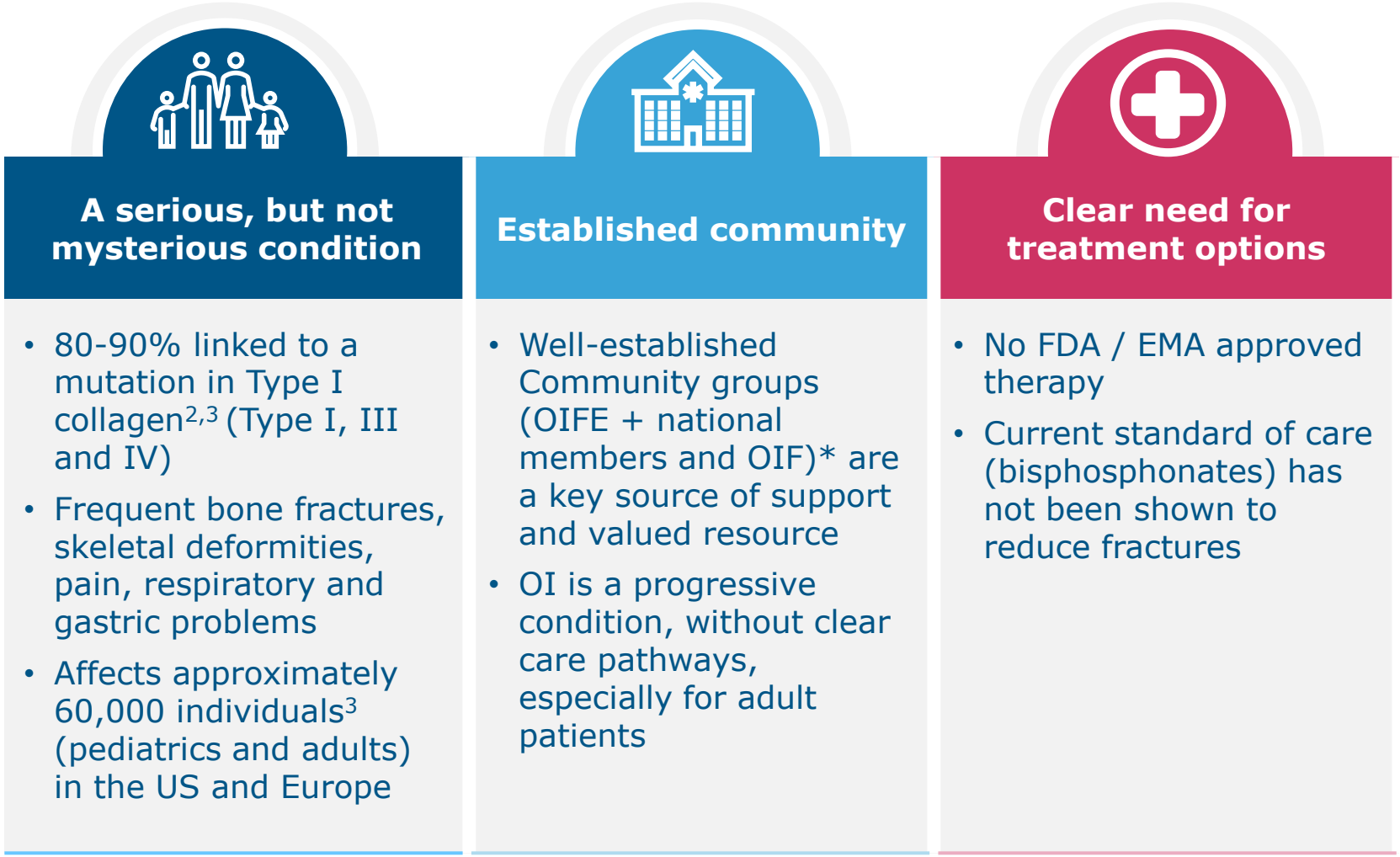
Setrusumab (UGX143)

Osteogenesis Imperfecta: a rare genetic bone condition with no FDA or EMA approved therapy

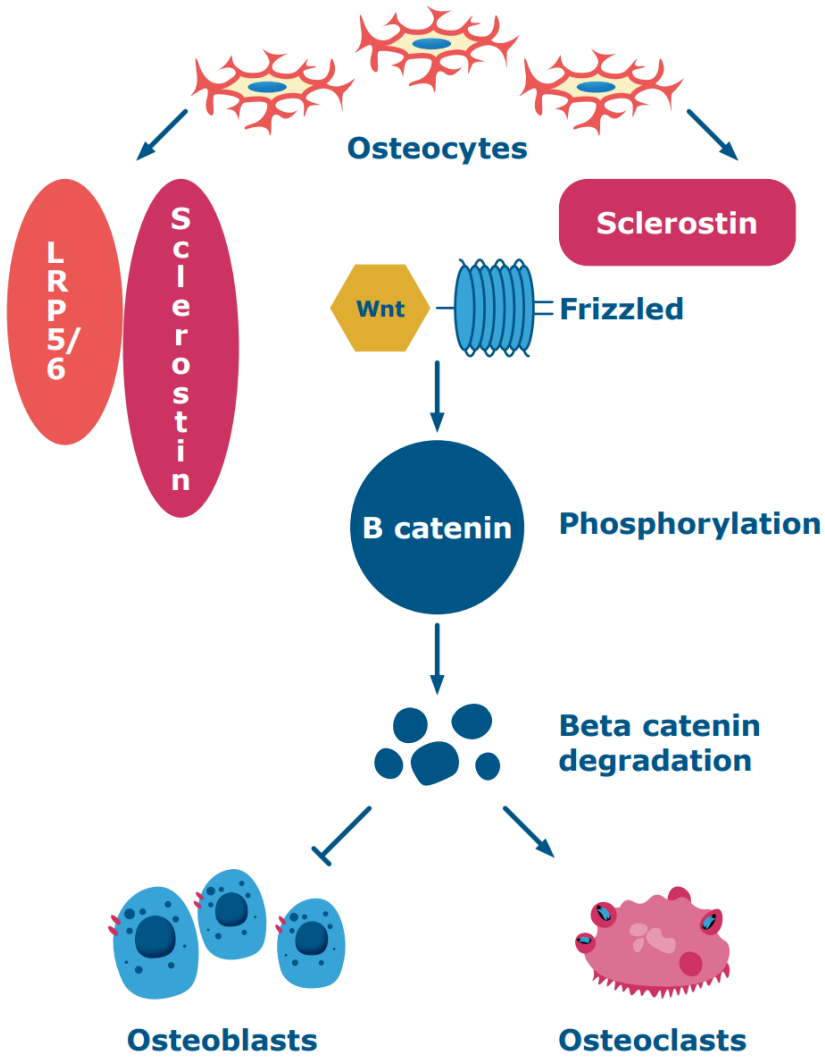
OIFE Topical Meeting
June 2023

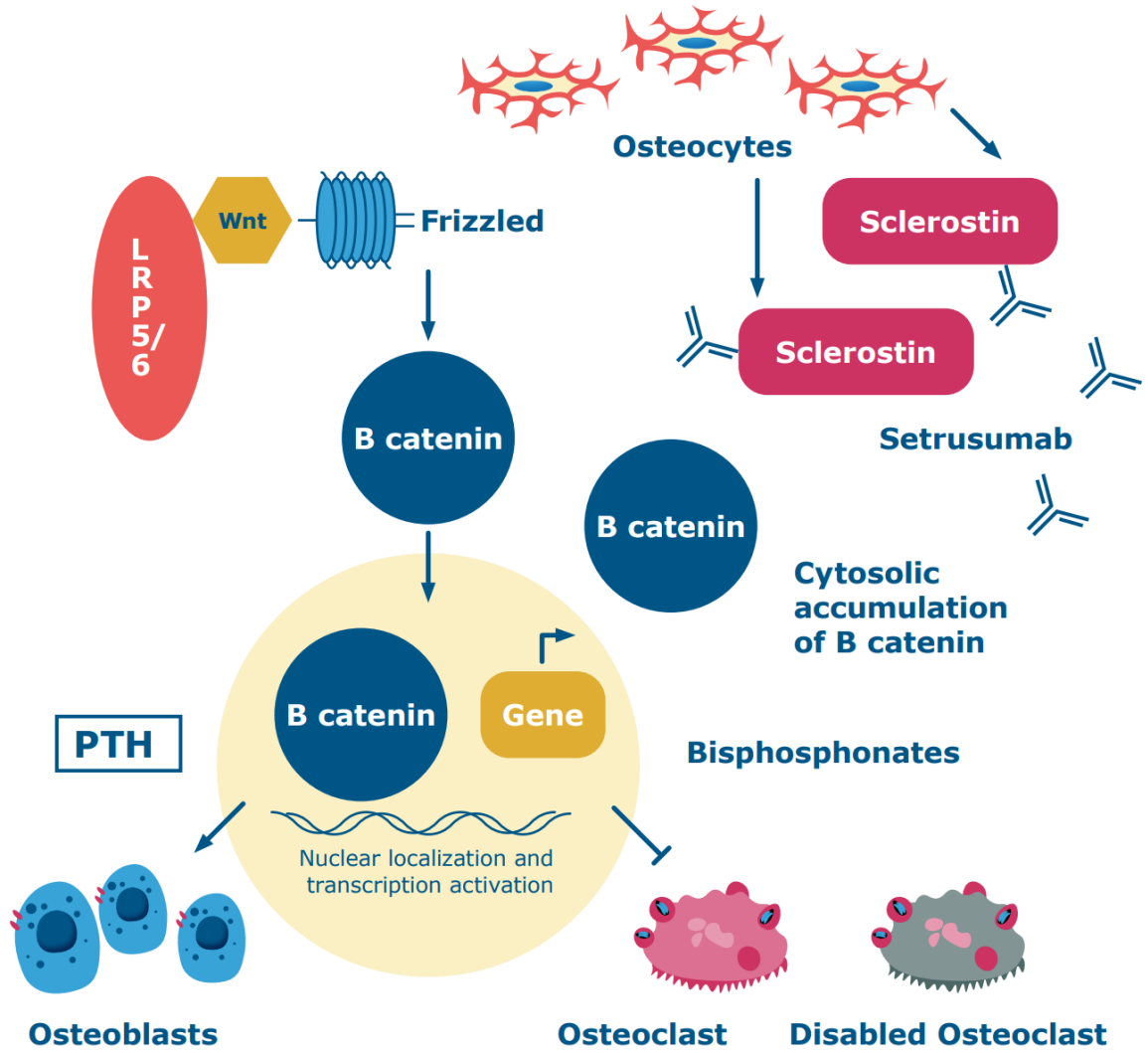
Rare genetic bone condition represents a >$1Bn market opportunity



1. Based on Cantor Fitzgerald estimates of Net Peak Sales in the US and EU5; 2. Based on Osteogenesis Imperfecta Foundation estimates; 3. Based on Orphanet estimates; 3. Internal BD forecast;
*OIFE: Osteogenesis Imperfecta Federation Europe; OIF: Osteogenesis Imperfecta Foundation

Setrusumab – a well-defined Mechanism of Action





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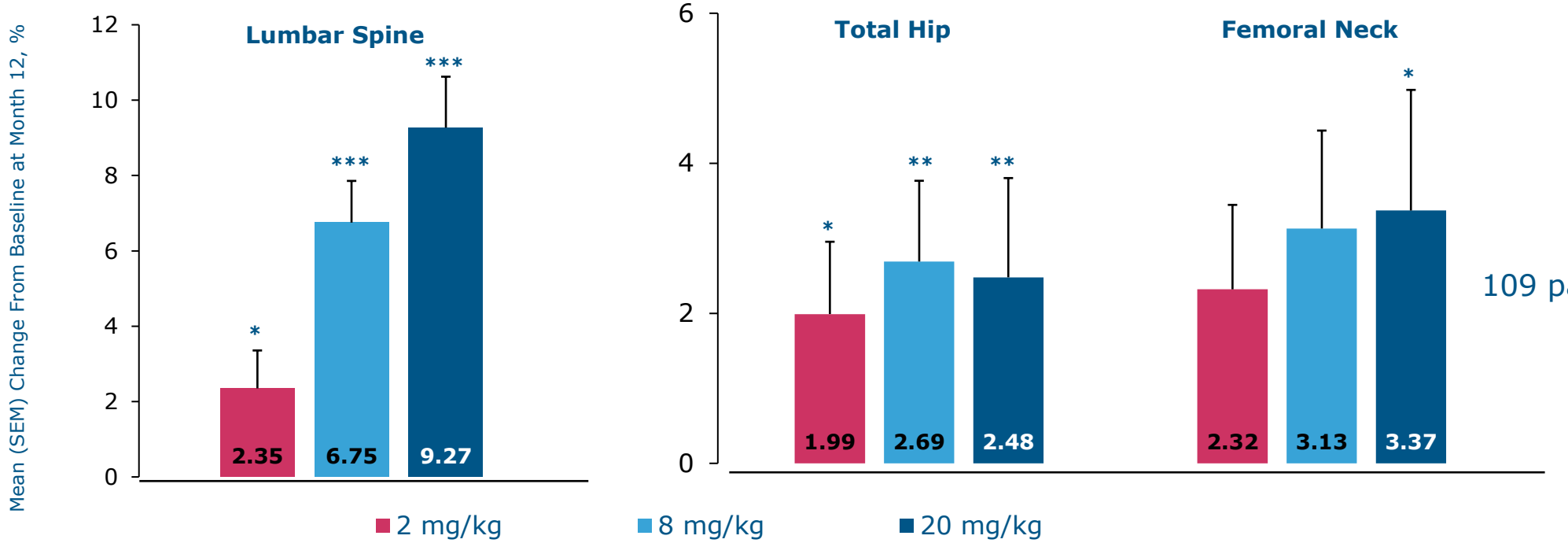
Increased BMD and bone strength, decreased fracture rate

Phase 2b ASTEROID study in adults with OI Types I, III and IV

Statistically significant dose-dependent increases in areal BMD by DXA following 12 months of setrusumab therapy



109 patients enrolled

**p<0.05, **p<0.01, ***p<0.001 vs baseline based on an ANCOVA model with baseline values, treatment group and OI type as covariates.*
ANCOVA, analysis of covariance; BMD, bone mineral density; DXA, dual-energy X-ray absorptiometry; OI, osteogenesis imperfecta; SEM, standard error of the mean.
At the 20 mg/kg dose - increase in failure load (p=0.037) and stiffness at the radius (p= 0.022) as measured by finite element analysis (FEA).
Increase in trabecular bone score (TBS) – 3D bone architecture, helps predict fracture (p<0.001 at 8mg/kg and 20mg/kg).

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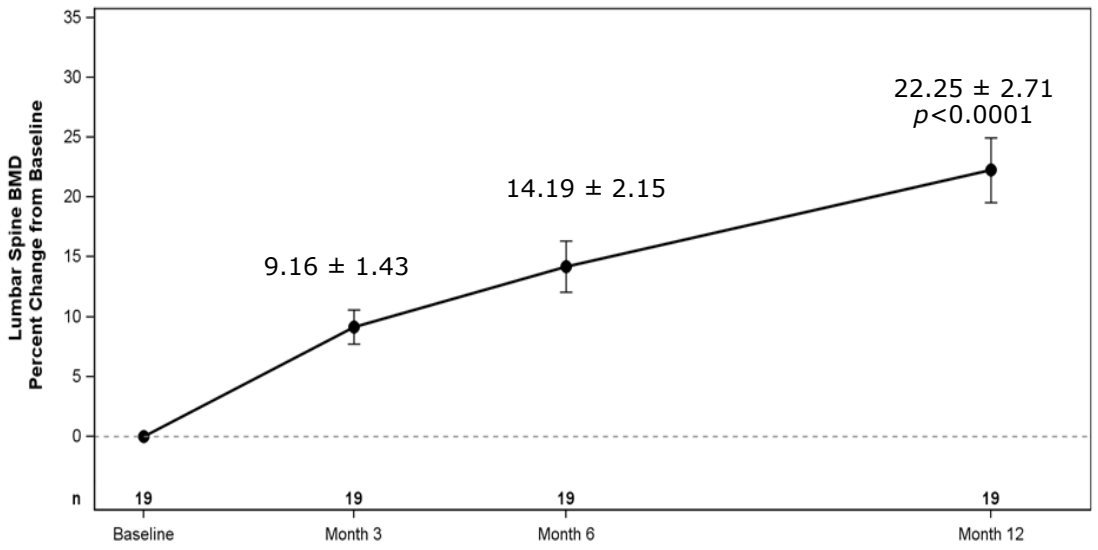
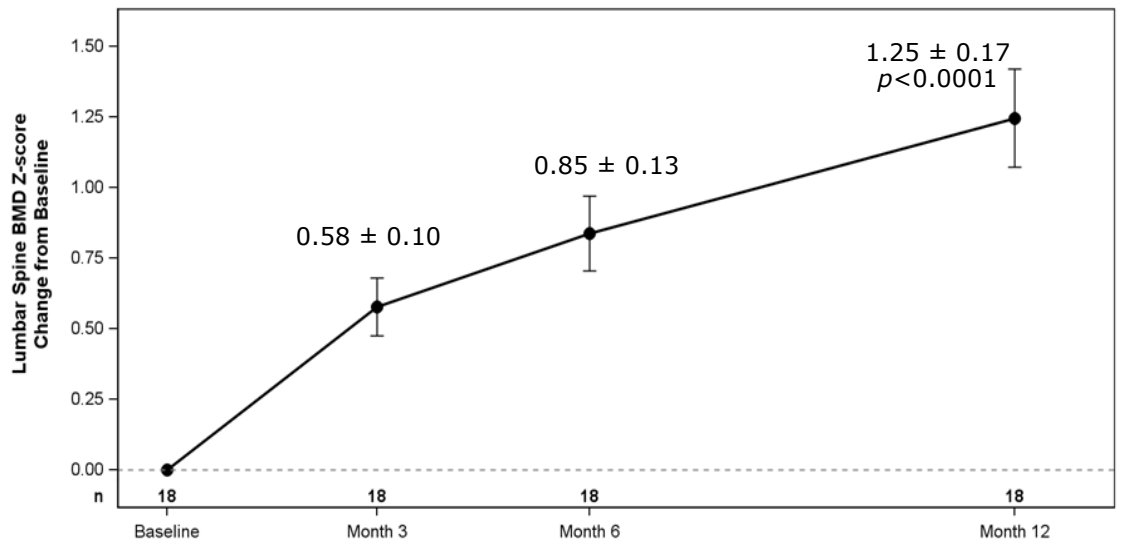
Glorieux F, *et al.* "Setrusumab for the treatment of osteogenesis imperfecta (OI): Results from the Phase 2b ASTEROID Study" ASBMR 2021; Abstract 1016.

Orbit Phase 2 – BMD and Z-score mean increase through month 12[1]
Improvements consistent across all OI Types studied

Lumbar Spine BMD[1] % Change from Baseline



Lumbar Spine BMD[1] Z-Score Change from Baseline



Change in lumbar spine BMD from baseline at 12 months = 22% (p<0.0001, n=19) (14% at 6 months)
Change in baseline lumbar spine BMD Z-score at 12 months = +1.25 (p<0.0001, n=18) (+0.85 at 6 months)

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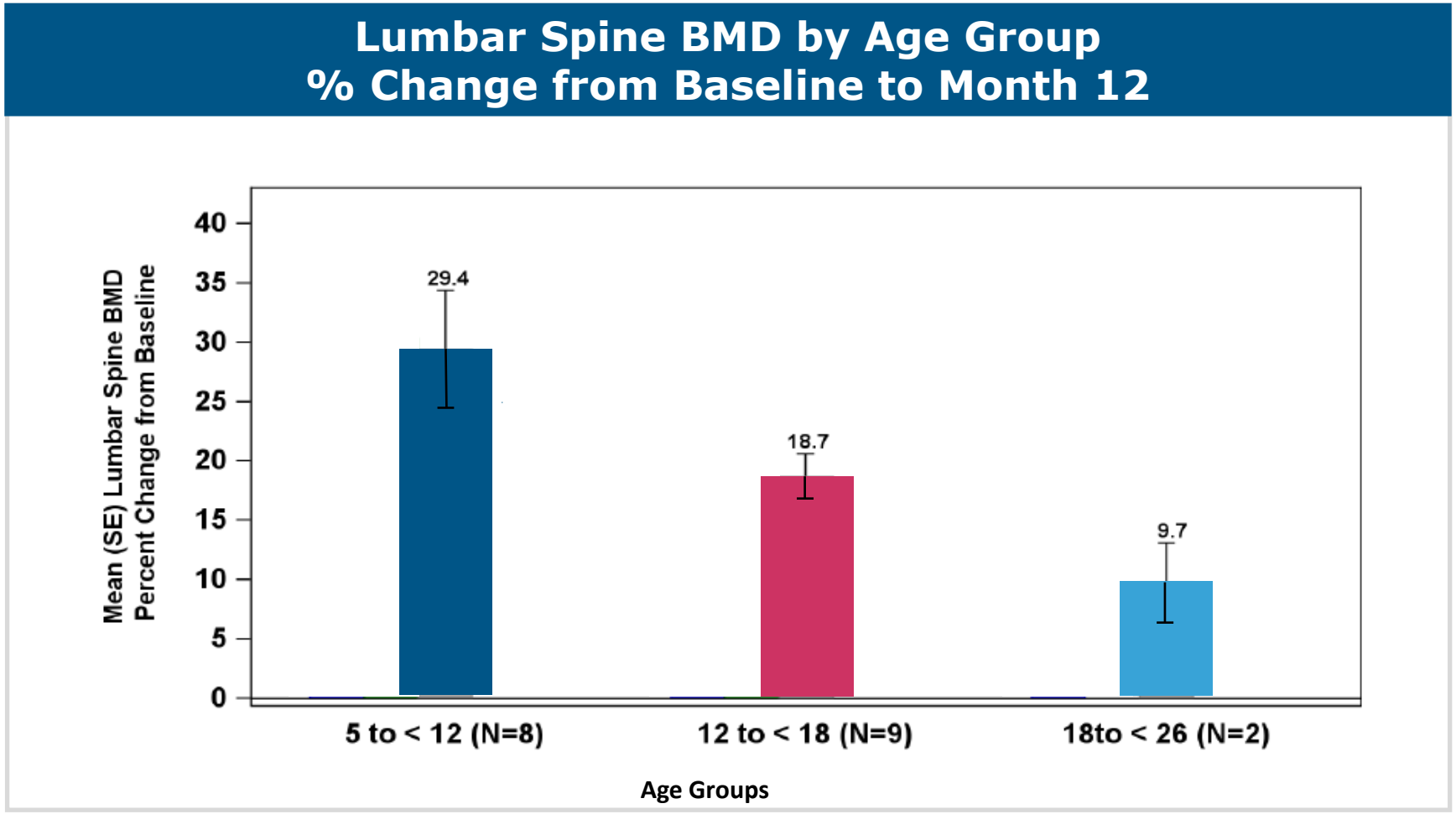
1. Data as of June 2024

Orbit Phase 2 – increase in BMD observed in all age groups,[1,2] Greatest increase in patients 5-12 years of age



Data consistent with ASTEROID Phase 2 data in adults[2]

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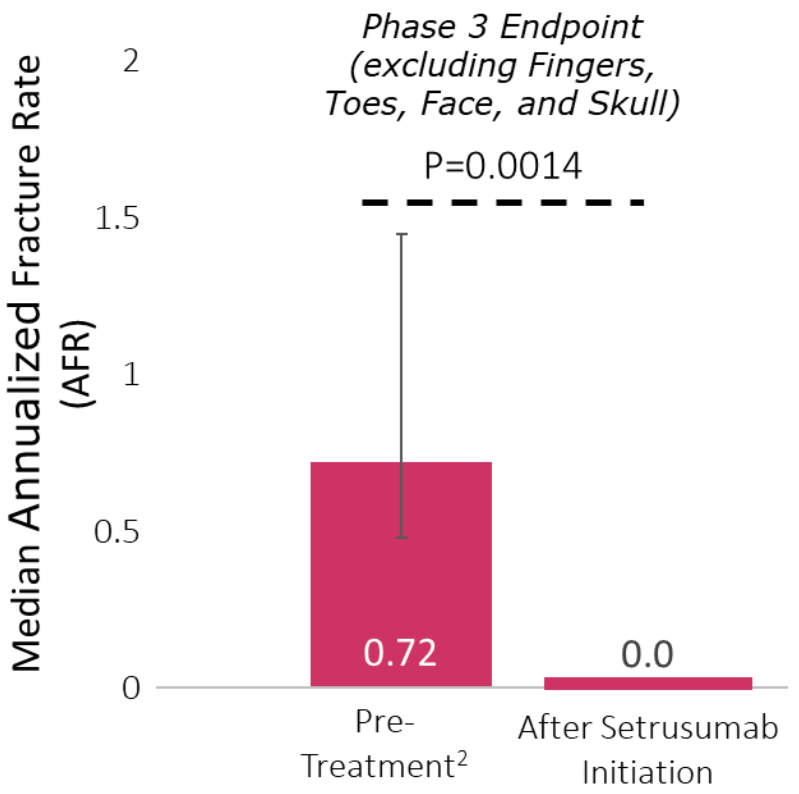
1. Data as of June 2024; 2. Lewiecki EM *et al*. Evaluating Setrusumab for the Treatment of Osteogenesis Imperfecta: Phase 2 Data from the Phase 2/3 Orbit Study. Presented at the American Society for Bone and Mineral Research; October 13–16, 2023; Vancouver, BC, Canada. Abstract/Poster LB SAT-650
2. Setrusumab for the Treatment of Osteogenesis Imperfecta: 12-Month Results from the Phase 2b Asteroid Study, Journal of Bone and Mineral research, July 2024

Treatment with setrusumab (mean duration of 16 months) resulted in a 67% reduction in annualized fracture rate (AFR) compared to pre-treatment AFR

Radiographically Confirmed Fractures[1]



1: Data as of June 2024; updated clinical fractures includes a mean follow-up of 16 months
2: Pre-Treatment period includes fractures in the two years before screening based on medical record review and patient report, and fractures between screening and first dose

6 y/o male patient with Type IV OI, increased mobility after 17 months on study

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Safety evaluation at 14 months shows setrusumab is well tolerated

No treatment-related SAEs	No unexpected adverse events or safety concerns	No subject discontinued treatment for any adverse event	No drug-related hypersensitivity reactions

Most common adverse events (AEs) reported at 6 months*[1]

Adverse Event at 6 months	Phase 2 Patients (N=24)
Infusion-related events (low grade)	7 (29%)
Headache	3 (13%)
Abdominal discomfort	1 (4%)
Infusion site pain	1 (4%)
Bone pain	1 (4%)
Upper respiratory tract infection	1 (4%)

*All related adverse events were mild to moderate in severity

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1. Lewiecki EM et al. Evaluating Setrusumab for the Treatment of Osteogenesis Imperfecta: Phase 2 Data from the Phase 2/3 Orbit Study. Presented at the American Society for Bone and Mineral Research; October 13–16, 2023; Vancouver, BC, Canada. Abstract/Poster LB SAT-650

Orbit* & Cosmic** – Phase 3 studies are fully enrolled

	orbit Osteogenesis Imperfecta (OI) Clinical Research	cosmic Osteogenesis Imperfecta (OI) Clinical Research
Objective	**Setrusumab vs. placebo 2:1 randomization** **Double blind**	**Setrusumab vs. bisphosphonates** 1:1 randomization Open label
Enrollment	**158** subjects ages **5 to 25 years** with OI Types **I, III, or IV**	**69** subjects ages **2 to 6 years** with OI Types **I, III, or IV**
Inclusion Criteria	≥1 fracture in prior 12 months or ≥2 or ≥1 long bone in prior 24 months	≥1 fracture in prior 12 months or ≥2 or ≥1 long bone in prior 24 months
Primary Endpoint	**Annualized clinical fracture rate** (**excluding** fingers, toes, face and skull)	**Annualized clinical fracture rate** (**including** morphometric fractures)

Interim Analysis 2: mid-2025 (p<0.01). Final analysis at 18 months: Q4 2025 (p<0.039)
Potential successful readout scenarios driven by
baseline fracture variability, accumulated fracture events and p-value stringency

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*Clinical Trials Identifier: NCT05125809
**Clinical Trials Identifier : NCT05768854

Laying the foundation for a successful setrusumab launch in Europe

Maximizing readiness for patients & caregivers

- Long-established OI patient community
- High-level of readiness for new treatments and to advocate
- Mereo engagement since Day 1 (2017)

Partnering with physician community to be delivery-ready

- Connected physician community – small number of expert OI centers
- High enthusiasm for new, effective therapies (BP's limitations)
- High diagnosis rate

Capturing & articulating value to healthcare systems

- Early engagement with HTAs and payors (2018)
- AFR "hard" primary endpoint – highly valued
- Quantified high level of unmet medical need
- HTA and economic value tools and post-approval data generation program ready

Targeted resourcing with rare disease expertise

- Defined number of expert centers – peak 65-70 field force
- Initial flexible footprint established 2022
- High-value, first-launch countries priority
- Maximize first-mover advantage

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Evidence Generation: building and delivering our case in Europe

Setting the baseline: Impact / Burden of Disease in OI in Adult and Pediatric patients across Mereo European territory markets

Largest ever burden of disease survey on the impact of OI on patients, physicians and caregivers. Successful collaboration between OIFE, OIF and Mereo. Made possible by the generous contribution of the OI community.

Regulatory scientific advice & HTA & Payor advice

Scientific advice from GBA & NICE in 2024 – sets our **base framework**

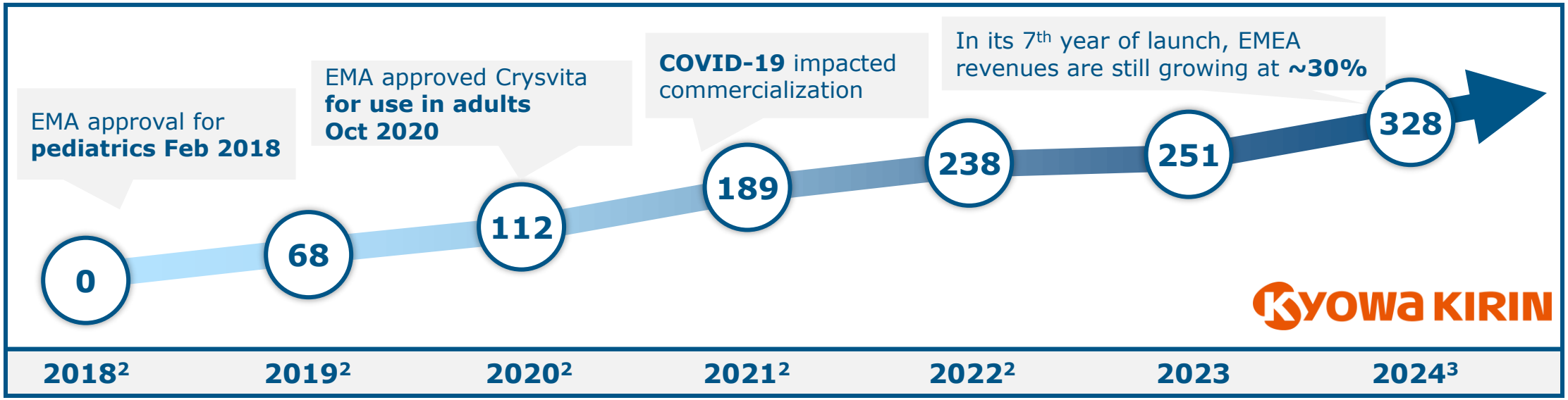
Validated "library" of data sources to answer authorities' questions: at time of MAA submission and to support ongoing reimbursement

Using existing data sets to provide coordinated data across multiple European treatment centers for OI

Abbreviations: SATURN: Systematic Accumulation of Treatment practices and Utilization, Real world evidence, and Natural history data for OI

Learning from the launch of Crysvita in Europe

Kyowa Kirin reported EMEA revenues for Crysvita[1], $M, 2018-2024



- **Build** on the learnings of "rare bone product launch"
- **Leverage** HTA/payor/physician and OI community experience
- **Target** simultaneous adult and pediatrics launch

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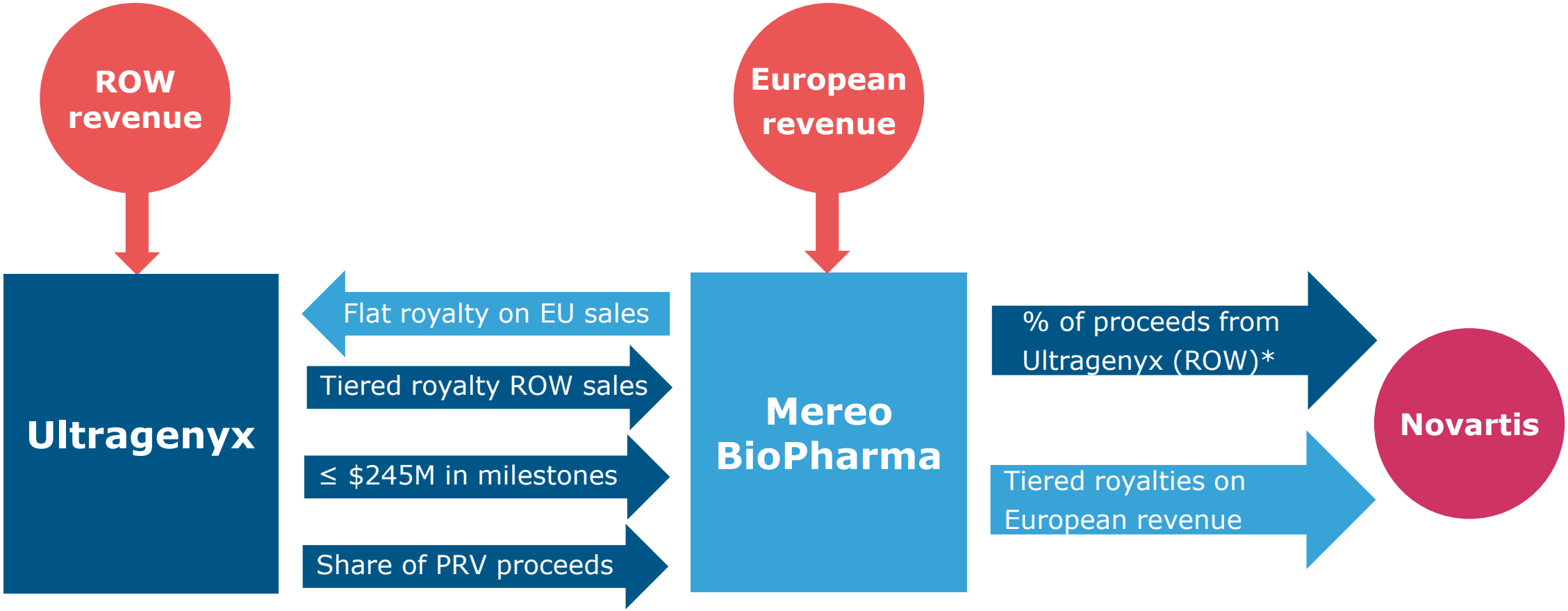
1. Revenues converted from Japanese Yen to USD at year-by-year currency rates as per Kyowa Kirin Co., Ltd. Appendix to the Consolidated Financial Summary (IFRS) Fiscal 2018-2023 and Fiscal 2024 Q3 (January 1, 2024 – September 30, 2024), respectively; 2. Revenue from Early Access Programme not included in Kyowa Kirin reported revenues; 3. Q1-Q3 reported revenues annualized

The Ultragenyx partnership, a highly effective collaboration

- Ultragenyx leads and funds the global development plan, including CMC (Dec 2020)
- Mereo retains European rights (including UK) and Ultragenyx has the USA and Rest of the World rights
- Mereo received $50M upfront and a $9m milestone with potential additional $245M in regulatory and commercial milestones and shared potential PRV proceeds
- Ultragenyx pays Mereo tiered double digit % royalties on net sales in Ultragenyx territories
- Mereo pays Ultragenyx fixed double digit % royalty on net sales in Mereo territories

Combining the potential European revenue with focused Opex costs, and the cash inflows from milestones and royalties from Ultragenyx = **a compelling business opportunity**

The Ultragenyx partnership – potential attractive cash flows



* Subject to certain deductions

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Alvelestat (MPH966)

Alpha-1 Antitrypsin Deficiency-associated Lung Disease: a rare progressive lung disease with high unmet need

Alpha 1 Support Group UK Information Day September 2023

Alvelestat, a potential >$1bn market opportunity in AATD-LD

A rare progressive disease with high unmet need

- Presents age **20 to 50** with shortness of breath
- **~60-80%** of severe patients develop lung disease[1]
- Currently COPD treated with lifestyle changes and **weekly IV – augmentation therapy**

Alvelestat targets root cause of lung damage

- Lack of AAT → risk of **progressive lung damage** and early onset emphysema
- Potential to treat **early stages of lung disease** to delay progression
- Potential **efficacy advantage** due to **sustained NE suppression**

Two Phase 2 trials in AATD-LD

ASTRAEUS

- No augmentation
- Established disease
- Median baseline FEV_1: 59%

ATALANTa

- ~50% on augmentation
- Earlier-stage patients
- Median baseline FEV_1: 81%

Total = **162 patients**

Significant market opportunity

- Augmentation revenues **$>1Bn** in 2023[2]
- AATD products forecast to reach **$3.2bn** by 2031[3] **partially driven by increasing diagnosis rate**
- Europe AAT augmentation **not widely reimbursed**

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1. Blanco I et al. 2017. alpha-1 antitrypsin Pi*Z gene frequency and Pi*ZZ genotype numbers worldwide: an update. Int J COPD: 12 561-569
2. Internal analysis
3. GlobalData

Alvelestat's potential role in lung disease is supported by promising efficacy and safety data in >1000 subjects

Relevant Phase 2 studies		
AATD-LD | ASTRAEUS study	N=99	Reduction in biomarkers of NE-driven connective tissue breakdown (desmosine and Aα-val^{360}) in PI*ZZ patients not on augmentation therapy
AATD-LD | ATALANTa study	N=63	Sig. change on St. George's Respiratory Questionnaire (SGRQ) Activity Score in non-augmentation subgroup (Δ10.2, P=0.01 vs. pbo, wk 12) and 4.7 difference on SGRQ Total score vs. placebo (MCID= 4, P=0.1)
COPD (2 studies)	N=~1,500	In one study (n=615) a >100ml improvement in FEV_1 observed in bronchitic subset (n~200, p<0.01)[1]
Bronchiectasis	N=38	100ml improvement in FEV_1 (p=0.006); numerical improvement SGRQ of -5.64 (LSM over placebo)[2]
Cystic Fibrosis	N=55	Reduction of biomarker of lung damage (desmosine) (p<0.05)[3]
Hospitalised COVID-19	N=15	Faster 5-day clinical improvement in WHO severity scale[4]
Bronchiolitis Obliterans Syndrome	N=13	Reduction of biomarker of lung damage (desmosine), with signal of FEV_1 stabilization[5]

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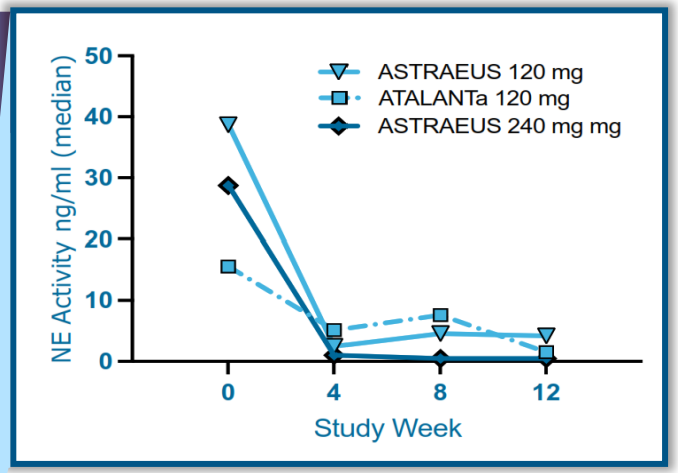
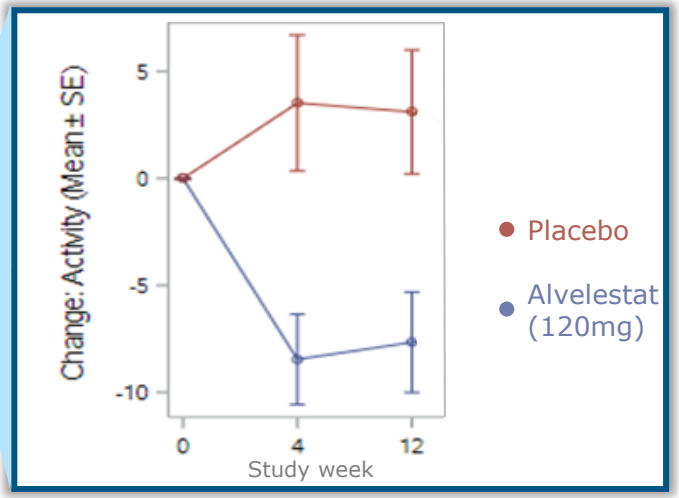
1. Kuna et al Resp. Med 2012; 106:531 supplement; 2. Stockley et al Resp Med 2013;107:524; 3. Elborn et al Eur Resp J 2012; 40:969; 4. Mereo R&D Update March 14 2022; 5. Im et al Blood 2021:138, Supplement 1 1815; Abbreviations: MCID: Minimal Clinically Important Difference

Alvelestat results in short-term symptomatic changes that we expect will evolve to long-term disease modification

	Short-term effect of alvelestat
Timeframe	**1-3 months**
Impact	**Systemic NE inhibition**
Dose required for effect	**120mg or 240mg**
Key biomarker	**Serum NE**
Key PRO & clinical endpoints	**SGRQ-Activity Score, CAT Score**
Overall effect	**Symptomatic relief**



Alvelestat shows >90% inhibition of serum NE from wk 4[1]



Alvelestat shows -10pt SGRQ activity improvement at wk 12[2] (p=0.01, MCID is est. at ~7.1[3])

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1. ATALANTa and ASTRAEUS studies; 2. ATALANTa Study, Non-augmentation sub-group – N=34; 3. Jenkins AR et al, Pulmonology 2024 30(1):24-33, MCID estimated to be 7.1 but not yet validated; Abbreviation: MCID: Minimum clinically important difference, CAT: COPD Assessment Test

Data from two AATD Phase 2 studies, demonstrated good overall safety vs. placebo and builds on extensive safety database

	Alvelestat 240 mg N=40 (%)	Alvelestat 120 mg N=54 (%)	Placebo N=67 (%)
SAE	3 (7.5)	1 (1.9)	0 (0)
Adverse Events of Special Interest	11 (27.5)	10 (18.5)	18 (26.9)
Infections requiring antimicrobial therapy	10 (25.0)	10 (18.5)	18 (26.9)

Adverse Events of Special Interest

- Across both Phase 2 studies, no discrepancy was observed in number of infections vs placebo
- Single case (240 mg) of prolonged QTc in subject with history of prolonged QTc on concomitant therapy with known QTc effects
- Single case (240 mg) of elevated ALT>5xULN without raised bilirubin; asymptomatic and resolved. No Hy's Law cases.

Adverse events

- Headache was most frequent adverse event, generally mild or moderate and resolving on continued dosing. 3 cases reported as SAEs (240 mg)

Including legacy studies, safety database of 1,269 subjects exposed to alvelestat

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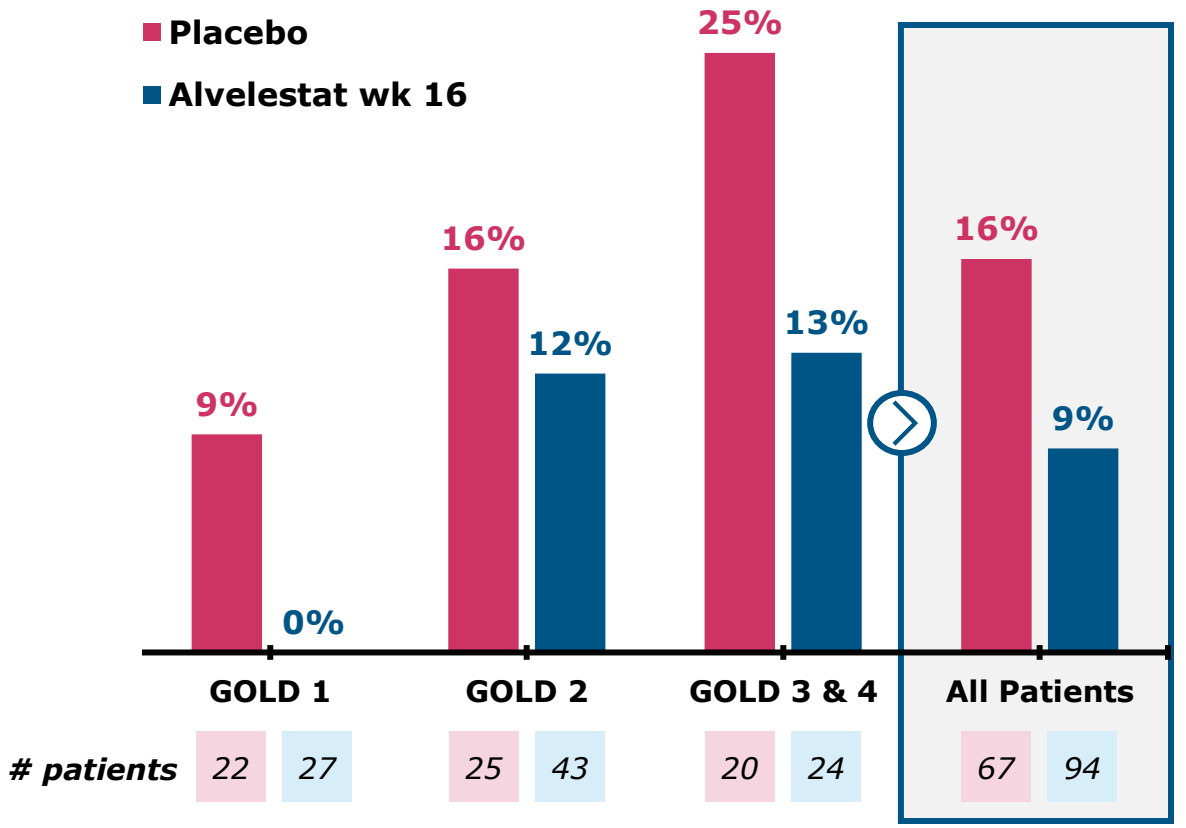
Preliminary data support a protective effect of alvelestat on acute exacerbations

- Reduction in acute exacerbations observed in Phase 2 program
  - Effect observed across all levels of GOLD severity[1]
  - Effect remains consistent when adjusted for exposure
- Augmentation therapy has not shown benefit on exacerbations:
  - Meta analysis of EXACTLE and RAPID trials showed significant 0.29 per year increase in rate compared to placebo, p=0.02[2]

% patients with exacerbations by week 16
ATALANTa + ASTRAEUS combined, all doses N=161



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1. GOLD1 defined as FEV_1% predicted <80, GOLD2 defined as FEV_1% predicted ≥50-<80, GOLD3 defined as FEV_1% predicted ≥30-<50, GOLD4 defined as FEV_1% predicted ≤30; 2. Edgar et al, Int J COPD 2017:12 1295–1308

Association of alvelestat treatment with improvement in Respiratory Health Status (SGRQ), an FDA recognized PROM*

- St. George's Respiratory Questionnaire – Patient reported outcome in COPD recognized by FDA
  - Total score = Activity, Symptoms and Impacts domains
  - Activity domain most impacted in patients with AATD
- Potential tool for "feels and functions" endpoints required by the FDA for registrational trials in AATD
- In AATD studies, **SGRQ Total score** has been shown to deteriorate ~ 1 point per annum[1]
- Phase 2 studies demonstrated a consistent association between the effects of alvelestat (biomarker reductions) and improvement in SGRQ (Total score and Activity Domain)[2,3]
- Effect also observed for the COPD Assessment Test (CAT), another validated patient-reported quality of life tool
- ATALANTa study – greater effect in SGRQ (Total score and Activity domain) in non-augmentation subgroup with earlier stage lung disease (FEV_1)

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* Patient reported outcome measure

1. Chapman et al, Lancet 2015; 386: 360–68
2. Parkin Am J Respir Crit Care Med 2023;207:A2844
3. Fettiplace. Am J Respir Crit Care Med 2024;209:A3298

Alvelestat is expected to be a long-term disease-modifying therapy going above & beyond augmentation therapy

Reduction in desmosine for 240 mg alvelestat at 12 weeks

superior to augmentation therapy

		Augmentation therapy[1]	Alvelestat (240 mg, ASTRAEUS[2])
Desmosine (absolute reduction from baseline, mean)	Month 3	-0.013 ng/ml	**-0.028 ng/ml**
	Month 48	-0.074 ng/ml	***Expect progressive improvement***

Long-term effect of alvelestat

Desmosine levels have been shown to **significantly correlate** with **clinically relevant measures** of disease severity in AATD-LD (FEV_1, SGRQ, and CT Density)[1,2,3]

Disease-modifying

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1. Ma et al 2017 Chronic Obstr Pulm Dis. 2017;4(1):34-44, adapted from source; 2. ASTRAEUS Study - Per protocol analysis, study duration 12 weeks; 3. Fettiplace et al, Am J Resp Crit Care Med 2024;209:A3298

Well-defined plan for Phase 3 registrational trial in AATD-LD

Clinical Data

- Earlier stage severe PI*ZZ patients observed to have **greater response** in SGRQ (Total and activity)
- Earlier stage patients (higher FEV_1) may be more likely to **show spirometry benefit**

Phase 3 Design

- **Early → late stage** – Pi*ZZ genotype
- Two independent primary endpoints – **SGRQ Total** (FDA) and **lung density by CT** (EMA – p<0.1 may be acceptable)
- **~220 patients** for up to **18 months** (240 mg alvelestat)

Commercial Opportunity

- Opportunity for broad label including **earlier stage PI*ZZ** patients who may not be eligible for AAT augmentation**
- Payors and HCPs **familiar** with SGRQ Total and CT endpoints
- **Partnering process ongoing** – range of structures

Broader population maximizes potential for **clinical** and **commercial success**

**EARCO and country level data indicate 60%-<80% FEV_1 predicted

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Other programs, milestones and financials

Key milestones for core programs

Product candidate	2023		2024		2025		Next milestone
	H1	H2	H1	H2	H1	H2	
Setrusumab	Phase 2 Orbit (5 - <26 yrs old) **OLE**						
OI		Phase 3 Orbit (5 - 25 yrs old)					Phase 3 Interim analysis
		Phase 3 Cosmic (2 - <7 yrs old)					Phase 3 Interim analysis
Alvelestat	ASTRAEUS						Potential partnering, Phase 3 initiation
AATD-LD	Phase 2 ATALANTa						Medical conferences
BOS*	Phase 1b	Phase 2					BOS: Phase 2 data

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*Bronchiolitis Obliterans Syndrome, Investigator-sponsored study

Other programs

Other current partnerships

Navicixizumab – global rights out-licensed to Feng Biosciences for further development in ovarian cancer

- Payments of up to $300 million in milestones plus royalties

Leflutrozole – global rights out-licensed to ReproNovo for further development

- ReproNovo is a reproductive medicine company
- Upfront plus up to $64 million in milestones and royalties

Partnering opportunities

Etigilimab – anti-TIGIT which has completed a Phase 1b basket study in a range of rare tumor types in combination with nivolumab. It is currently in a Phase 1b/2 investigator led study at the MD Anderson in clear cell ovarian cancer in combination with nivolumab, which has been expanded from the initial 10 patients to 20 patients. This study is funded by the Cancer Focus Fund.

Acumapimod – a P38 MAP kinase inhibitor which has successfully completed a Phase 2 study in Acute Exacerbations of chronic obstructive pulmonary disease (AECOPD) in 282 patients

Financial highlights

Cash runway into 2027
$80.5 million as of
September 30, 2024

Cap Table *(September 2024)*	**ADSs** *(in thousands)*
Shareholders > 2% holding	86,026
Shareholders < 2% holding	68,709
Share capital – Issued and outstanding as of September 30, 2024[1]	**154,734**
Potential Future Dilution:	
Warrants[2]	1,401
Convertible loan notes	3,421
Employee share schemes[3]	11,028

1 *ADS equivalents of 773,672,299 ordinary shares, with one ADS representing five ordinary shares.*
2 *Assumes a market price of $4.00 per ADS and cashless exercise. The maximum number of warrants outstanding is 1.8m.*
3 *Excludes 1.4m ADSs for employee share awards with an exercise price in excess $8.00; Most employee share awards have an exercise price between ~$1.00 - $6.00.*

Source: Shareholding based on the 13G & 13F filings (as of June 30, 2024), adjusted for subsequent purchases/sales when known.

Thank you

With a special thank you to members of our community, who generously agreed to be featured in this presentation.

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APPENDIX

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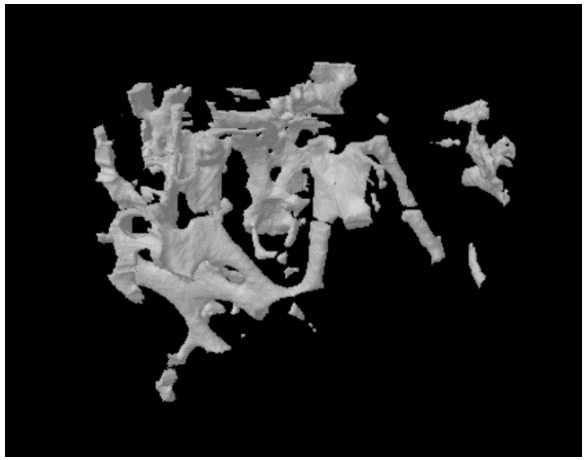
Setrusumab (BPS-804)

Mouse models and HR-pQCT

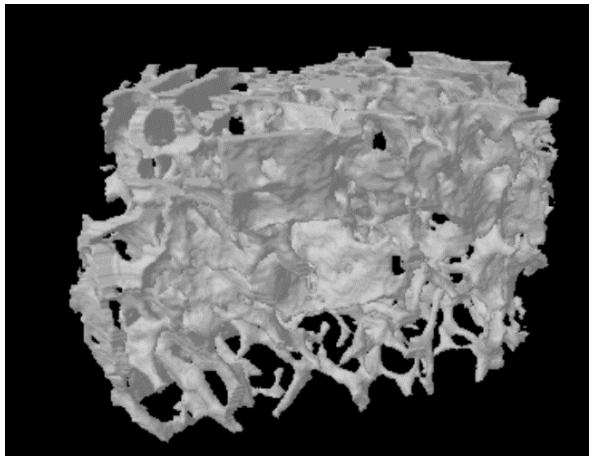
Rare Disease Day
February 2023

Brittle mouse model (Brtl/+)– treatment with BPS-804 (setrusumab)

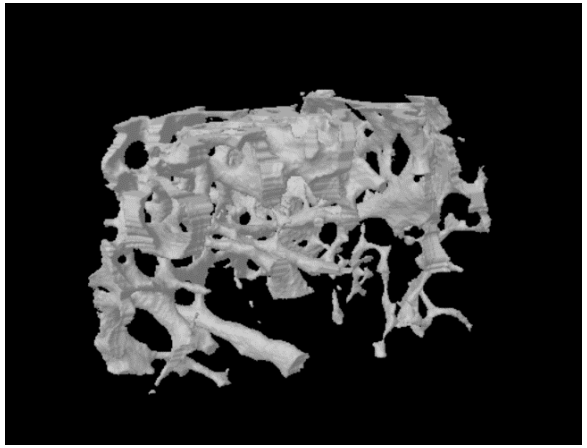
Mature Btrl control



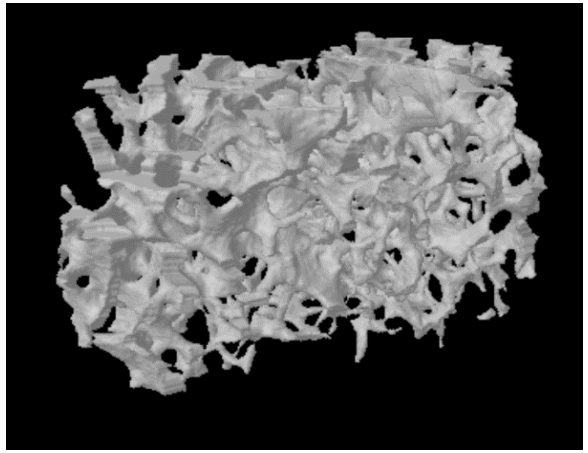
Mature WT Control



Mature Brtl treated



Mature WT Treated



Brtl – brittle mouse model

WT – wild type

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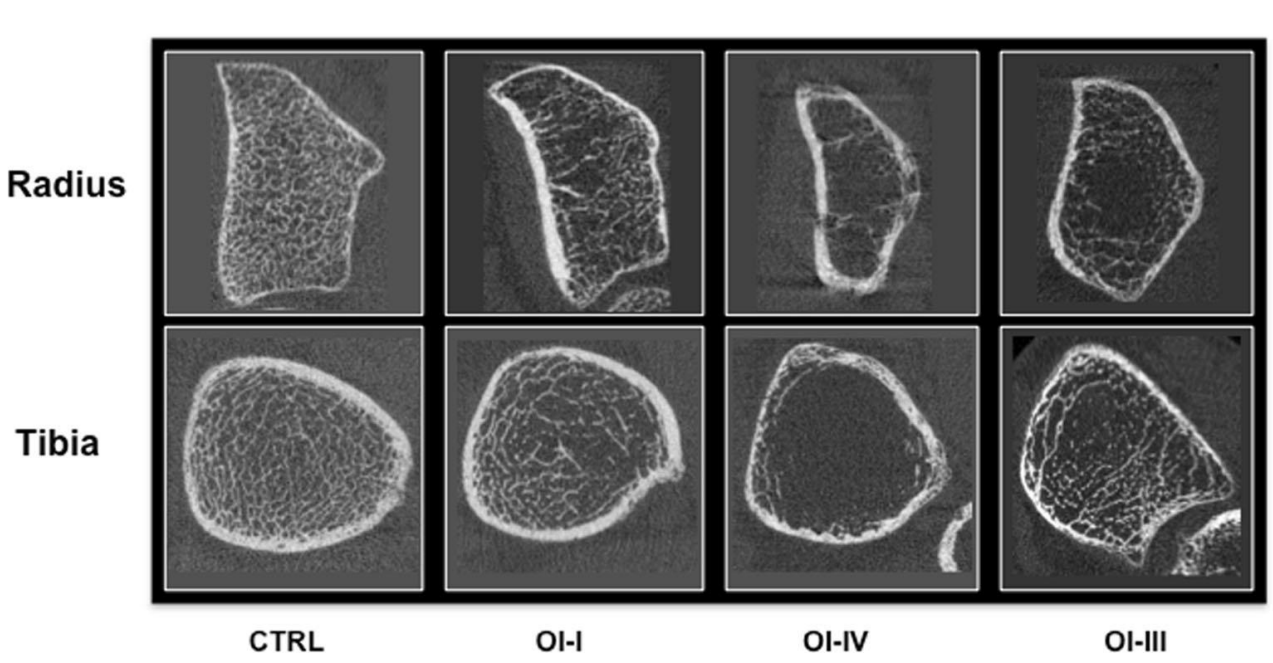
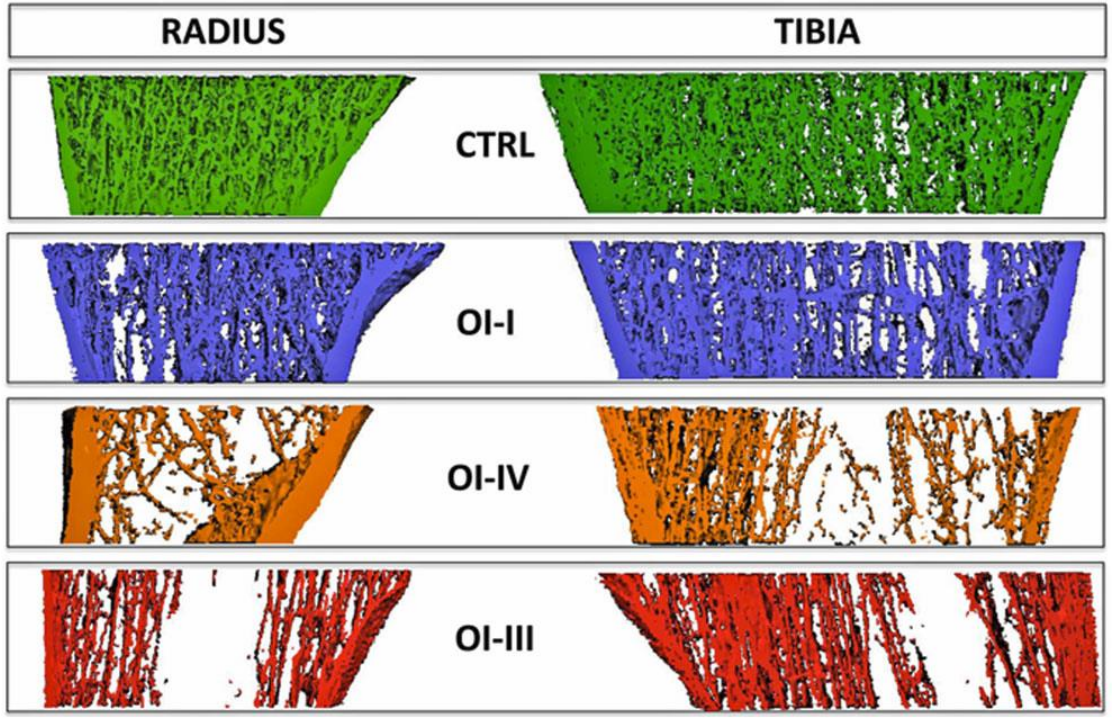
HR-pQCT scans of patients with OI and controls





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The OFLEY STUDY and HR-pQCT

- Prospective study investigating the prediction of fracture (Fx) by bone microarchitecture assessed by HR-pQCT in postmenopausal women
- HR-pQCT used to measure microarchitecture at the distal radius and tibia in 589 women (mean 68 years old)
- During 9 year follow up 135 women sustained a fracture including 81 women with a major osteoporotic fracture
- After adjusting for age, women who had fractures had significantly lower total and trabecular volumetric densities (vBMD) at both sites as determined by HR-pQCT
- OI patients have fewer and thinner trabeculae and increased cortical porosity

Bone Microarchitecture Assessed by HR-pQCT as Predictor of Fracture Risk in Postmenopausal Women Sornay-Rendu et al JBMR March 09 2017

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Alvelestat (MPH966)

Additional data

Alpha 1 Support Group UK Information Day September 2023

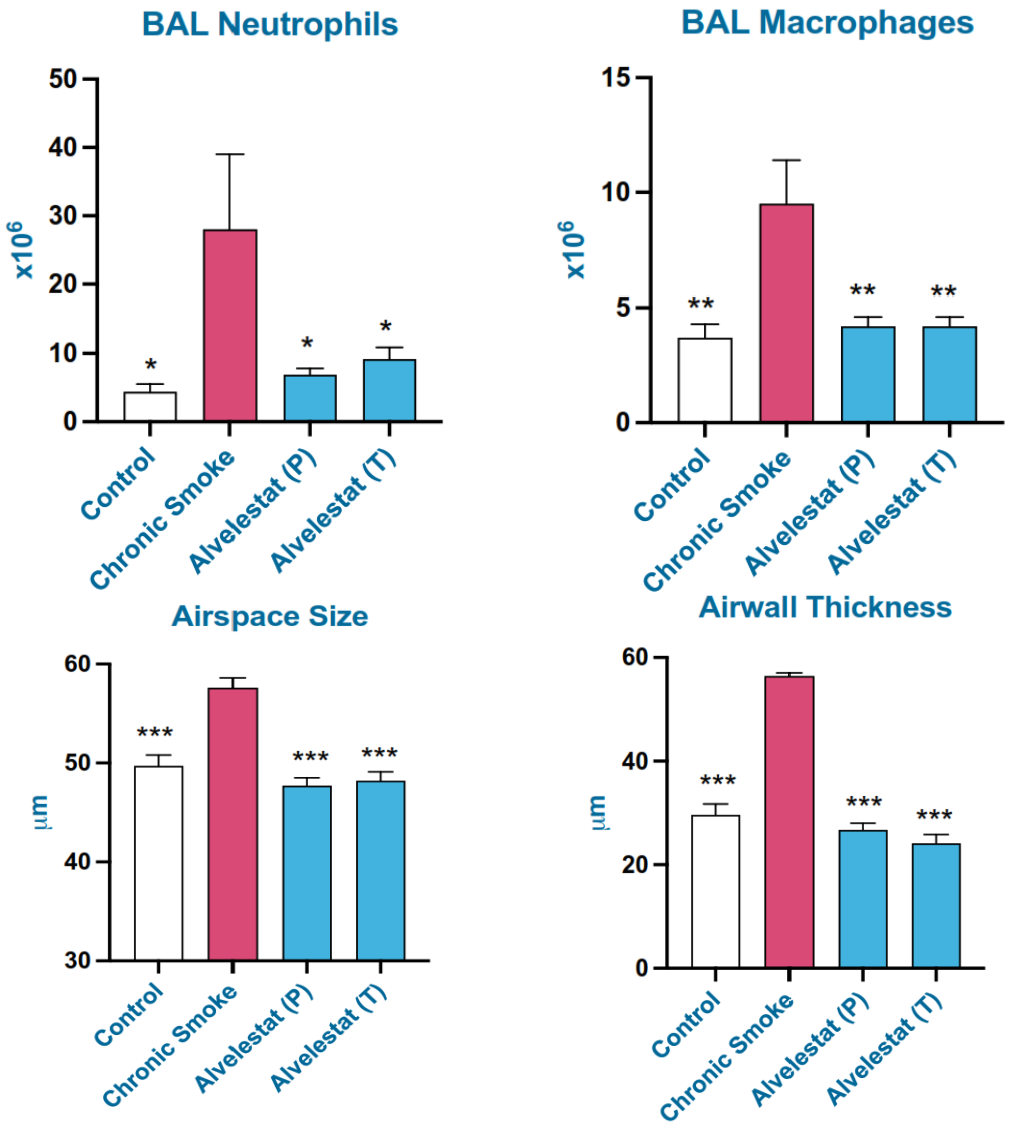
Alvelestat is highly effective in an Animal Model of AATD Lung Disease

Six-month Chronic Smoke (CS)-exposed guinea-pig model of AATD emphysema[1]

- CS inactivates AAT
- Progressive inflammation, airspace enlargement and airway remodeling

At clinically relevant doses, alvelestat, prophylactically (P) and therapeutically (T), completely prevented[2]

- Increases in lavage neutrophils and macrophages
- Airspace enlargement (emphysema) and small airway remodeling



*p<0.03, **p<0.002, ***p<0.001

1.Alam and Mahadeva. Chapter 11. Animal Models of Alpha-1 Antitrypsin Deficiency 2017
2.Stevens et al JPET 339:313–320, 2011

Earlier stage lung disease patients show greater SGRQ response

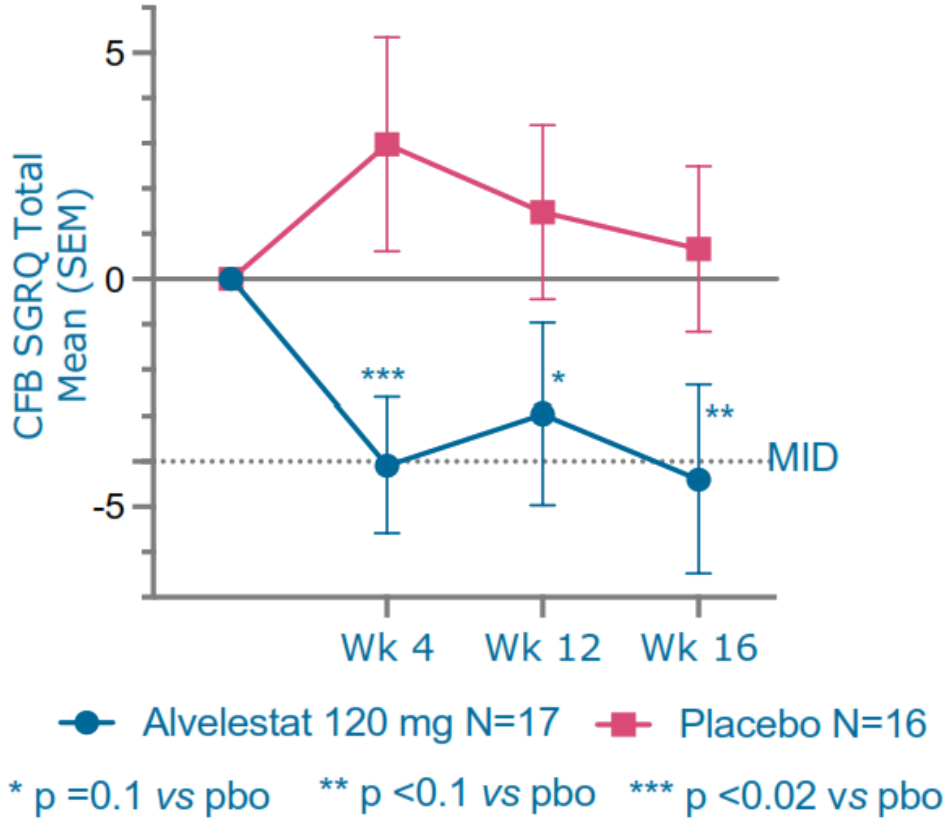
- ATALANTa study – Non-augmentation subgroup (median FEV_1 89.3%). Between group changes at week 12:
  - **SGRQ Total** = 4.7-point improvement (p=0.10)
  - **SGRQ Activity** = 10.0-point improvement (p=0.01)
- Post hoc analysis of ASTRAEUS and **SGRQ Total** change shows earlier stage patients also had the greatest improvement

Following FDA input, a qualitative validation study has been completed at several US sites to meet the initial requirements for SGRQ as a primary efficacy assessment in Phase 3.

Study concluded:

"The SGRQ is fit for purpose, content valid measure for patients with AATD-LD and is suitable for use as a key COA endpoint"

ATALANTa study (non-augmentation subgroup) – Change in SGRQ Total Score



MID= Minimal Important Difference for SGRQ Total (COPD)

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Biomarkers and PK modelling confirm 240 mg dose for progression

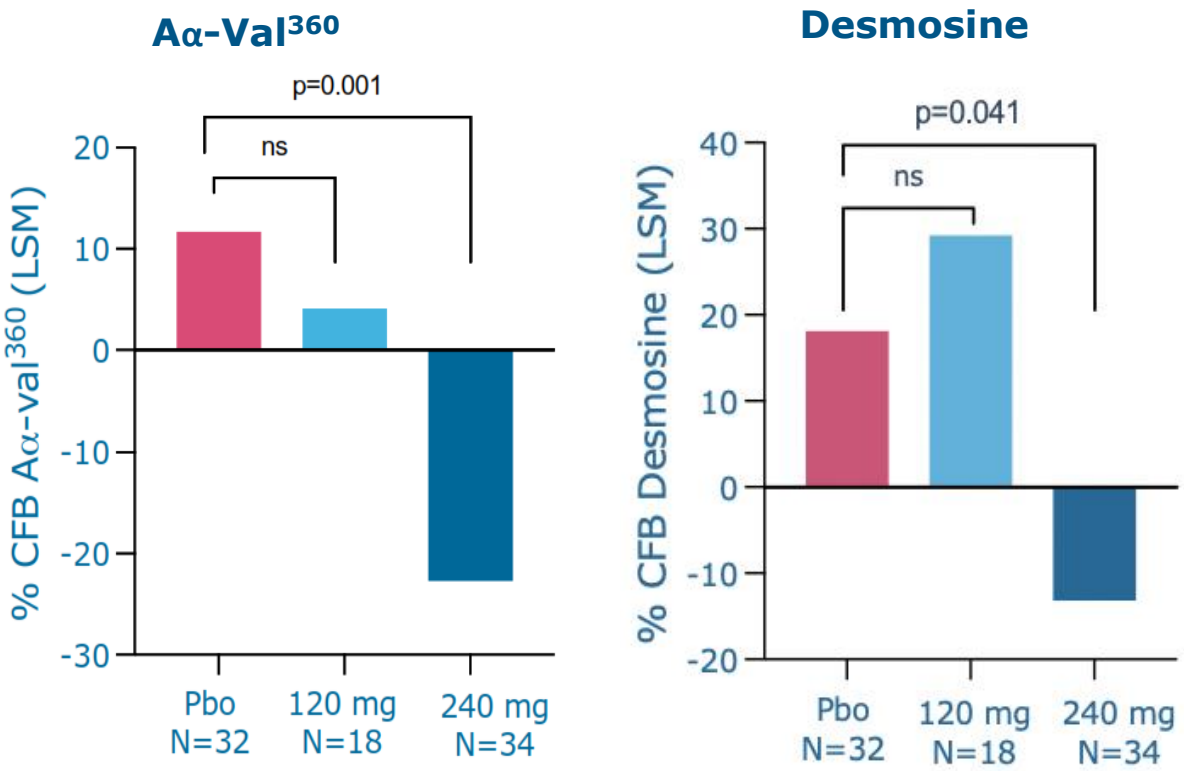
ASTRAEUS

- 240 mg – progressive reduction in biomarkers of NE-driven protein breakdown (Aα-val^{360}) and elastin turnover (desmosine)
- 120 mg – no effect on desmosine

ATALANTa

- Consistent with ASTRAEUS – 120 mg had no effect on desmosine
- Significant reduction from baseline in Aα-Val^{360} (p=0.03), but not significant compared to placebo

ASTRAEUS (Primary Endpoints)



Population PK modelling predicts 240 mg achieves target drug levels in lung tissue

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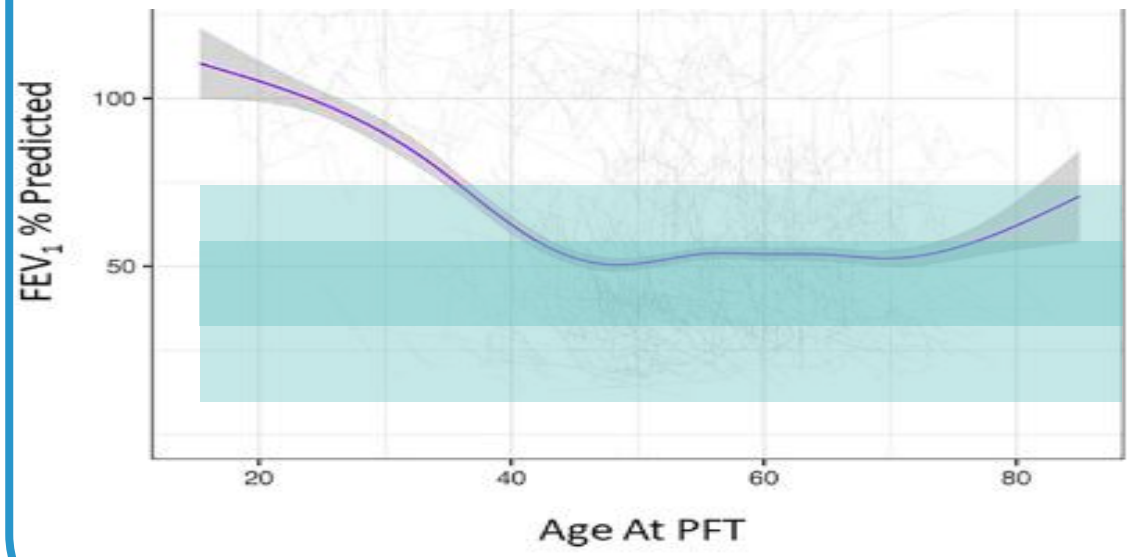
Historical augmentation studies

Limited to FEV_1 <70% or <80%
(Average FEV_1 in RAPID, EXACTLE ~50%)

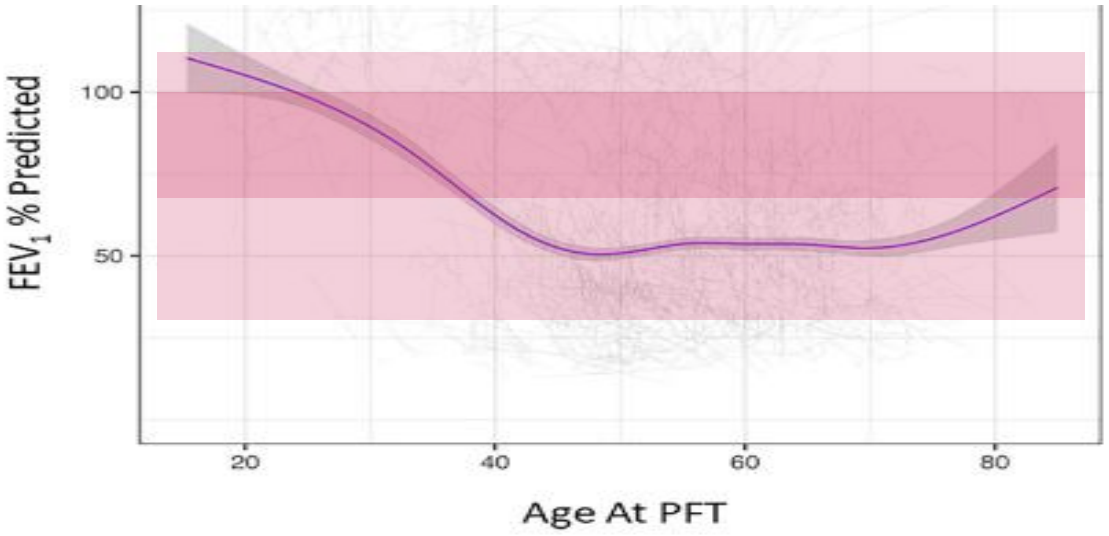
- Patients earlier in their disease not eligible
- Intervening later may limit impact



Mereo's approach to Phase 3

No upper FEV_1 limit

- FEV_1 – weighting towards patients >75%
- More patients eligible, including those not eligible for augmentation therapy
- Intervening earlier may have greater impact



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PFT = Pulmonary function testing

Graphs adapted from Fraughen et al, Am J Resp Crit Care Med 2023 Nov 1;208(9):964-974. Reprinted with permission of the American Thoracic Society.

 Showing FEV_1 decline over time in 615 AATD patients

Mereo BioPharma Group plc

4th Floor, One Cavendish Place, London, W1G 0QF, UK
investors@mereobiopharma.com
www.mereobiopharma.com
+44(0)333 023 7300

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