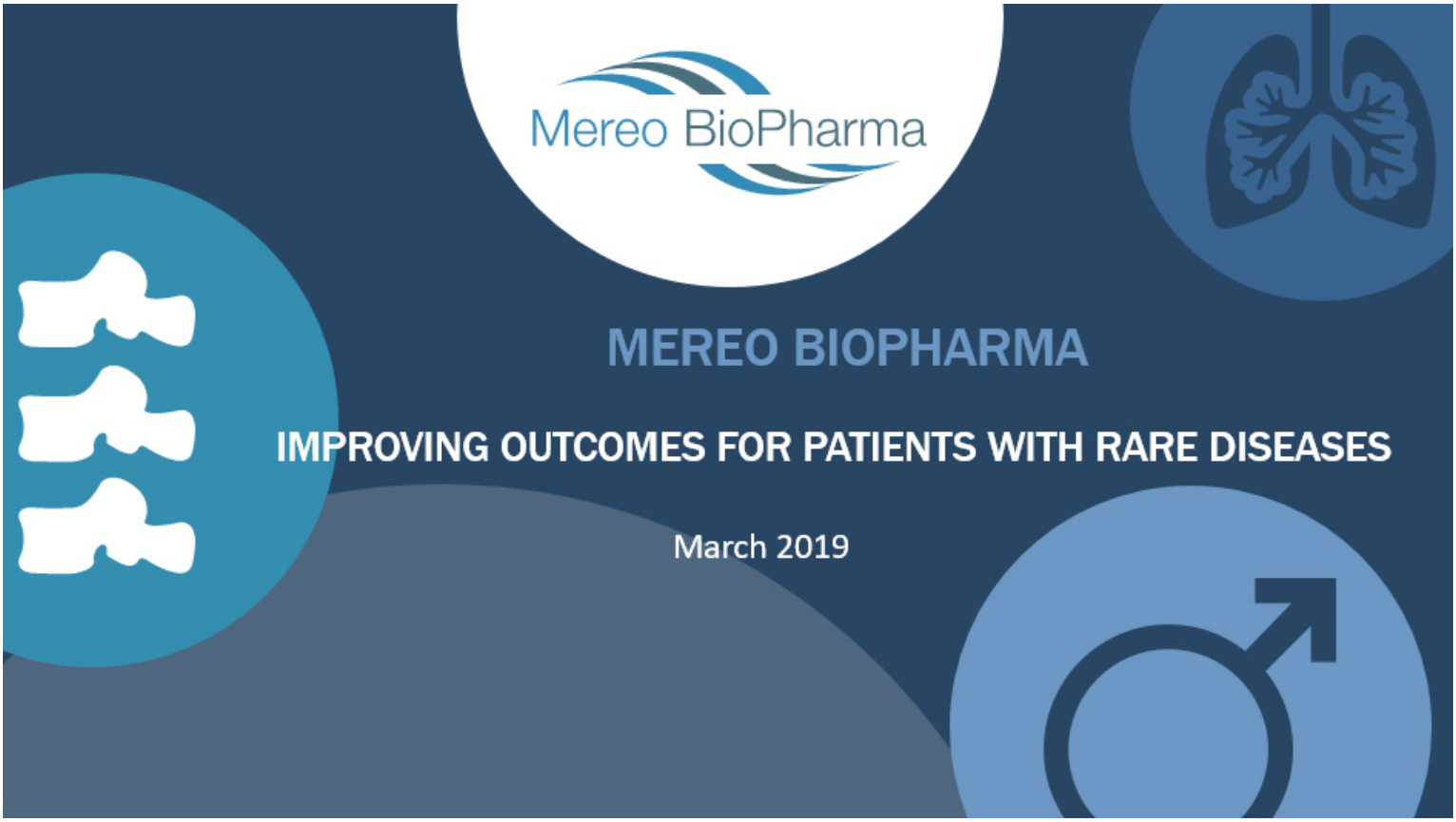
Filed by Mereo BioPharma Group plc pursuant to
Rule 425 under the Securities Act of 1933, as amended
Subject Company: OncoMed Pharmaceuticals, Inc.
Date: March 12, 2019.
(Subject Company Commission File No.: 001-35993)



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**Additional Information**

Important Additional Information Has Been and Will Be Filed with the SEC

Mereo has filed with the SEC (1) a preliminary registration statement on Form F-4 containing the proxy statement of OncoMed that also constitutes a prospectus of Mereo (the "proxy statement/prospectus") and (2) other documents concerning the proposed merger. **BEFORE MAKING ANY VOTING DECISION, INVESTORS AND STOCKHOLDERS ARE URGED TO CAREFULLY READ THE PROXY STATEMENT/PROSPECTUS, AND OTHER RELEVANT DOCUMENTS FILED OR TO BE FILED WITH THE SEC, INCLUDING THE DEFINITIVE REGISTRATION STATEMENT ON FORM F-4, IN THEIR ENTIRETY WHEN THEY ARE FILED BY EACH OF MEREO AND ONCOMED WITH THE SEC IN CONNECTION WITH THE PROPOSED MERGER OR INCORPORATED BY REFERENCE THEREIN BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT MEREO, ONCOMED, THE PROPOSED TRANSACTION AND RELATED MATTERS.** Investors and stockholders will be able to obtain free copies of the proxy statement/prospectus and other documents filed with the SEC by the parties through the website maintained by the SEC at www.sec.gov. In addition, investors and stockholders will be able to obtain free copies of the proxy statement/prospectus and other documents filed with the SEC on Mereo's website at https://www.mereobiopharma.com/investors-page/sec-filings/ (for documents filed with the SEC by Mereo) or on OncoMed's website at http://cms2.oncomed.com/investors/financial-information/sec-filings (for documents filed with the SEC by OncoMed).

Participants in the Solicitation

Mereo, Oncomed and their respective directors, executive officers and certain employees may be deemed to be participants in the solicitation of proxies from the stockholders of Mereo and OncoMed, respectively in connection with the proposed merger. Stockholders may obtain information regarding the names, affiliations and interests of OncoMed's directors and officers in OncoMed's Annual Report on Form 10-K for the fiscal year ended December 31, 2018, which was filed with the SEC on March 7, 2019, and its definitive proxy statement on Schedule 14A for the 2018 annual meeting of stockholders, which was filed with the SEC on April 27, 2018. To the extent the holdings of OncoMed's securities by OncoMed's directors and executive officers have changed since the amounts set forth in OncoMed's proxy statement for its 2018 annual meeting of stockholders, such changes have been or will be reflected on Statements of Change in Ownership on Form 4 filed with the SEC. Information regarding the names, affiliations and interests of Mereo's directors and officers is contained in Mereo's Annual Report for the fiscal year ended December 31, 2017 and can be obtained free of charge from the sources indicated above. Additional information regarding the interests of such individuals in the proposed merger will be included in the definitive proxy statement/prospectus relating to the proposed merger when it is filed with the SEC. These documents (when available) may be obtained free of charge from the SEC's website at www.sec.gov, Mereo's website at https://www.mereobiopharma.com/investors-page/sec-filings/, or on OncoMed's website at http://cms2.oncomed.com/investors/financial-information/sec-filings.

# FORWARD LOOKING STATEMENTS

**Forward-Looking Statements**

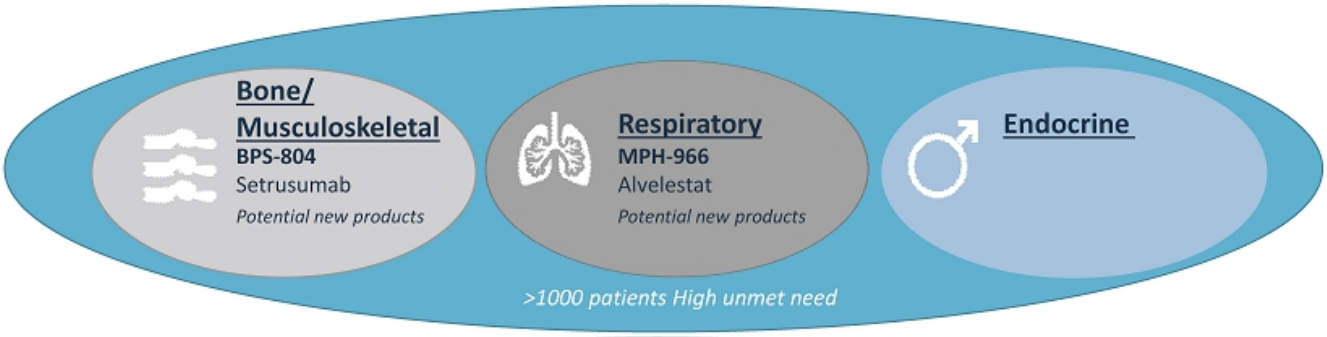
This communication contains "forward-looking statements." All statements other than statements of historical fact contained in this report are forward-looking statements within the meaning of Section 27A of the United States Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the United States Securities Exchange Act of 1934, as amended (the "Exchange Act"). Forward-looking statements usually relate to future events and anticipated revenues, earnings, cash flows or other aspects of our operations or operating results. Forward-looking statements are often identified by the words "believe," "expect," "anticipate," "plan," "intend," "foresee," "should," "would," "could," "may," "estimate," "outlook" and similar expressions, including the negative thereof. The absence of these words, however, does not mean that the statements are not forward-looking. These forward-looking statements are based on our current expectations, beliefs and assumptions concerning future developments and business conditions and their potential effect on us. While management believes that these forward-looking statements are reasonable as and when made, there can be no assurance that future developments affecting us will be those that we anticipate.

Factors that could cause actual results to differ materially from those in the forward-looking statements include failure to obtain applicable stockholder approvals in a timely manner or otherwise; failure to satisfy other closing conditions to the proposed transaction; failure to realize anticipated benefits of the proposed transaction; risks relating to unanticipated costs, liabilities or delays of the transaction; failure or delays in research and development programs; unanticipated changes relating to competitive factors in the companies' industry; risks relating to expectations regarding the capitalization, resources and ownership structure of the combined organizations; the availability of sufficient resources for combined company operations and to conduct or continue planned clinical development programs; the outcome of any legal proceedings related to the merger; risks related to the ability to correctly estimate operating expenses and expenses associated with the merger; risks related to the ability to project future cash utilization and reserves needed for contingent future liabilities and business operations; risks related to the changes in market prices of the shares of OncoMed's common stock or Mereo's ordinary shares relative to the exchange ratio; ability to hire and retain key personnel; the potential impact of announcement or consummation of the proposed transaction on relationships with third parties; changes in law or regulations affecting the companies; international, national or local economic, social or political conditions that could adversely affect the companies and their business; conditions in the credit markets; risks associated with assumptions the parties make in connection with the parties' critical accounting estimates and other judgments.

All of our forward-looking statements involve risks and uncertainties (some of which are significant or beyond our control) and assumptions that could cause actual results to differ materially from our historical experience and our present expectations or projections. You should carefully consider the foregoing factors and the other risks and uncertainties that affect the parties' businesses, including those described in OncoMed's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other documents filed from time to time by OncoMed and Mereo with the United States Securities and Exchange Commission (the "SEC") and those described in Mereo's annual reports, relevant reports and other documents published from time to time by Mereo. We wish to caution you not to place undue reliance on any forward-looking statements, which speak only as of the date hereof. We undertake no obligation to publicly update or revise any of our forward-looking statements after the date they are made, whether as a result of new information, future events or otherwise, except to the extent required by law.

# CORPORATE AND COMMERCIAL STRATEGY

## The core strategy of the combined business will continue to focus on Orphan Drugs & Rare Diseases




**Maximize Value to shareholders by Partnering for next stage development**

**Oncology**

**NAVI**
Navicixizumab

**TIGIT**
Etigilimab

**Respiratory**

**BCT-197**
Acumapimod

**Endocrine**

**BGS-649**
Leflutrozole

# STRATEGIC RATIONALE FOR THE COMBINATION

## 1 Combined portfolio of six assets with near-term value catalysts

- Three phase 2 readouts in core orphan products in 2019 (Mereo's BPS-804 and MPH-966)
- Potential partnerships of Mereo's BCT-197 and BGS-649 programs
- Potential partnership of OncoMed's navicixizumab
- Ongoing Celgene collaboration with an option to license OncoMed's etigilimab

## 2 Strong combined cash position

- Extends Mereo's operational runway into 2020
- Pro-forma combined cash balance of $115.5 million as of 30 September 2018
- Opportunity to further extend through partnering or etigilimab option exercise

## 3 US and UK stock market listing

- Increased liquidity for shareholders
- More diversified, global shareholder base
- US institutional specialist healthcare investors

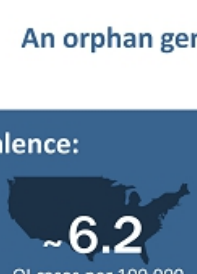
## 4 Enhanced team, capabilities and infrastructure

- Two new biopharma industry-experienced independent non-executive directors
- Combined expertise in product development and regulatory affairs
- UK headquarters in London
- US operational base in Redwood City, California

# OSTEOGENESIS IMPERFECTA (OI)

## An orphan genetic chronic bone disorder characterised by fragile bones that break easily

**Prevalence:**



~6.2
OI cases per 100,000 population in the US [1]

~10
OI cases per 100,000 population in the EU [2]

85% - 90%
linked to a gene mutation that produces abnormal type 1 collagen [1, 2]

OI types I, III and IV occur in
72% - 77%
of total OI population [3]

**Symptoms**

- Frequent bone fractures and brittle teeth
- Early hearing loss
- Respiratory problems

**No FDA or EMA approved therapies in OI**

**Historically 83 patients received BPS-804 – anti-sclerostin inhibitor**

**In OI patients, statistically significant increase in lumbar spine BMD, increase in biomarkers of bone building and reduction of bone resorption biomarkers**

1) Based on Osteogenesis Imperfecta Foundation estimates
2) Based on Orphanet estimates
3) Shapiro J (2014) Osteogenesis Imperfecta: A Translational Approach to Brittle Bone Disease. Academic Press. Chapter 2: p15-22

# OI TREATMENT:
# DRUGS USED – NONE FDA OR EMA APPROVED FOR OI

- Bisphosphonates
  - Alendronate, risedronate, pamidronate, zoledronate, etc.
  - Approved for treatment of adult osteoporosis
  - Synthetic analogues of pyrophosphate
  - Inhibit bone resorption
  - Can be given orally or intravenously, depending on compound
- PTH analogue
  - Teriparatide (Forteo®)
  - Increases number + activity of osteoblasts
  - Increases bone turnover
  - Usefulness in OI not clear
  - Black box warning due to potential risk of osteosarcoma
- RANKL Inhibitor
  - Denosumab (Prolia®)
  - Inhibits bone resorption

# BPS-804 ADULT PHASE 2B STUDY

**Completed enrolment:**
**112**
**OI Patients**
Types I, III and IV

**Trial arms:**
Three different monthly dosing regimens of BPS-804

Open label arm at top monthly dose

**Study duration:**
**52**
Weeks

Analysis at 26 and 52 weeks

6 months open label data 1H 2019 with 12 months H2 2019

Top line data from three blinded arms by the end of 2019

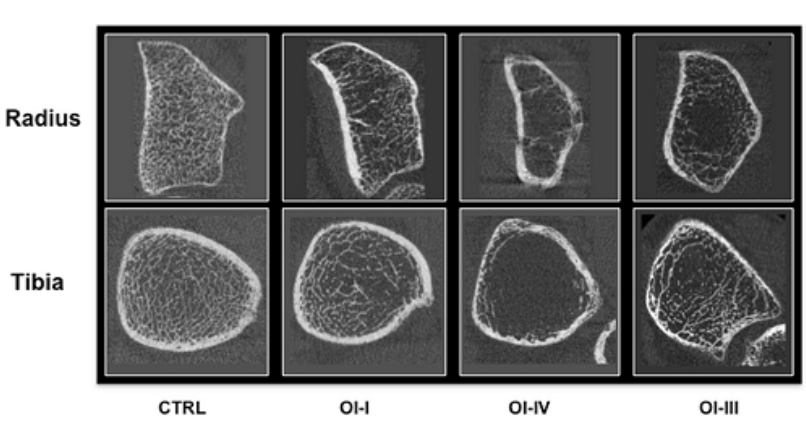
**Primary endpoints**

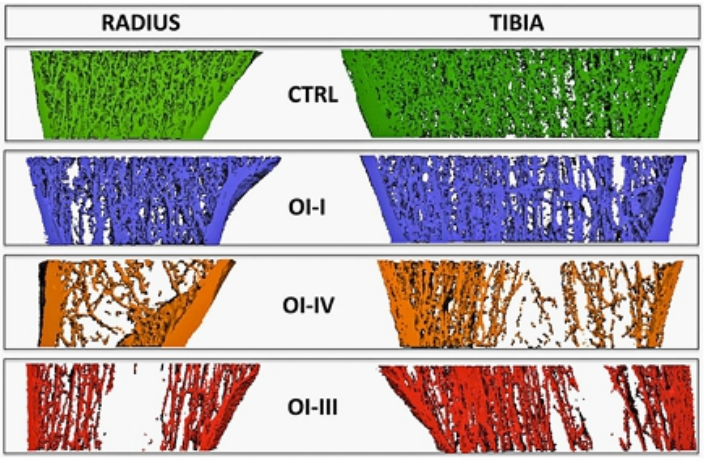
Trabecular volumetric BMD by HRpQCT versus baseline at 12 months
Change in bone strength using finite element analysis

**Secondary endpoints**

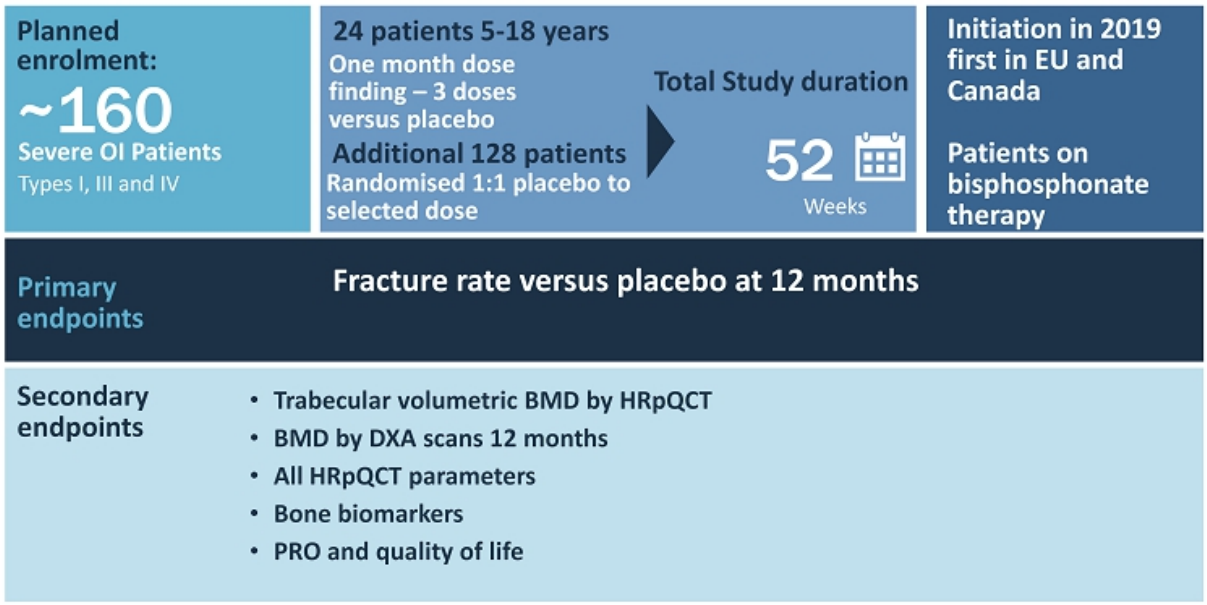
- Trabecular volumetric BMD by HRpQCT at 6 months
- BMD by DXA scans at 6 and 12 months
- HRpQCT parameters
- Bone biomarkers
- PRO and quality of life

# HRPQCT SCANS OF PATIENTS WITH OI AND CONTROLS



# BPS-804 – PEDIATRIC PHASE 3 STUDY



# BPS-804 REGULATORY STRATEGY

**Orphan drug status EU and US**

**PIP agreed with EMA**

**Admitted to the Adaptive Pathway and PRIME in the EU**

- Ongoing interactive dialogue with EMA and HTA's
- Real world evidence/registries

**Plan to engage with the FDA on extending the pediatric Phase 3 trial to sites in the United States**

**Will initiate the study in EU and Canada**

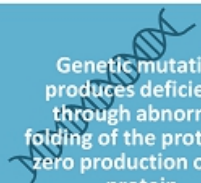
- **Validation of HRpQCT in the pediatric study**
- **Once validated, the use of HRpQCT data may be sufficient to support submission of a CMA to the EMA for the treatment of adults with OI in the EU**
- **CMC plan under review with the regulators**

# ALPHA-1 ANTITRYPSIN DEFICIENCY (AATD)

## An orphan genetic disorder that results in pulmonary disease

**Estimated prevalence of target patients (PiZZ and Nulls)**

| North America | Europe |
|---|---|
| ~50,000 | ~60,000 |



**Genetic mutation produces deficiency through abnormal folding of the protein or zero production of the protein**

**Mutations in SERPINA1 gene chromosome 14**

**Only homozygotes (ZZ's) and Nulls have severe disease**

**Symptoms:**

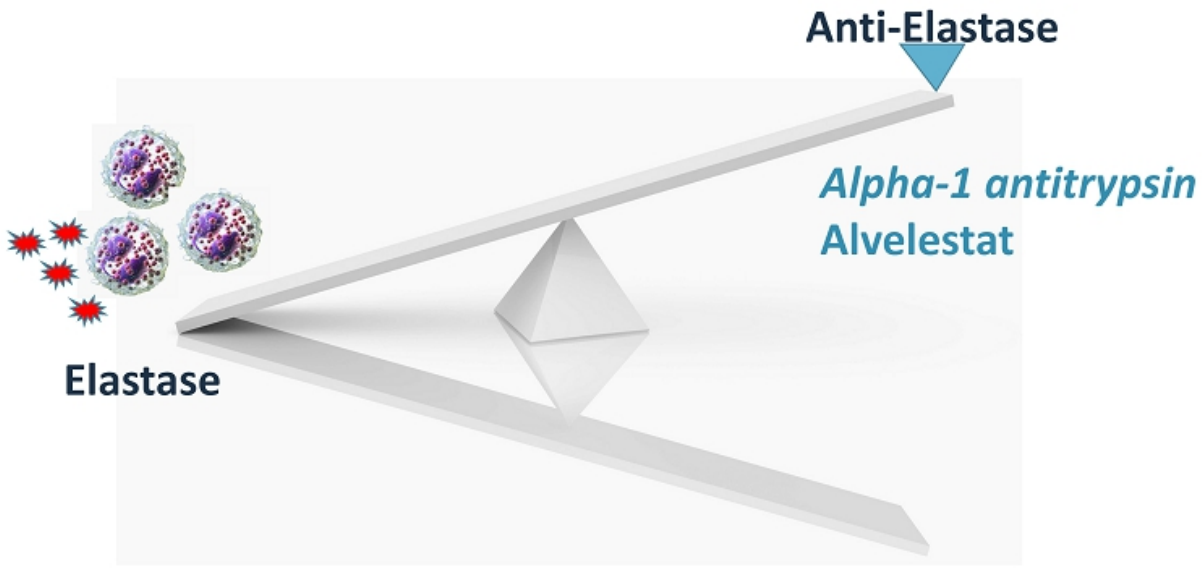
- Age 20-50 - wheeze and reduced exercise tolerance
- PiZZ and Null adults develop early onset emphysema
- Some mutations can cause cirrhosis in children
- Reduced life expectancy

**Current treatment is weekly IV alpha 1 antitrypsin protein – annual cost up to $150k ~9000 patients**

**MPH-966 in 1000 patients in 4 COPD studies and a cystic fibrosis and bronchiectasis study (positive)**

Francisco et al (2012) Rare alpha-1-antitrypsin variants: are they really so rare? Therapeutic Advances in Respiratory Disease January 30
Luisetti et al (2004) $\alpha_1$-Antitrypsin deficiency - 1: Epidemiology of $\alpha_1$-antitrypsin deficiency Thorax 59:164-169

## RESTORING THE BALANCE IN ALPHA-1 LUNG DISEASE WITH NEUTROPHIL ELASTASE INHIBITOR - ALVELESTAT



# MPH-966 – PROOF OF CONCEPT PHASE 2 STUDY

- Three-arm study with two different dosing arms versus placebo
- Planned enrolment- 165 patients completed
- Treatment duration- 12 weeks
- FPI in November 2018

**Primary Endpoint**

- Desmosine - biomarker shown to have correlation with lung density by CT scan[1]

**Proposed Patient Population**

- CT scan - emphysema
- Confirmed genotype (PiZZ or Null)
- FEV1>25%

*1) A biomarker in KAMADA's RAPID study. Ref: Ma S, Lin YY, Cantor JO, et al. The effect of alpha-1 proteinase inhibitor on biomarkers of elastin degradation in alpha-1 antitrypsin deficiency: An analysis of the RAPID/RAPID Extension trials. Chronic Obstr Pulm Dis. 2017; 4(1): 34-44.*

# BCT-197 MET THE PRIMARY END-POINT IN THE PHASE 2 TRIAL

## TOTAL OF 282 PATIENTS

### PRIMARY ENDPOINT (CHANGE IN FEV1 FROM BASELINE TO DAY 7 WITHIN THE TREATMENT GROUP)

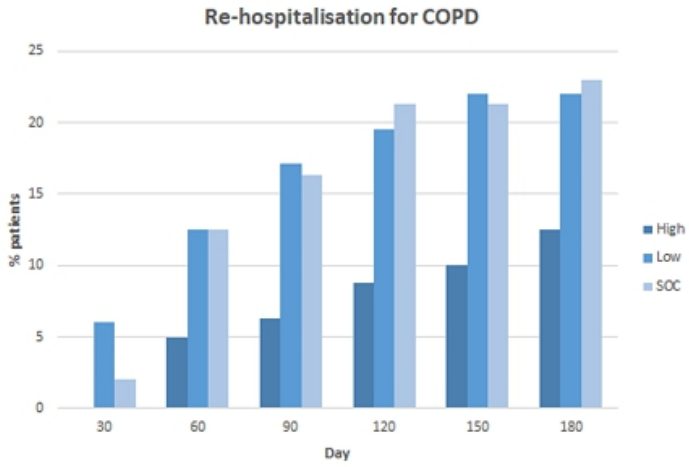
Primary endpoint met on an ITT basis for both high and low dose regimens (p= 0.012, p ≤ 0.001) versus no significant change from baseline (p=0.102) for Standard of Care plus placebo

### POSITIVE CLINICAL AND HEALTH ECONOMIC OUTCOMES SUPPORTED BY OTHER SECONDARY MEASURES

Statistically significant reduction of more than 50% (p ≤ 0.027 to 0.05) in the number of clinical treatment failures compared to standard of care plus placebo as measured by the number of re hospitalisations for the treatment of COPD at days 90 through 150

### SAFETY

BCT-197 was reported to be safe and well tolerated with adverse events in line with expectations for this patient population



# BGS-649 MET THE PRIMARY END POINT IN THE PHASE 2B TRIAL

## TOTAL OF 271 PATIENTS

**PRIMARY ENDPOINT:** normalisation of testosterone @ 24 wk in >75% subjects at all three doses p<0.001 versus placebo with no patient >1500 ng/dl at any time point

**SECONDARY ENDPOINTS** Change in fertility hormones (LH and FSH) from baseline at 24 weeks met by all three doses p<0.001 versus placebo

**EXPLORATORY ENDPOINTS** Improvement in total motile sperm count across all three doses versus placebo with statistical significance attained for high dose

**PHASE 2b EXTENSION STUDY (143 patients)** All three doses normalised testosterone in 90% patients No doses met lower bound (95% CI) of pre-specified safety criterion of a > 3% reduction in lumbar spine, hip or femoral neck BMD after 48 weeks. No shift into osteopenia or osteoporosis, no development of new osteopenia.

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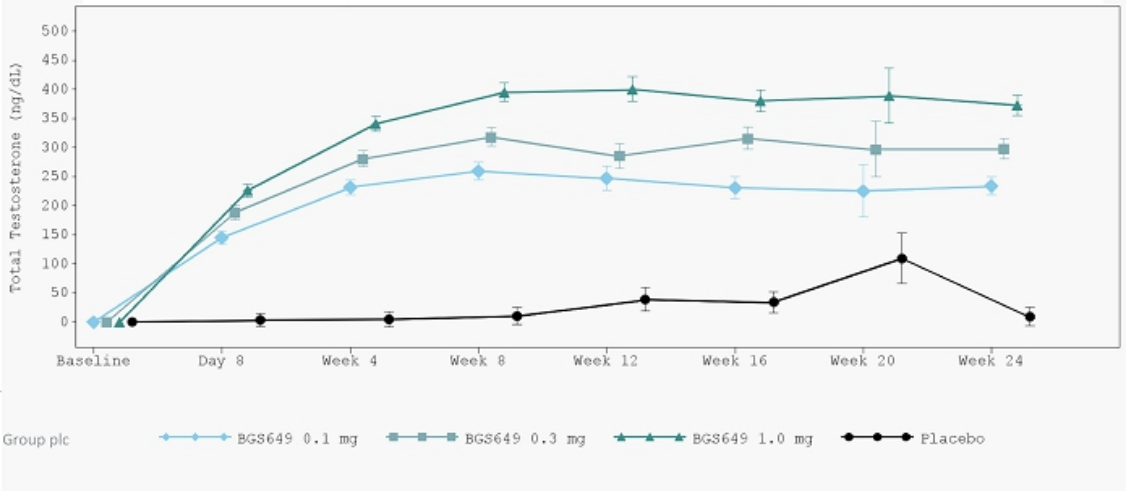
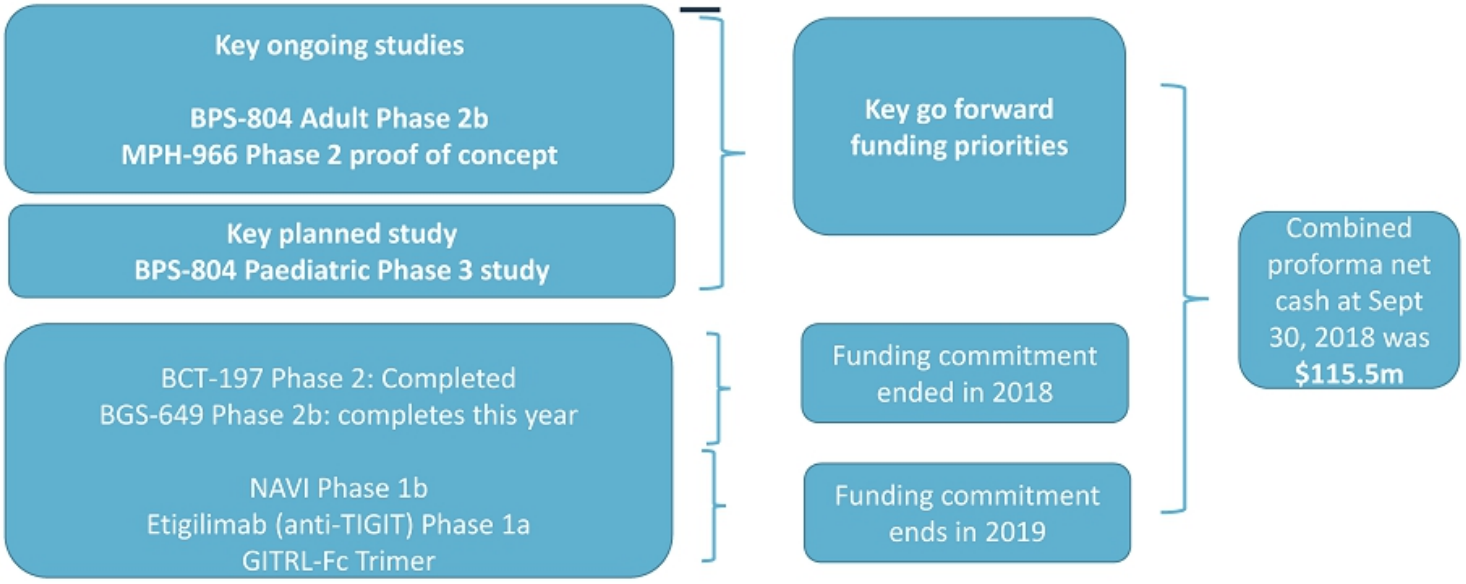
Protocol No. MBGS205

Page 1 of 1
Final Unblinded TFLs

**LS Mean change from baseline in testosterone – ITT population (MMRM)**

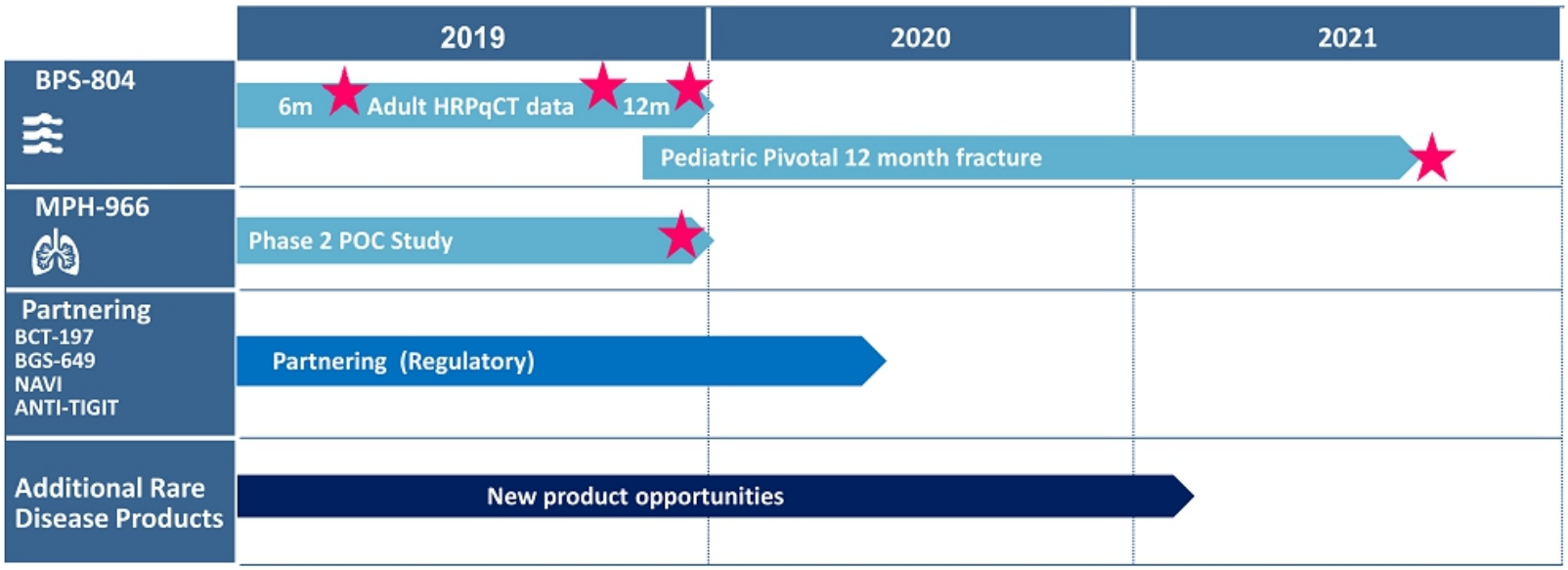


# COMBINED GROUP CASH RUNWAY EXTENDED INTO 2020




Post merger, additional funding expected via partnering opportunities for the non-rare disease products

# MEREO UPCOMING KEY MILESTONES



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