Filed by Mereo BioPharma Group plc pursuant to Rule 425 under the Securities Act of 1933, as amended Subject Company: OncoMed Pharmaceuticals, Inc. Date: January 7, 2019. (Subject Company Commission File No.: 001-35993)

IMPROVING OUTCOMES FOR PATIENTS IN RARE DISEASES

Denise Scots-Knight – CEO Richard Jones – CFO Alastair Mackinnon - CMO

January 2019

DISCLAIMER

No Offer or Solicitation

This communication is not intended to and does not constitute an offer to sell or the solicitation of an offer to subscribe for or buy or an invitation to purchase or subscribe for any securities or the solicitation of any vote in any jurisdiction pursuant to the proposed transactions or otherwise, nor shall there be any sale, issuance or transfer of securities in any jurisdiction, in each case in contravention of applicable law. No offer of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act and applicable European or UK, as appropriate, regulations. Subject to certain exceptions to be approved by the relevant regulators or certain facts to be assertained, the public offer will not be made directly or indirectly, in or into any jurisdiction where to do so would constitute a violation of the laws of such jurisdiction. If the mails or by any means or instrumentality (including without limitation, facsimile transmission, telephone and the internet) of interents of ortegin commerce, or any facility of a national securities exchange, of any such jurisdiction.

Additional Information

Important Additional Information Will be Filed with the SEC

Mereo will file with the SEC a Registration Statement on Form F-4 containing the proxy statement/prospectus of OncoMed that also constitutes a prospectus of Mereo (the "proxy statement/prospectus") and other documents concerning the proposed merger with the SEC. BEFORE MAKING ANY VOTING DECISION, INVESTORS AND STOCKHOLDERS ARE URGED TO CAREFULLY READ THE PROXY STATEMENT/PROSPECTUS, AND OTHER RELEVANT DOCUMENTS TO BE FILED WITH THE SEC, IN THEIR ENTIRETY WHEN THEY BECOME AVAILABLE AND ANY OTHER DOCUMENTS 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 TRANSACTIONS AND ATTERS. 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 <u>www.sec.gov</u>. 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 <u>www.mereobiopharma.com</u> (for documents filed with the SEC by Mereo) or on OncoMed's website at <u>www.noncomed.com</u> (for documents filed with the SEC by Mereo).

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, 2017, which was filed with the SEC on March 8, 2018, and its definitive proxy statement on Schedule 14A for the 2018 annual meeting of stockholders, which was filed with the SEC on March 8, 2018. To the fiscal year ended December 31, 2017, which was filed with the SEC on March 8, 2018. To the fiscal year ended December 31, 2017, which was filed with the SEC on March 8, 2018. To the fiscal year ended December 31, 2017, which was filed with the SEC on March 8, 2018. To the fiscal year ended December 31, 2017, which was filed with the SEC on March 8, 2018. To the fiscal year ended December 31, 2017, which was filed with the SEC on March 8, 2018 and its definition 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 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, OncoMed's websi

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. Forwardlooking 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's 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.



KEY TRANSACTION TERMS

Combined company will operate as Mereo BioPharma

| Upfront Stock Consideration | Issuance of new Mereo shares (in the form of newly registered ADRs) to OncoMed shareholders Ownership split on completion 75% Mereo / 25% OncoMed shareholders⁽¹⁾ Consideration represents a total value of \$57 million and a 34% premium to OncoMed's total market cap as of market close on 4 Dec 2018 |
|--------------------------------|---|
| Contingent Value Rights | TIGIT: Issuance of additional Mereo ADRs if OncoMed's partner Celgene exercises its opt in right on the TIGIT program before 31 Dec 2019 Value to OncoMed shareholders will represent 100% of net Celgene milestone payment actually received – \$35m in Celgene contract Number of Mereo ADRs to be issued calculated based on prevailing Mereo share price following milestone announcement⁽²⁾ NAVI: Cash payment of 70% of the net proceeds of any milestones received by Mereo in relation to NAVI for 5 years following completion Subject to a cap of approximately \$80 million |
| Management & Governance | Mereo's CEO, Denise Scots-Knight, and existing management team will lead combined company Board of directors will include 8 existing Mereo board members (including chair) and 2 new members from OncoMed London, UK headquarters and US operational base in Redwood City, California |
| | Transaction has been unanimously approved by the Board of Directors of each company Expected closing in H1 2019, subject to OncoMed shareholder approval draw shares currently outstanding and subject to an adjustment mechanism based on target OncoMed cash balance of \$38 million at closing r pursuant to the TIGIT CVIRs will be subject to a total dilation cap such that they do not represent more than 66.7% of Mereo's issued share capital prior to completion [or equivalently, 40% of the enlarged share capital] |

STRATEGIC RATIONALE FOR THE COMBINATION

| Combined portfolio of seven assets with near- term value catalysts | Strong combined cash position | US and UK stock market listing | Enhanced team, capabilities and infrastructure |
|--|--|---|---|
| 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 | 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 | Increased liquidity for shareholders More diversified, global shareholder base US institutional specialist healthcare investors | 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 |

MANAGEMENT & GOVERNANCE

| | Industry Leading Management Expertise | | | | | Er | larged Group Boa | rd of Directo | ors |
|---|--|-----------------|------------------|---|--------------------------|-----------------|--|---------------|---|
| | Executive Select Experience | | Mere | o board wil | ll be expanded to includ | e two of Oncolv | led's directors | | |
| Ø | Dr. Denise Scots-Knight Chief Executive Officer | phase4 partners | 4. Amersham | * Rothschild | | | Dr. Peter Fellner Chairman | Ø | Dr. Denise Scots-Knight Executive Director CEO and Co-Founder |
| 2 | Richard Jones Chief Financial Officer | ⊖ Investec | SHIELD | | | 6 | Richard Jones Executive Director CFO | | Dr. Anders Ekblom Non – Executive Director |
| - | Dr. Alastair MacKinnon Chief Medical Officer | phase4 partners | NOAURA | Tre some dougles in sense and or towardship | | Ha a | Dr. Frank Armstrong Non –Executive Director | 25 | Peter Bains Non – Executive Director |
| | Charles Sermon General Counsel | phase4 partners | NOMURA | ()) Freshfields | | | Kunal Kashyap Non – Executive Director | | Paul Blackburn Non – Executive Director |
| T | John Richard Head of Corporate Development | phase4 partners | NOMURA | SEQUUS | | | | + | |
| 0 | Wills Hughes-Wilson Head of Patient Access & Commercial Planning | () sobi | SANOFI GENZYME 🎝 | | OncoMed | Ø | Deepa R. Pakianathan Non – Executive Director | | Michael Wyzga Non – Executive Director |

NEXT STEPS

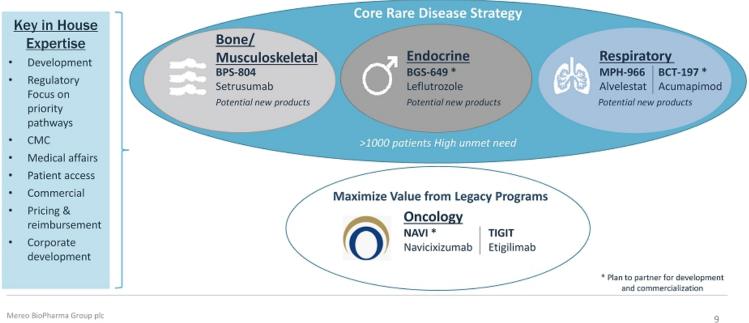
- Filing with the SEC of a Registration Statement on Form F-4 for Mereo
- Proxy statement of OncoMed (to be included in Mereo Form F-4)
- OncoMed shareholder meeting

Targeting completion in H1 2019



CORPORATE AND COMMERCIAL STRATEGY

The core strategy of the combined business will remain focused on orphan diseases



MEREO'S CURRENT PRODUCT PIPELINE

| Product Candidate Indication | Phase 1 | Phase 2a | Phase 2b | Last Milestone | Next Anticipated Milestones |
|---|---------|----------|----------|--|--|
| BPS-804 (setrusumab) Osteogenesis Imperfecta | | | | Phase 2b enrolled | Top-line data from open label arm of Phase 2b trial in adults in 1H 2019 and commence pediatric Phase 3 study in Europe and Canada in 2019 |
| MPH-966 (alvelestat) Severe Alpha-1 Antitrypsin Deficiency | | | | Positive Phase2 data in bronchiectasis | Phase 2 trial top-line data in severe AATD in 4Q 2019 |
| BCT-197 (acumapimod) Acute Exacerbations of COPD | | | | Positive Phase 2 data | Enter into strategic relationship for further clinical development |
| BGS-649 (leflutrozole) Hypogonadotropic Hypogonadism in Obese Men | | | | Phase 2b extension study – topline data | Enter into strategic relationship for further clinical development |

OVERVIEW OF ONCOMED

OncoMed Overview

- Clinical stage biopharmaceutical company focused on discovering and developing novel anti-cancer therapeutics
- Headquartered in Redwood City, California
- Currently has three therapeutic candidates in clinical development (Phase 1/1b)
- Extensive experience in administrative, regulatory and clinical project management
- · Established partnership with Celgene Corp
- Net cash of \$70.9 million as of 30 Sep 2018

- Key Product Overview & Pipeline
- Navicixizumab ("NAVI"): bispecific monoclonal antibody that targets and inhibits both Delta-like ligand 4 and vascular endothelial growth factor
- Etigilimab ("anti-TIGIT"): antibody that targets the T-cell immunoreceptor with immunoglobulin and ITIM domains (TIGIT), an inhibitory receptor that is thought to stop T-cells from attacking tumor cells
- GITRL-Fc ("GITRL"): member of the tumor necrosis factor family of ligands and functions to activate the co-stimulatory receptor GITR to enhance T-cell modulated immune responses

| Product Candidate | Pre-Clinical | Phase 1A | Phase 1B | Current Status |
|----------------------------|--------------|----------|----------|---|
| Navicixizumab (NAVI) | Phase 1 | | | Phase 1B clinical trial under way |
| Etigilimab (anti-TIGIT) | Phase 1A | | | Phase 1a and 1b underway Potential to realize \$35m milestone from Celgene |
| GITRL-Fc Trimer (GITRL) | Phase 1A | | | Phase 1a data due in 2019 |

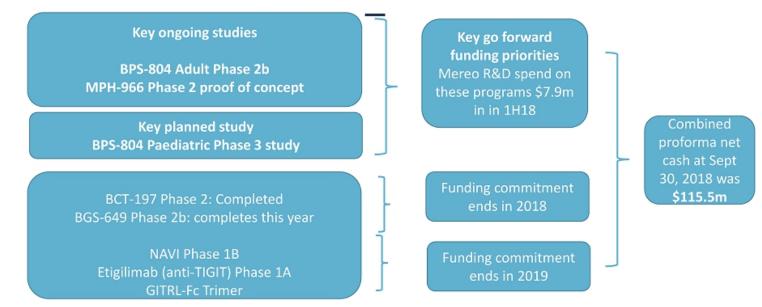
MEREO'S UPCOMING KEY MILESTONES

| | 2018 | 2019 | 2020 | 2021 |
|------------------------|-----------------------|------------------------|----------------|------|
| BPS-804 | Adult HRPqCT data | 6 m 12 m | | |
| â | | Pediatric Pivotal 12 | month fracture | * |
| мрн-966 🚱 | Phase II Po | DC Study | | |
| BGS-649 | Pha II Extension | Phase 3 planning | | |
| ď | | Option : Commercial pa | rtnering | |
| BCT-197 | | | | |
| e's | Commercial partnering | | | |
| Additional Products | New | product opportunities | | |
| | | | | |

Mereo BioPharma Group plc

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COMBINED GROUP CASH RUNWAY FURTHER EXTENDED INTO 2020



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

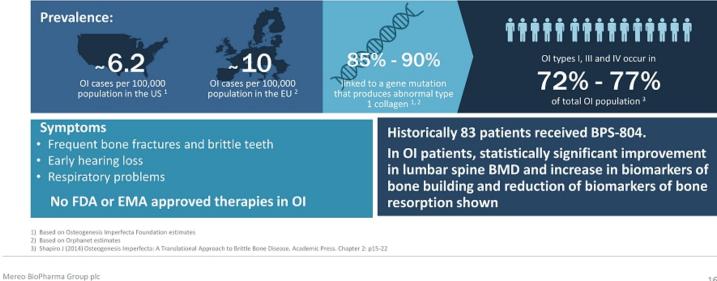


OSTEOGENESIS IMPERFECTA A SEVERE GENETIC BONE DISEASE



OSTEOGENESIS IMPERFECTA (OI)

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



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

| Revised estimated 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 H1 2019 with 12 months H2 2019 Top line data from three blinded arms by the end of 2019 | | | |
|--|---|--|--|--|--|--|
| Primary endpoints | | | | | | |
| endpoints • BM • HRJ • Bor | becular volumetric BMD by HRp ID by DXA scans at 6 and 12 mor pQCT parameters ne biomarkers D and quality of life | | | | | |

BPS-804 - PEDIATRIC PHASE 3 STUDY

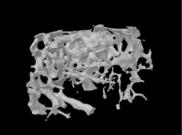
| Estimated enrolment: ~160 Severe OI Patients Types I, III and IV | 24 patients 5-18 years One month dose finding – 3 doses versus placebo Additional 128 patients Randomised 1:1 placebo to selected dose | Initiation in 2019 first in EU and Canada Patients on bisphosphonate therapy |
|--|--|---|
| Primary endpoints | Fracture rate versus placebo at 12 months | |
| endpoints . • | Trabecular volumetric BMD by HRpQCT BMD by DXA scans 12 months All HRpQCT parameters Bone biomarkers PRO and quality of life | |

BRITTLE MOUSE MODEL – TREATMENT WITH BPS-804

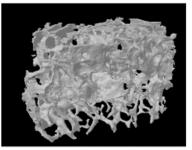
Mature Brtl control



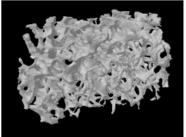
Mature Brtl treated



Mature WT Control



Mature WT Treated

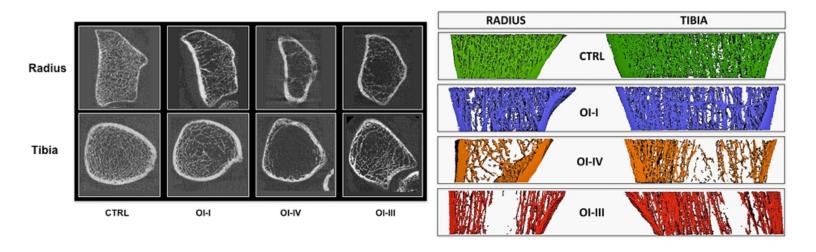


THE OFLEY STUDY AND HRPQCT

- Prospective study investigating the prediction of fracture (Fx) by bone microarchitecture assessed by HRpQCT 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 HRpQCT
- · OI patients have fewer and thinner trabeculae and increased cortical porosity

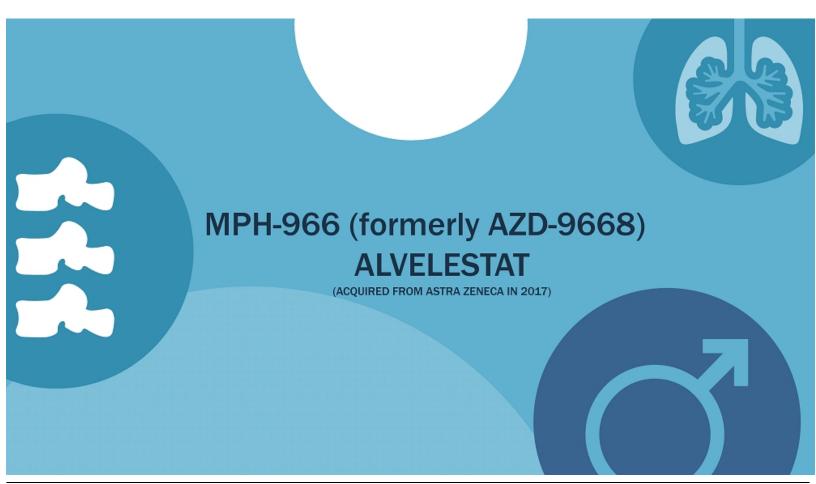
Bone Microarchitecture Assessed by HR-pQCT as Predictor of Fracture Risk in Postmenopausal Women Sornay-Rendu et al JBMR March 09 2017

HRPQCT SCANS OF PATIENTS WITH OI AND CONTROLS



BPS-804 REGULATORY UPDATE

| 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 |
|---|---|---|
| Once validated, th submission of a Cl | QCT in the pediatric study he use of HRpQCT data may be sufficient to MA to the EMA for the treatment of adults eview with the regulators | |

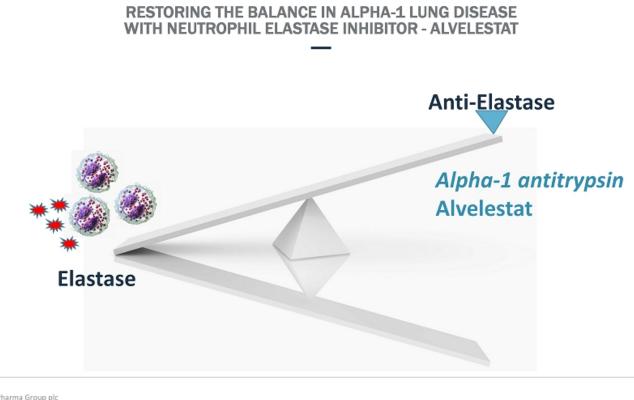


ALPHA-1 ANTITRYPSIN DEFICIENCY (AATD)

An orphan genetic disorder that results in pulmonary disease

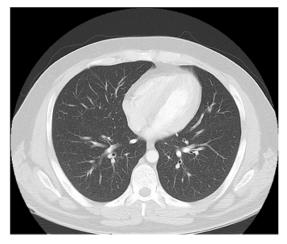
| Estimated prevalence of (PiZZ and Nulls) North America ~50,000 | target patients Europe ~60,000 | produ throu folding | etic mutation ces deficiency ligh abnormal of the protein or oduction of the protein | Mutations in SERPPINA1 gene chromosome 14 Only homozygotes (ZZ's) and Nulls have severe disease |
|---|---|---------------------------|---|--|
| PiZZ and Null adults deve | Age 20-50 - wheeze and reduced exercise tolerance PiZZ and Null adults develop early onset emphysema Some mutations can cause cirrhosis in children | | | tment is weekly IV alpha 1 antitrypsin nnual cost up to \$150k ~9000 patients 1000 patients in 4 COPD studies and a sis and bronchiectasis study (positive) |

 $\label{eq:score} Francisco et al \{2012\} Rare alpha-1-antitrypsin variants: are they really so rare? Therapeutic Advances in Respiratory Disease January 30 \\ Luisetti et al \{2004\} \alpha_i-Antitrypsin deficiency - 1: Epidemiology of <math>\alpha_i$ -antitrypsin deficiency Thorax 59:164-169 \\ \end{tabular}

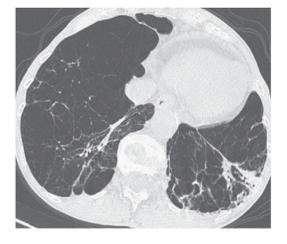


CT IMAGES SHOWING THE LUNG OF AN ALPHA-1 ANTITRYPSIN DEFICIENT PATIENT

Normal lung







MPH-966- RELEVANT CLINICAL STUDIES TO-DATE

Bronchiectasis

- Total of 38 patients in one study
- 22 patients treated for 4 weeks with 60mg BD
- Statistically significant improvement in FEV1 and clinically meaningful improvement in SVC (slow vital capacity)

Cystic Fibrosis

- Total of 56 patients in one study
- 27 patients treated for 4 weeks with 60mg BD
- Statistically significant reduction in the biomarker urine desmosine
- · In addition total of 970 patients across four COPD studies

MPH-966 - PROOF OF CONCEPT PHASE 2 STUDY

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

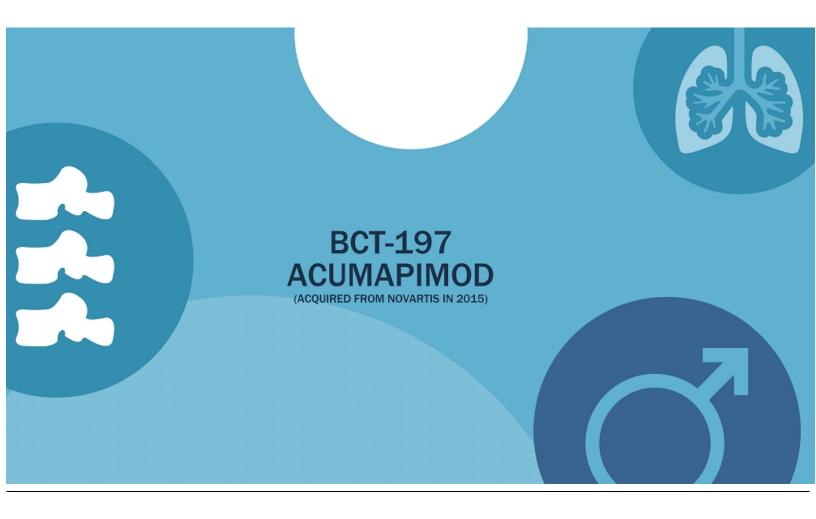
Primary Endpoint

Desmosine - biomarker shown to have correlation with lung density by CT scan¹

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.



ACUTE EXACERBATIONS OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE (AECOPD)

COPD includes chronic bronchitis, emphysema and some forms of bronchiectasis **Prevalence:** ***** 62.5% >1.5m 6 of all hospital admissions related COPD cases COPD cases diagnosed in the US¹ estimated in the EU² to COPD are AECOPD patients ⁴ Symptoms AECOPD - patients with COPD experience a sustained increase in cough, sputum production or dyspnoea Each episode poses significant risk to the patient, including hospitalisation and an increased risk of death 1) National Heart, Lung and Blood Institute (accessed in Nov 2017) 4) Wier et al (2011) AHRQ, HCUP, Statistical Brief #106 p1-11 2) COPD Coalition 3) Mannino et al (2002) MMWR Survell Summ 51: p1-6

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)

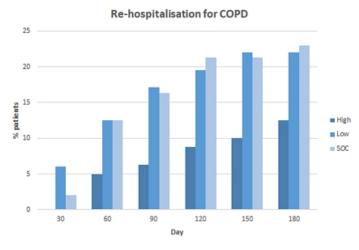
Primary endpoint met on an ITT basis for both high and low dose regimens (p= 0.012, p \leq 0.001) versus no significant change from baseline (p=0.102) for Standard of Care plus placebo

POSITIVE CLINICAL AND HEALTH ECONOMIC OUTCOMES SUPPORTED BY OTHER SECONDARY MEASURES

Statistically significant reduction of more than 50% ($p \le 0.027$ 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

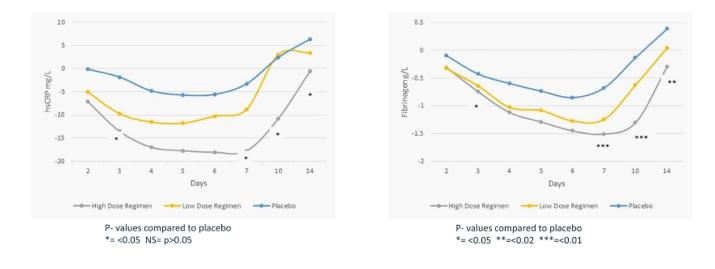
SAFETY

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



BCT-197 RESULTED IN A SIGNIFICANT REDUCTION IN THE INFLAMMATORY MARKERS HSCRP AND FIBRINOGEN IN THE FIRST 14 DAYS DURING THE INDEX EXACERBATION

· Suppression of hsCRP maintained through the 26-week observation period

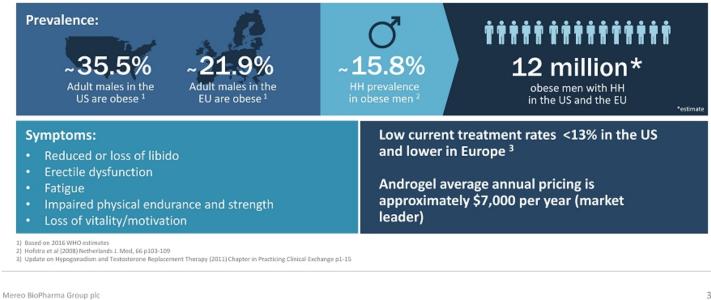


[·] Dose - dependent, statistically significant reductions in key inflammatory markers hsCRP and fibrinogen



HYPOGONADOTROPIC HYPOGONADISM (HH) IN OBESE MEN

A highly prevalent clinical syndrome that results from inadequate levels of testosterone



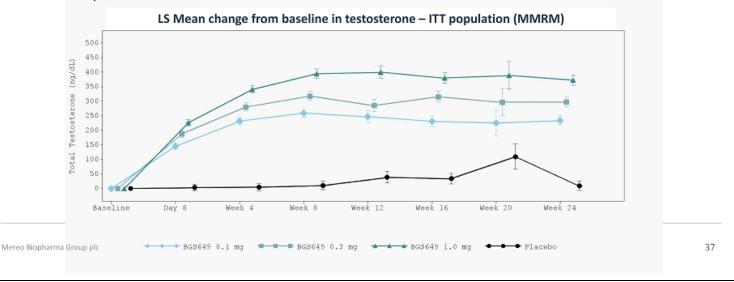
HYPOGONADOTROPIC HYPOGONADISM - TREATMENT LANDSCAPE



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
 - Met at all three doses p<0.001 versus placebo
 - No patient >1500 ng/dl at any time point, in the treatment groups
- SECONDARY ENDPOINT: normalisation of testosterone @ 24 wk in >90% subjects met in top two doses (p<0.001) with 88% of subjects on dow dose



BGS-649 MET THE SECONDARY END POINTS IN THE PHASE 2B TRIAL

Total of 271 patients

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

Positive trend on reduction of fatigue in the exploratory patient reported outcomes (PROs) at 8-12 weeks treatment

PHASE 2B EXTENSION STUDY (143 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.

Efficacy data consistent with Phase 2B:

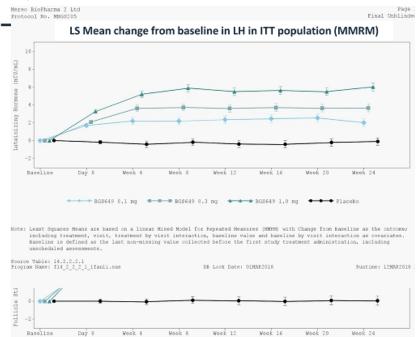
- · all three doses normalised testosterone in 75% of patients
- all three doses normalised testosterone in 90% of patients
- all three doses increased LH and FSH

Safety

Reported to be safe and well tolerated during the study.

Increased incidence of elevated haematocrit levels was noted and in the higher doses small increases in blood pressure, both consistent with increasing testosterone levels

Mereo Biopharma Group plo



38 Note: Least Squares Nears are based on a linear Nixed Model for Pepeated Measures (NOND) with Charge from Baseline as the outcom including treatment, visit, treatment by visit interaction, baseline value and baseline by visit interaction as covariates. Easeline is defined as the last non-mission value collected before the first study treatment administration. including



FINANCIAL HIGHLIGHTS

Total financing raised since launch

£126 million*

- £15m (gross) placing completed in April 2017
- £20m debt facility agreed in August, 2017 fully drawn as at December 31, 2017

*(gross including debt facility)

Novartis convertible debt balance at June 30 2018

£2.3 million

R&D spend in 1H 2018 £10.9 million

(£10.5m on non-GAAP adjusted basis)

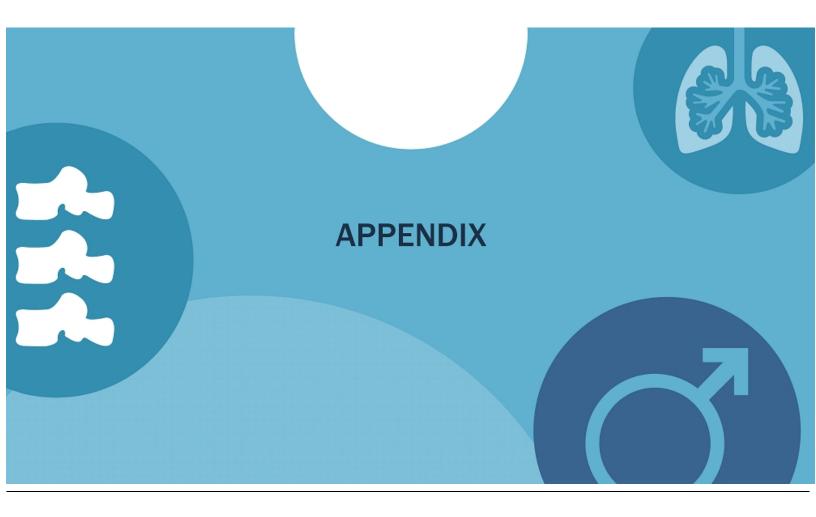


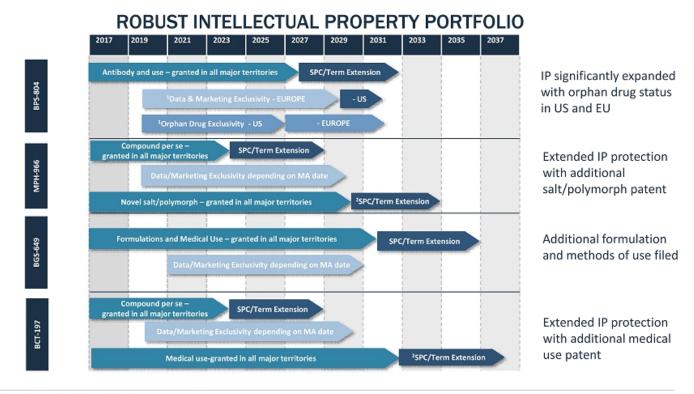
Admin Expenses in 1H 2018 £7.1 million

(£3.8m on non-GAAP adjusted basis)

Funded through to key clinical milestones







1. Assuming accelerated approval/adaptive pathway

2. Alternative SPC extension

GUIDANCE ON TERMS OF PRODUCT ACQUISITION AND LICENSE AGREEMENTS

| Transaction | Mereo Entitlement | NVS/AZ Entitlement |
|---|--|--|
| Licence of product in territory or worldwide | Majority percent of licensing income (upfront, milestones and royalties) | Share of licensing income (upfront, milestones and royalties) |
| Commercialisation by Mereo (territory or worldwide) | Product sales | Ascending tiered royalties typical for Phase 2 products and in the case of AZ cash milestones on sales |
| Sale of Mereo subsidiary | Proceeds from sale | Buyer steps into Mereo's shoes re (i) royalties and any milestones on any products directly commercialised by Buyer (ii) sharing any licensing income |
| Sale of Mereo Group | Exit for shareholders (NVS and AZ equity) | Buyer steps into Mereo's shoes re (i) royalties and/or milestones on any products directly commercialised by Buyer (ii) sharing any licensing income |
| Option to acquire MPH966 outright | | Equity and cash milestones including successful POC study and initiation of pivotal study |

Mereo BioPharma Group plc CONFIDENTIAL

ROBUST PRODUCT CANDIDATE SELECTION CRITERIA



BPS-804 (0I)

Fully human monoclonal antibody designed to inhibit sclerostin

Novartis data: Statistically significant increase in BMD in OI patients Type I, III, IV

Completed clinical studies to date:

- · 83 patients have received BPS-804
- Statistically significant improvement in BMD and bone biomarkers in OI patients (P1NP, P1CP, BSAP and OC)
- Down regulation of bone resorption biomarker CTX-1 in OI patients
- Well tolerated in the target population

| Day 141 | BPS-804 | | | Placebo | | |
|----------------------------|---------|-------------------------------------|---------|---------|-------------------------------------|---------|
| Parameter | N | Ratio geometric mean to baseline | P value | N | Ratio geometric mean to baseline | P value |
| Bone mineral density | 9 | 1.04 | 0.038* | 4 | 1.01 | 0.138 |

* Statistical significance

Note: Trial performed on 14 patients, 9 received BPS-804 and 5 received placebo

Bone Biomarkers: Procollagen I N-terminal propeptide (P1NP), procollagen C terminal propeptide (P1CP), bone-specific alkaline phosphatase (BSAP), osteocalcin (OC), Carboxy-terminal telopeptide (CTX-1)

RANGE OF SEVERITY IN OI

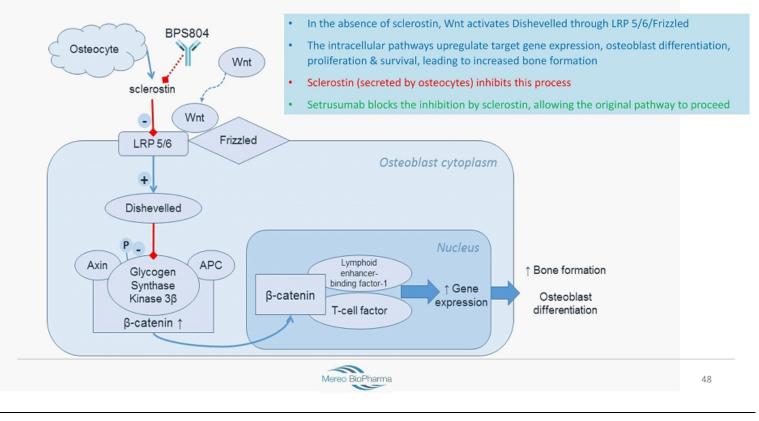
| | | | | Quantitative collagen defects | Qualitative collagen defects | | |
|--------------------------------------|--------|-----------------------|-------------|--|------------------------------|--|-----------------------|
| | | | | Mild- moderate | Severe Moderate Lethal | | |
| _ | | | | Non-deforming with blue sclera | Progressively deforming | Common variable with normal sclera | Perinatally lethal |
| | Gene | Protein | Inheritance | Type I | Type III | Type IV | Type II |
| ~90% of OI (van Dijk et al. 2012. | COL1A1 | Collagen α-1 chain | AD | ~ | \checkmark | ~ | ~ |
| Eur J Hum Genet 20:11–19) | COLIA2 | Collagen α-2 chain | AD | ~ | \checkmark | ~ | ~ |
| | Others | Others | AR | | \checkmark | ~ | \checkmark |
| - | | | XL | | | ~ | |
| | | | | ~43% | ~24% | ~19% | ~9% |
| | | | | ~95% of all patients with OI (Martin & Shapiro. Current Osteoporosis Reports 2007, 5:91–97) | | | |

NON-PHARMACOLOGICAL TREATMENTS

- Metal rod insertion (not plates!) into long bones (since 1940s)
- Spinal fusion for scoliosis
- Physiotherapy to strenghten muscles, improve motility
- Physical aids (crutches, wheelchairs, splints, ...)
- Community support



SETRUSUMAB: MECHANISM OF ACTION



BPS-804: Statistical significant benefit for markers of bone mineralization

| Day 43 | BPS-804 | | | Reference | | |
|-----------|---------|-------------------------------|---------|-----------|-------------------------------|---------|
| Parameter | Ν | Geometric mean to baseline | P value | N | Geometric mean to baseline | P value |
| PINP | 9 | 1.84 | <0.001* | 5 | 1.06 | 0.651 |
| PICP | 9 | 1.53 | 0.003* | 5 | 1.05 | 0.6 |
| BSAP | 9 | 1.59 | <0.001* | 5 | 0.87 | 0.582 |
| oc | 9 | 1.44 | 0.012* | 5 | 0.86 | 0.436 |

* Statistical significance

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BPS-804 (OI)- HISTORIC DATA

Fully human monoclonal antibody designed to inhibit sclerostin

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| Day 141 | BPS-804 | | | Placebo | | |
|----------------------------|---------|-------------------------------------|---------|---------|-------------------------------------|---------|
| Parameter | N | Ratio geometric mean to baseline | P value | N | Ratio geometric mean to baseline | P value |
| Bone mineral density | 9 | 1.04 | 0.038* | 4 | 1.01 | 0.138 |

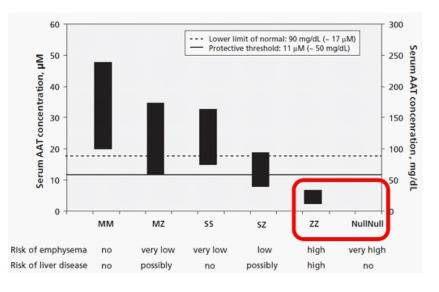
* Statistical significance

Note: Trial performed on 14 patients, 9 received BPS-804 and 5 received placebo

Bone Biomarkers: Procollagen I N-terminal propeptide (P1NP), procollagen C terminal propeptide (P1CP), bone-specific alkaline phosphatase (BSAP), osteocalcin (OC), Carboxy-terminal telopeptide (CTX-1)

ALPHA 1 ANTITRYPSIN DEFICIENCY CURRENT TREATMENT

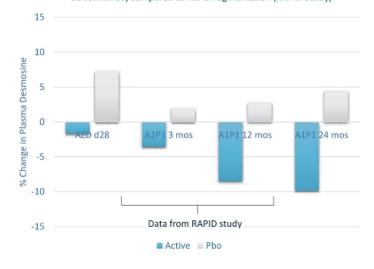
- Routine COPD medications
- Augmentation therapy:
 - Plasma derived alpha 1 anti trypsin
 - Weekly one hour IV infusion
 - Approval based on restoration of A1AT to a threshold level NOT clinical outcome data
 - Cost \$150k pa
 - ~9,000 patients treated
- Surgery lung volume reduction surgery or transplant



¹Brode et al Alpha-1 antitrypsin deficiency: a commonly overlooked cause of lung disease. CMAJ, September 4, 2012, 184(12)

LONG TERM AUGMENTATION AND SHORT TERM TREATMENT WITH AZD-9668 - IMPACT ON DESMOSINE

Change in Median Plasma Desmosine AZD6998 - alvelestat (CF and BE combined) compared to A1P1 Augmentation (RAPID Study)

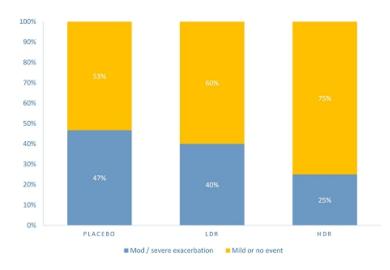


RAPID study - 2 years of augmentation in AATD patients

- · Reduced loss of lung density:
 - Total lung capacity (TLC) -1.45g/l/year vs -2.19 g/l/year (P=0.03)
- Post hoc analysis demonstrated correlation in change in desmosine vs lung density (reduced desmosine – less loss of lung density)

BCT197 REDUCED THE PERCENTAGE OF PATIENTS WHO SUFFERED A SUBSEQUENT EXACERBATION IN FREQUENT EXACERBATORS

. Effect on moderate/severe exacerbations best seen in patients with >= 2 exacerbations / year



· Patient population with highest unmet need

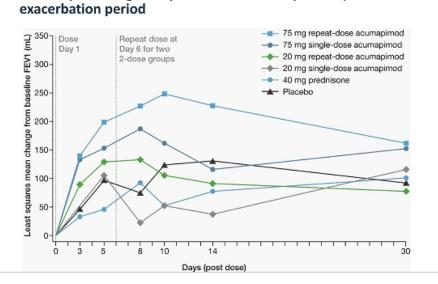
BCT-197: IMPROVEMENT IN FEV1

p38 MAPK inhibitor



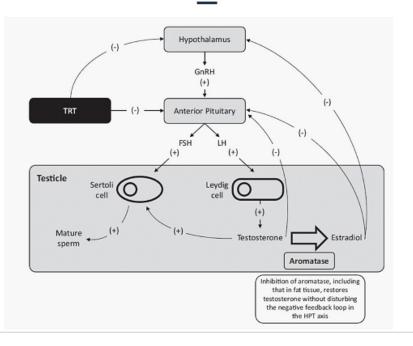
Completed clinical studies to date:

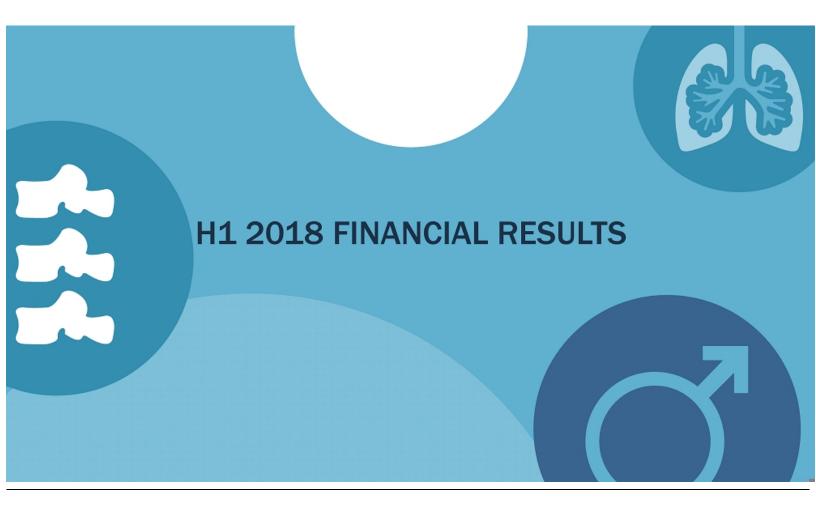
- 310 subjects have received BCT-197
- Dosed at 75mg x 2 AUC over exacerbation period (14 days) shows a statistically significant improvement in FEV1 vs placebo and prednisolone (P=0.0198 and 0.0102)
- Well tolerated in the target population



Clinically meaningful improvement in FEV1 (>100ml) over

BGS-649 (HH): HPT FEEDBACK LOOP PROCESS





| 114/4.0 | 114/4.0 | Change based | E. | One off level | 114/2010 | 114/2017 |
|-----------------------|----------|-------------------------|-------|------------------------|---------------------|---------------------|
| H1'18 | H1'18 | Share based payments | Fx | One off legal costs | H1'2018 Non-GAAP | H1'2017 Non-GAAP |
| | £'000 | £'000 | £'000 | £'000 | £'000 | £'000 |
| Development costs | (10,864) | 337 | - | | (10,527) | (20,823) |
| Admin expenses | (7,102) | 1,080 | | 2,235 | (3,787) | (2,982) |
| Operating loss | (17,966) | | | | (14,314) | (23,805) |
| Finance charge | (1,386) | | 87 | | (1,299) | 199 |
| Loss before tax | (19,352) | | | | (15,613) | (23,606) |
| Тах | 2,365 | | | | 2,365 | 4,546 |
| Net Loss | (16,988) | 1,417 | 87 | 2,235 | (13,249) | (19,060) |
| EPS | 24 pence | | | | 19 pence | 28 pence |
| Net cash resources | | | | | 36, 912* | 56,575 |

SUMMARY OF FINANCIAL RESULTS FOR THE SIX MONTHS ENDED JUNE, 30 2018

Mereo BioPharma Group plc

* Excludes FY '17 R&D tax credit due of £8.2m

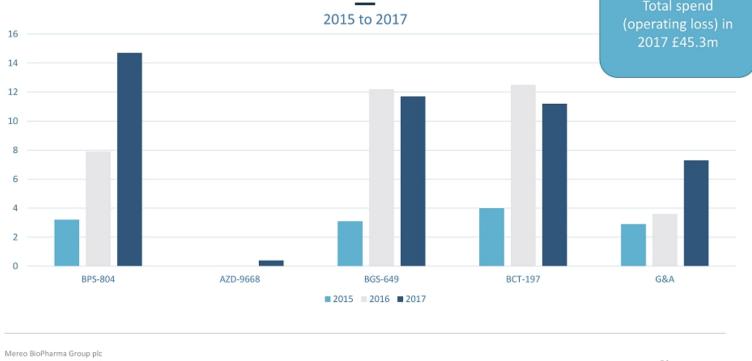
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R&D COSTS BY SEGMENT (£'M)

H1'17 vs H1 '18



TOTAL OPERATING COSTS BY SEGMENT (£'M)



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