Mereo BioPharma

2019 INTERIMS CORPORATE UPDATE CONFERENCE CALL

SEPTEMBER 17, 2019

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CORE STRATEGY FOCUSED ON RARE DISEASES…

Setrusumab
Osteogenesis Imperfecta (OI)

- Positive Phase 2b open label 6-month data reported in May 2019; 12-month randomized data expected Q4 2019
- Granted EMA PRIME designation; Pivotal Phase 3 pediatric study ready in EU with potential extension into the U.S.

Avelestat
Alpha-1 Antitrypsin Deficiency (AATD)

- Phase 2 proof-of-concept study currently enrolling patients with topline data expected in mid-2020
- Other investigator-sponsored clinical studies underway, including in bronchiolitis obliterans syndrome (BOS)

…WITH A ROBUST PORTFOLIO OF CLINICAL STAGE ASSETS READY FOR PARTNERING

Product Candidate / Indication	Phase 1	Phase 2	Phase 3	Current Status
BCT-197 Acute Exacerbations of COPD	✓ Positive Phase 2 study; Phase 3 Ready			• Phase 2 completed, pivotal program outlined
BGS-649 Hypogonadotropic Hypogonadism (HH)	✓ Positive Phase 2b study			• Phase 2b successfully completed
Navicixizumab[1] Ovarian Cancer	Phase 1b			• Phase 1b fully enrolled
Etigilimab[1] Solid Tumors	Phase 1a/b			• Phase 1a fully enrolled

[1]Acquired via merger with OncoMed Pharmacauticals, Inc.

SETRUSUMAB FOR OSTEOGENESIS IMPERFECTA (OI)

Girl, two, has brittle bone disease that makes her limbs so delicate she was BORN with a broken arm

By ALEXANDRA THOMPSON SENIOR HEALTH REPORTER FOR MAILONLINE
PUBLISHED: 10:29, 9 September 2019 | **UPDATED:** 11:44, 9 September 2019

The twins 'made of glass': 17-month-old sisters defy the odds after doctors gave them a 'zero per cent chance of survival' because of a rare disease that caused them to endure fractures in the WOMB

By ALEXANDRA THOMPSON SENIOR HEALTH REPORTER FOR MAILONLINE
PUBLISHED: 12:11, 9 September 2019 | **UPDATED:** 15:09, 9 September 2019

- OI is rare genetic bone disease characterized by frequent bone fractures, brittle teeth, and other physical symptoms
- There are currently no FDA or EMA approved therapies for OI
- Setrusumab is a human monoclonal antibody targeting sclerostin that has been demonstrated to be a strong bone-building agent and, also reduce the resorption of bone
- Setrusumab received PRIME (Priority Medicine) designation by the European Medicines Agency (EMA)

PHASE 2B ASTEROID STUDY: TOPLINE 12-MONTH DATA EXPECTED Q4 2019

ASTEROID Study Design

Fully Enrolled

112

OI Patients

Types I, III and IV

Trial arms:

Three different monthly dosing regimens

Positive 6-month open label data reported in May 2019

Top line data from all three blinded arms in Q4 2019

Primary endpoint: **Trabecular volumetric BMD (Tr vBMD) by HRpQCT versus baseline at 12 months**

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**

Encouraging 6-Month Data

Tr vBMD as measured by HRpQCT		
Change from baseline	**Absolute (%)**	**Mean (%)**
3 Months (n=12)	1.32 (SD 3.8)	1.36 (SD 4.1)
6 Months (n=11)	3.0 (SD 3.0)	3.21 (SD 6.6)

BMD as measured by DXA (n=12)		
Change from baseline	**Absolute (%)**	**Mean (%)**
6 Months (n=12)	N/A	3.5 (SD 4.2)

- **Data compare favorably with data from other HRpQCT studies of long-term therapy in osteoporosis**
- **Accepted for late-breaking oral presentation at ASBMR 2019**

ASBMR
The American Society for Bone and Mineral Research

SETRUSUMAB PEDIATRIC PHASE 3 PIVOTAL STUDY READY TO BEGIN

Planned enrollment:

~165

Severe OI Patients

Types I, III and IV

24 patients 5-18 years

One month dose finding – 3 doses versus placebo

Additional 128 patients

Randomized 1:1 placebo to selected dose

Total study duration

52

Weeks

Pivotal study approved in EU and Canada

Exploring extension into the U.S.

Primary endpoints

- **Fracture rate versus placebo at 12 months**

Secondary endpoints

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

ALVELESTAT FOR ALPHA-1 ANTITRYPSIN DEFICIENCY (AATD)

Scientific Rationale

- AATD is a rare, serious genetic disorder that results in early onset pulmonary disease
- AATD patients either lack the protective alpha 1 anti-trypsin protein, or produce abnormal, ineffective protein, that cannot block the destruction of neutrophil elastase (NE), an enzyme that attacks lung tissue.
- Hypothesis: restore the balance by inhibiting NE with alvelestat
- Alvelestat may also carry broader utility in other indications such as bronchiolitis obliterans syndrome (BOS) associated with transplantation

Phase 2 Proof of Concept Study

Enrolling

~165

Severe AATD Patients (target)
(PiZZ or NULL)

Trial arms:

Two different dosing arms vs. placebo

Topline data expected mid-2020

Primary endpoint: **Biomarker desmosine (break down product of NE)**

If results are positive, Mereo intends to commence a pivotal trial in the EU and the U.S.

STRONG OPERATIONAL PROGRESS SETS THE STAGE FOR AN EXCITING 2H19/2020

RARE DISEASES

SETRUSUMAB

- Adult Phase 2b completed enrollment of 112 patients in US and EU
- Open label 6 month data reported in Q2 2019 and will be presented at ASMBR 2019 annual meet
- 12 month data Q4 2019
- Pediatric fracture study Phase 3 ready

ALVELESTAT

- Phase 2 POC study continues to enroll patients
- NCATS grant of $10m to University of Alabama at B'ham – Mereo supplying material
- Additional investigator-sponsored studies underway have potential to expand development

NON-RARE DISEASES

LEFLUTROZOLE

- Six month extension study (12 month data) completed successfully

ACUMAPIMOD

- Successful Type B End of Phase 2 meeting
- Outline of pivotal Phase 3 agreed with FDA

CORPORATE

- Merger with OncoMed completed April 2019 added two new oncology product candidates to pipeline:

NAVICIXIZUMAB

ETIGILIMAB

- IP strengthened
- Recent management team and board additions
- Partnering discussions for non-rare disease assets ongoing

1H 2019 FINANCIAL HIGHLIGHTS

(£ in millions)	1H 2019	1H 2018
Research & Development	11.9	10.9
Operating Expenses	6.5	7.1

(£ in millions)	1H 2019	1H 2018
Cash & cash deposits & short-term investments	36.1	36.9

Total shares outstanding as at June 30, 2019	97,959,622
ADR's (each representing 5 underlying shares)	4,779,436

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THANK YOU