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Mereo BioPharma Group plc
(“Mereo” or the “Company” or the “Group”)

Update on BGS-649 Phase 2b Study

Completion of Patient Enrolment in Phase 2b dose-confirmation study of BGS-649 for the treatment of hypogonadotropic hypogonadism

Top line results expected Q1 2018

London, 5 September 2017 – Mereo BioPharma Group plc (AIM: MPH), a clinical stage, UK-based, biopharmaceutical company focused on rare and specialty diseases, today announced, that it has successfully completed patient enrolment in a Phase 2b dose-confirmation study for the treatment of hypogonadotropic hypogonadism (HH) in men with a body mass index of over 30. BGS-649 is a once a week oral aromatase inhibitor that restores a patient’s own testosterone to normal levels by inhibiting the conversion of testosterone to oestradiol.

A total of 270 patients have been enrolled into a randomised placebo controlled Phase 2b dose-confirmation study assessing three different dosing regimens. This follows a positive outcome, announced in March 2017, of a blinded interim review of the safety and efficacy of all the three doses based on 93 patients who had received at least one month’s treatment.

The primary endpoint of this study is to demonstrate the efficacy of BGS-649 to normalise total testosterone levels in over 75% of subjects after 24 weeks of treatment. Secondary endpoints are based on the impact of BGS-649 on luteinising hormone (LH), follicle stimulating hormone (FSH) and semen parameters. In addition the company is exploring patient recorded outcomes including sexual function and fatigue. Top-line data are expected in the first quarter of 2018.

Additionally, a six-month extension study in up to 120 patients to confirm the safety of long term treatment with BGS-649 is well underway.

Alastair Mackinnon, Chief Medical Officer of Mereo BioPharma Group plc commented:

“We are delighted to have completed enrolment in our Phase 2b study for BGS-649, which is another important milestone in the development of the Company. BGS-649 is highly differentiated from current treatment options and those in development, which are based on delivering exogenous testosterone. We believe that BGS-649 has the potential to be an important new safe, effective and more convenient treatment for the men suffering from this debilitating condition. We look forward to announcing the top line results of the trial in Q1 2018.”

About Hypogonadotropic hypogonadism

Hypogonadotropic hypogonadism (HH) results from inadequate levels of testosterone. Symptoms associated with testosterone deficiency include reduced/loss of libido, erectile dysfunction, tiredness, fatigue, impaired physical endurance, loss of vitality, lack of motivation and mood disturbance. There are approximately six million cases of HH in obese men in the US and approximately four million cases in Europe. Current therapies for HH involve direct replacement of testosterone administered by gel formulations applied to the skin, which risk transference to anyone in close contact, or intramuscular injections, which can be painful and inconvenient. Exogenous testosterone replacement can impair male

fertility by suppressing luteinising hormone (LH) and follicle stimulating hormone (FSH). BGS-649 is a once a week oral therapy designed to be more convenient compared with current therapies and due to its mechanism of action, is expected to restore normal testosterone production without the risk of supra-physiological levels or suppression of LH and FSH, thereby treating the symptoms of HH whilst maintaining or improving testicular function.

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About Mereo

Mereo BioPharma is an innovative biopharma company established to address the R&D and financial challenges faced by an increasing number of large pharma and biotech companies. Mereo focuses on developing and optimizing the value of novel medicines acquired from large pharma and biotech designed to address significant unmet medical needs in rare and specialty disease areas.

Mereo is comprised of a strong team with broad operational capabilities and the financial resources to conduct comprehensive clinical studies. The Company plans to build a rare and orphan commercial business combined with plans to partner where relevant.

Mereo's initial portfolio consists of three mid-late stage clinical assets that were acquired from Novartis in July 2015 each with proof of concept data in the indication that Mereo is now developing. BPS-804 is being developed for the prevention of fractures resulting from osteogenesis imperfecta (brittle bone disease); acumapimod (BCT-197), is being developed to treat inflammation in patients with an AECOPD; and BGS-649 is a once-weekly oral novel therapy that restores the patient's own testosterone in men with hypogonadotropic hypogonadism.

In H1 2016 the Company initiated a Phase 2 study with acumapimod and a Phase 2b study with BGS-649. Mereo recently announced commencement of the first potentially pivotal Phase 2b trial for BPS-804 and completion of enrolment of the acumapimod Phase 2 study. Additional product opportunities, from a range

of large pharmaceutical and biotechnology companies, are under active evaluation and these are focussed on orphan and rare diseases.