Mereo BioPharma Reports Interim Data from ACTIVATE Phase 1b/2 Open Label Study of etigilimab Anti-TIGIT Antibody in combination with Nivolumab in Solid Tumors

One complete response, one partial response and four cases of stable disease observed among 15 patients in the efficacy analysis set

Etigilimab was well tolerated with a favorable safety profile

Conference call today at 8:30am ET

London and Redwood City, Calif., November 30, 2021 - Mereo BioPharma Group plc (NASDAQ: MREO) ("Mereo" or the "Company"), a clinical stage biopharmaceutical company focused on oncology and rare diseases, today reported promising interim efficacy, safety, and biomarker data on patients from ACTIVATE, a Phase 1b/2 study of its anti-TIGIT antibody, etigilimab, in combination with nivolumab in select recurrent advanced / metastatic solid tumors.

"These early results from the ACTIVATE study are highly encouraging and support the further study of etigilimab in combination with an anti-PD-1 antibody in solid tumor types, especially in gynecologic malignancies," said Dr. Denise Scots-Knight, Chief Executive Officer of Mereo. "We are particularly excited by the complete response in the cervical cancer cohort and the partial response in one of the ovarian cancer patients treated to-date. In the efficacy analysis set, biomarker analysis showed a positive trend between baseline PVR expression and clinical benefit including in the absence of PD-L1 expression in the efficacy analysis population. Clinical benefit also occurred in tumor types with historically low response rates to anti-PD-1/PDL-1 antibodies. We look forward to providing additional updates on the study in 2022."

The ACTIVATE study aims to enroll approximately 125 patients across seven parallel cohorts. At the time of the data cut-off, 22 patients were included in the safety analysis set, 20 patients were evaluable with a minimum of at least one scan (as of November 8, 2021) and 15 patients were included in the efficacy analysis population.

As of the cut-off date, there are one complete response in cervical cancer, one partial response in ovarian cancer and four instances of stable disease in ovarian cancer, cervical cancer, and uveal melanoma. The ovarian cohort in ACTIVATE has now crossed futility for expansion into the second stage of the study (IDMC review pending). These results add to the earlier Phase 1b data of etigilimab in combination with nivolumab, with a partial response in the single ovarian cancer patient of the 8 patients evaluable and support the continued development of this dual checkpoint combination regimen.

The combination of etigilimab and nivolumab has been safe and well tolerated, with no new safety signals. The most common treatment-related adverse events were skin reactions, observed in seven patients. None of these reactions required treatment with systemic steroids. There was one case of immune diabetes mellitus.

Conference Call and Webcast

Mereo BioPharma will hold a conference call today, November 30, 2021, at 8:30am ET. To participate by telephone, please dial (866) 688-2942 (Domestic) or (561) 569-9224 (International). The conference ID number is 6585106. To view the slideshow please use the live webcast which can be accessed through the Investors section of the Company's website at www.Mereobiopharma.com/investors. An archived

replay of the webcast will be available on the Company's website for two weeks following the live presentation.

About Mereo BioPharma

Mereo BioPharma is a biopharmaceutical company focused on the development and commercialization of innovative therapeutics that aim to improve outcomes for oncology and rare diseases. The Company has developed a portfolio of six clinical stage product candidates. Mereo's lead oncology product candidate, etigilimab (anti-TIGIT), has advanced into an open label Phase 1b/2 basket study evaluating anti-TIGIT in combination with an anti-PD-1 in a range of tumor types including three rare tumors and three gynecological carcinomas, cervical, ovarian, and endometrial carcinomas. Etigilimab is also under investigation for clear cell ovarian cancer in the phase 1b/2 study EON, in collaboration with MD Anderson and the Focus Fund. The Company's second oncology product, navicixizumab, for the treatment of late line ovarian cancer, has completed a Phase 1 study and has been partnered with OncXerna Therapeutics, Inc., formerly Oncologie, Inc. The Company has two rare disease product candidates, alvelestat for the treatment of severe Alpha-1 antitrypsin deficiency (AATD) and setrusumab for the treatment of osteogenesis imperfecta (OI). Alvelestat has recently received U.S. Orphan Drug Designation for the treatment of AATD and is being investigated in an ongoing Phase 2 proof-of-concept study in the U.S. and Europe which the Company will provide an update on in Q4 2021, with top-line data now expected early Q2 2022. The Company's partner, Ultragenyx Pharmaceutical, Inc., is expected to initiate a pivotal pediatric study for setrusumab in OI before the end of 2021.

Forward-Looking Statements

This press release contains "forward-looking statements." All statements other than statements of historical fact contained in this press release 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 relate to future events, including, but not limited to, statements regarding future clinical development, efficacy, safety, and therapeutic potential of clinical product candidates, including expectations as to reporting of data, conduct and timing and potential future clinical activity and milestones and expectations regarding the initiation, design and reporting of data from clinical trials. 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 the Company's current expectations, beliefs and assumptions concerning future developments and involve risks and uncertainties that could cause actual results, performance, or events to differ materially from those expressed or implied in such statements. You should carefully consider the foregoing factors and the other risks and uncertainties that affect the Company's business, including those described in the "Risk Factors" section of its latest Annual Report on Form 20-F, reports on Form 6-K and other documents furnished or filed from time to time by the Company with the Securities and Exchange Commission. You should not place undue reliance on any forward-looking statements, which speak only as of the date hereof. The Company undertakes no obligation to publicly update or revise any 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.

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