UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13a-16 or 15d-16
UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of March, 2022

Commission File Number: 001-38452

MEREO BIOPHARMA GROUP PLC

(Translation of registrant's name into English)

4th Floor, One Cavendish Place,
London, W1G 0QF, United Kingdom
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F ☒ Form 40-F ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ☐

Exhibit Index

Exhibits

99.1	Press release dated March 31, 2022 titled “Mereo BioPharma Reports Full Year 2021 Financial Results and Recent Highlights.”

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: March 31, 2022

MEREO BIOPHARMA GROUP PLC

By: /s/ Christine Fox
Name: Christine Fox
Title: Chief Financial Officer

Exhibit 99.1

Mereo BioPharma Reports Full Year 2021 Financial Results and Recent Highlights

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London and Redwood City, Calif., March 31, 2022 - Mereo BioPharma Group plc (NASDAQ: MREO) ("Mereo" or the "Company"), a clinical-stage biopharmaceutical company focused on oncology and rare diseases, today announced financial results for the year ended December 31, 2021 and provided an update on recent corporate highlights.

"During 2021, we continued to execute on all fronts and made substantial progress across our pipeline. We further advanced our etigilimab anti-TIGIT program, reporting highly promising interim data from the ongoing ACTIVATE Phase 1b/2 study and expanded our research to include clear-cell ovarian cancer through our partnership with Cancer Focus Fund and MD Anderson," said Dr. Denise Scots-Knight, Chief Executive Officer of Mereo. "In addition, we reported positive data from multiple studies of alvelestat, which also received orphan drug designation for the treatment of AATD. We ended the year well positioned for further success in 2022, with a strong balance sheet supported by the proceeds of our public offering early last year. Following our accomplishments in 2021, we look forward to our upcoming catalysts in 2022."

Highlights from 2021 and Recent Developments

Etigilimab (MPH-313)

- Reported interim data in Q4 2021 from ACTIVATE Phase 1b/2 open label study of etigilimab anti-TIGIT antibody in combination with nivolumab in solid tumors
    - Based on analysis of 15 patients in the efficacy analysis set with a minimum of one scan to-date or clinical progression, those receiving the etigilimab / nivolumab combination have achieved one complete response in cervical cancer, one partial response in ovarian cancer and four instances of stable disease in ovarian cancer, cervical and uveal melanoma
- Well tolerated with a favorable safety profile
- Ongoing Phase 1b/2 basket combination study continues to enroll well
    - Update on additional patients and durability of initial responses expected in Q2 2022

Alvelestat (MPH-966)

- Received orphan designation from the FDA for the treatment of AATD
- Held an R&D Day update on the alvelestat programs in Q1 2022, including in the ongoing Phase 2 trial which enrolled 99 patients with AATD
    - Data expected in early Q2 2022
- Reported positive bio-marker data from investigator-sponsored Phase 1b/2 study of alvelestat in patients with BOS following hematopoietic stem cell transplantation
- Reported positive top-line results from Phase 1b/2 trial in hospitalized patients with COVID-19 respiratory disease; Alvelestat, on top of standard of care, resulted in a more rapid time to improvement in WHO Disease Severity score in the first 5-7 days compared to placebo plus standard of care.

Corporate Updates

Partnerships

- Announced partnership with the Cancer Focus Fund supporting a Phase 1b/2 clinical study of etigilimab in combination with nivolumab in clear cell ovarian cancer to be conducted at The University of Texas MD Anderson Cancer Center
- Ultragenyx expects to enroll the first patient in the Phase 2/3 study of setrusumab in 5–25 year-olds with osteogenesis imperfecta in 1H 2022

Public Offering of American Depositary Shares

- Public offering gross proceeds of $115.1 million in Q1 2021

Strengthened Board of Directors

- Pierre Jacquet, M.D., Ph.D. appointed to Board of Directors, September 2021
- Anne Hyland appointed to Board of Directors, March 2022

Full Year 2021 Financial Results

Revenue was £36.5 million in 2021, representing the upfront payment under the licensing and collaboration agreement with Ultragenyx in January 2021 for the development and commercialization of setrusumab for OI.

Full year 2021 research and development expenses were £23.6 million, compared to £16.3 million in 2020, an increase of £7.2 million, or 44%. R&D expenses relating to etigilimab increased by £12.5 million. The increase was due to the costs associated with commencement of the open label Phase 1b/2 basket study in combination with nivolumab in a range of tumor types. R&D expenses relating to alvelestat increased £0.6 million, or 13%, primarily related to the ongoing Phase 2 proof-of-concept study. Partially offsetting the increases, R&D expenses relating to setrusumab and navicixizumab decreased by £4.1 million and £1.7 million, respectively. The decrease related to setrusumab was primarily driven by the licensing and collaboration agreement with Ultragenyx, under which Ultragenyx will fund global development of the program, and the decrease related to navicixizumab was driven by the global out-licensing agreement with OncXerna for the development and commercialization of navicixizumab.

Administrative expenses decreased by £5.3 million, or 25%, from £21.2 million in 2020 to £15.9 million in 2021. The decrease was primarily driven by a £4.0 million reduction in legal and professional fees in 2021, reflecting lower activity and related transaction costs in 2021 compared to 2020. Premises-related costs decreased by £1.3 million in 2021 primarily due to one-off transaction costs in 2020 associated with renegotiation of our office lease in Redwood City.

Net profit attributable to equity holders for the year 2021 was a net profit of £12.7 million, compared to a net loss of £163.6 million in 2020, reflecting an operating loss of £20.9 million and a gain of £40.0 million, due to changes in the fair value of financial instruments resulting from an unrealized gain on warrants.

Total ordinary shares outstanding at December 31, 2021 were approximately 585 million. Total ADSs outstanding at December 31, 2021 were approximately 116.5 million, with each ADS representing five ordinary shares of the Company.

Cash and short-term deposits totaled £94.3 million at December 31, 2021.

About Mereo BioPharma

Mereo BioPharma is a biopharmaceutical company focused on the development of innovative therapeutics that aim to improve outcomes for oncology and rare diseases and plans to commercialize selected rare disease programs. 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. 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 Bronchiolitis Obliterans Syndrome (BOS), 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, with top-line data expected in early Q2 2022. The Company's partner, Ultragenyx Pharmaceutical, Inc., is expected to initiate a pivotal Phase 2/3 pediatric study and young adult study (5-25 years old) for setrusumab in OI in H1 2022.

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 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 the Company’s current expectations, beliefs and assumptions concerning future developments and business conditions and their potential effect on the Company. While management believes that these forward-looking statements are reasonable as and when made, there can be no assurance that future developments affecting the Company will be those that it anticipates.

All of the Company’s forward-looking statements involve known and unknown risks and uncertainties some of which are significant or beyond its control and assumptions that could cause actual results to differ materially from the Company’s historical experience and its present expectations or projections. 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. The Company wishes to caution you not to 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 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.

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Lee Roth

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Consolidated Statements of Comprehensive Income/(Loss)

	Year ended December 31,		
	2021	2020	2019
	£ '000s	£ '000s	£ '000s
Revenue	36,464	—	—
Cost of revenue	(17,908)	—	—
Research and development expenses	(23,559)	(16,347)	(23,608)
Administrative expenses	(15,933)	(21,222)	(15,909)
Operating loss	**(20,936)**	**(37,569)**	**(39,517)**
Net income recognized on acquisition of subsidiary	—	—	1,035
Finance income	1	44	377
Finance costs	(4,022)	(6,383)	(4,371)
Changes in the fair value of financial instruments	40,039	(109,849)	875
Gain/(loss) on disposal of intangible assets	113	(10,872)	—
Net foreign exchange loss	(954)	(1,821)	483
Profit/(loss) before tax	**14,241**	**(166,450)**	**(41,118)**
Taxation	(1,516)	2,822	6,274
Profit/(loss) for the year, attributable to equity holders of the parent	**12,725**	**(163,628)**	**(34,844)**
Items that may be reclassified subsequently to profit or loss:			
Currency translation of foreign operations	(191)	349	(499)
Total comprehensive income/(loss) for the year, attributable to equity holders of the parent	**12,534**	**(163,279)**	**(35,343)**
Basic profit/(loss) per share for the year (in £)	**0.02**	**(0.48)**	**(0.39)**
Diluted loss per share for the year (in £)	**(0.05)**	**(0.48)**	**(0.39)**

Consolidated Balance Sheets

	As at December 31, 2021	2020
Assets	**£ '000s**	**£ '000s**
Non-current assets		
Property, plant and equipment	2,530	1,573
Intangible assets	24,564	31,648
	27,094	**33,221**
Current assets		
Prepayments	2,799	1,619
R&D tax credits	—	2,818
Other taxes receivable	809	804
Other receivables	1,419	1,016
Cash and short-term deposits	94,296	23,469
	99,323	**29,726**
Total assets	**126,417**	**62,947**
Equity and liabilities		
Non-current liabilities		
Provisions	1,320	1,216
Convertible loan notes	14,384	16,142
Warrant liability	8,336	50,775
Lease liability	1,754	1,158
Other liabilities	80	62
	25,874	**69,353**
Current liabilities		
Trade and other payables	2,499	3,333
Accruals	3,826	4,178
Current tax liabilities	1,522	—
Provisions	2,803	418
Lease liability	622	636
Other liabilities	1,269	—
	12,541	**8,565**
Total liabilities	**38,415**	**77,918**
Net assets/(liabilities)	**88,002**	**(14,971)**
Equity		
Issued capital	1,755	1,017
Share premium	247,460	161,785
Other capital reserves	129,835	128,374
Employee Benefit Trust shares	(1,140)	(1,305)
Other reserves	7,401	5,001
Accumulated losses	(296,968)	(309,693)
Translation reserve	(341)	(150)
Total equity	**88,002**	**(14,971)**