

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 8-K

**Current Report Pursuant to
Section 13 or 15(d) of the
Securities Exchange Act of 1934**

Date of Report (Date of Earliest Event Reported): August 13, 2024

Mural Oncology plc
(Exact name of Registrant as Specified in Its Charter)

Ireland
(State or Other Jurisdiction
of Incorporation)

001-41837
(Commission File Number)

98-1748617
(IRS Employer
Identification No.)

10 Earlsfort Terrace
Dublin 2, D02 T380, Ireland
(Address of Principal Executive Offices)

Not Applicable
(Zip Code)

Registrant's Telephone Number, Including Area Code: +353-1-905-8020

Not Applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instructions A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Ordinary Shares, nominal value \$0.01	MURA	The Nasdaq Global Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 2.02. Results of Operations and Financial Condition.

On August 13, 2024, Mural Oncology plc (the "Company") issued a press release announcing the Company's financial results for the three months ended June 30, 2024. A copy of the press release is furnished herewith as Exhibit 99.1 and is incorporated herein by reference.

The information in this Form 8-K, including Exhibit 99.1, attached hereto, is being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing by the Company under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits

Exhibit No.	Description
99.1	Press release issued by Mural Oncology plc on August 13, 2024.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

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 hereunto duly authorized.

Mural Oncology plc

Dated: August 13, 2024

By: /s/ Adam Cutler

Name: Adam Cutler

Title: Chief Financial Officer



Mural Oncology Announces Second Quarter 2024 Financial Results and Provides Update on Pipeline Progress

Company remains well positioned to capitalize on the role of cytokines with near- and long-term potential value creation milestones, reiterates guidance on projected cash runway into Q4 2025

On track to report readouts from Mural's lead asset, nemvaleukin alfa, in two late-stage clinical trials in 1H 2025

Presented clinical data from ARTISTRY-3 on less frequent dosing of nemvaleukin at the American Society of Clinical Oncology annual meeting in June; newly recommended phase 2 dose is already in the clinic in ARTISTRY-6, with preliminary readouts expected in 2025

Candidate nominations for Mural's IL-18 and IL-12 programs are expected later this year, further deepening the company's pipeline

WALTHAM, Mass and DUBLIN – August 13, 2024 – Mural Oncology plc (Nasdaq: MURA), a clinical-stage immuno-oncology company developing novel, investigational engineered cytokine therapies designed to address areas of unmet need for patients with a variety of cancers, today announced financial results for the second quarter of 2024 and provided a business update.

"We've seen resurgent interest across the industry in cytokines as powerful tools to fight cancer and Mural is in a unique position to deliver promising drug candidates that have the potential to overcome the limitations of prior approaches," said Caroline Loew, Ph.D., Chief Executive Officer of Mural Oncology. "Since becoming an independent company late last year, we've rapidly worked to shape and grow a nimble organization focused on delivering meaningful new immunotherapy treatments to cancer patients. We believe each of our programs is engineered with a differentiated approach that we hope will play out significantly in the clinic starting early next year."

Recent Corporate Highlights and Upcoming Milestones

- Mural appointed George Golumbeski, Ph.D., to its board of directors in July. Dr. Golumbeski currently serves as a partner at DROIA Ventures, a specialist biotech investment firm focused on therapeutics for oncology and genetic disease. Prior to DROIA, he served as President and Head of Corporate Development for GRAIL and Executive Vice President of Business Development for Celgene. He has nearly 30 years of extensive experience with strategic collaborations, M&A, in-licensing, out-licensing, and alliance management.
 - Mural's **late-stage clinical trials of nemvaleukin alfa** continue to progress toward readouts in the first half of 2025. The company is focused on two foundational indications for nemvaleukin, where the majority of patients do not have any currently approved therapies.
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- o **ARTISTRY-7** is a potentially registrational, phase 3 clinical trial evaluating nemvaleukin in combination with pembrolizumab compared to investigators' choice of chemotherapy in patients with platinum-resistant ovarian cancer. Patient enrollment in this trial is now complete. Mural continues to expect to report interim overall survival (OS) results based on approximately 75% of events in the first quarter of 2025. The company anticipates reporting final OS results in the second quarter of 2026.
 - o Mural expects to report top-line data results from **cohort 2 of ARTISTRY-6** in the first half of 2025. This is a potentially registrational, phase 2 clinical trial evaluating nemvaleukin as a monotherapy in patients with mucosal melanoma.
 - o Mural is also evaluating a **less-frequent intravenous (LFIV) dose of nemvaleukin** in patients with cutaneous melanoma in cohort 3 (monotherapy) and cohort 4 (combination therapy) in **ARTISTRY-6**. The company expects preliminary data readouts in the monotherapy cohort in the first half of 2025, and in the combination cohort with pembrolizumab in the second half of 2025.
 - o In June, Mural presented data from **ARTISTRY-3**, an evaluation of the LFIV dosing of nemvaleukin, at the American Society of Clinical Oncology (ASCO) annual meeting. This data from ARTISTRY-3 informed the LFIV dose currently being used in cohort 3 and cohort 4 of ARTISTRY-6. In the ARTISTRY-3 trial, the company evaluated escalating LFIV infusions, all of which were generally well tolerated. The safety profile in all dosing schedules evaluated was consistent with nemvaleukin's known mechanism of action, and no dose limiting toxicities were observed. Although administering higher doses per cycle than in previous trials evaluating nemvaleukin, no new safety signals were identified. The desired pharmacodynamic (PD) effects were also seen across all evaluated doses. Expansion of antitumor CD8+ T cells and natural killer (NK) cells was observed concurrent with minimal expansion of immunosuppressive regulatory T cells (T_{regs}).
 - Mural's preclinical **interleukin-18 (IL-18)** and **IL-12** programs remain on track, with nominations for both development candidates expected this year.
 - o Mural's enhanced **IL-18** is engineered to deliver a more sustained immune response for cancer treatment. Native IL-18 is a potent immune-stimulating cytokine, but its efficacy is blunted by IL-18 binding protein (IL-18BP), a high affinity decoy receptor that binds with and neutralizes IL-18, thereby rendering it ineffective. Native IL-18 is also limited by its short half-life. Mural's IL-18 variant contains mutations that eliminate binding to IL-18BP while minimally impacting the native IL-18 structure. The company has also fused IL-18 to protein scaffolds to extend the half-life and increase IL-18's exposure. Together, Mural believes these have demonstrated a more durable immunological effect in preclinical studies.
 - o The company's enhanced **IL-12** is engineered to leverage native IL-12's anti-tumor potency while mitigating its hallmark toxicity. Native IL-12 is a highly potent
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pro-inflammatory cytokine, but because of its very narrow therapeutic index, it can also be incredibly toxic with systemic exposure. Mural's IL-12 variant splits the molecule into two inactive monomers, and these individual subunits are then separately fused to antibody fragments and sequentially injected, which deliver and concentrate IL-12 specifically in the tumor microenvironment with the goal of limiting systemic exposure. In preclinical studies, Mural believes its engineered IL-12 achieved the desired reduction in serum while maintaining tumor concentrations providing the potential to reduce systemic toxicities.

Financial Results for the Quarter Ended June 30, 2024

- **Cash Position:** As of June 30, 2024, cash, cash equivalents, and marketable securities were \$204.7 million.
- **R&D Expenses:** Research and development expenses were \$27.5 million for the second quarter of 2024 compared to \$42.5 million for the second quarter of 2023. The decrease in R&D expenses was primarily due to different team composition compared to the personnel allocated to us by Alkermes, our former parent, prior to the separation, as well as decreased spend on the ARTISTRY-1 and ARTISTRY-2 trials as activities related to these trials wound down in 2023 and decreased spend on the ARTISTRY-7 trial due to the timing of patient enrollment.
- **G&A Expenses:** General and administrative expenses were \$6.7 million for the second quarter of 2024 compared to \$4.7 million for the second quarter of 2023. The increase in expenses was primarily due to costs associated with operating as a standalone company after the separation. This includes employee-related expenses and professional fees.
- **Net Loss:** Net loss was \$31.6 million for the second quarter of 2024 compared to \$50.2 million for the second quarter of 2023.

Financial Guidance

- The company reaffirms guidance that its cash, cash equivalents, and marketable securities are expected to fund its operations into the fourth quarter of 2025.
- As noted previously, management forecasts lower operating expenses in 2025 versus 2024 due to the timing of clinical trial expenses.

About Nemvaleukin

Nemvaleukin alfa (nemvaleukin) is a novel, engineered cytokine designed to leverage antitumor effects of the IL-2 pathway while mitigating the hallmark toxicities that limit its use. Nemvaleukin selectively binds to the intermediate-affinity IL-2 receptor (IL-2R) and is sterically occluded from binding to the high-affinity IL-2R. Because of this molecular design, nemvaleukin treatment leads to preferential expansion of antitumor CD8+ T cells and natural killer cells, with minimal

expansion of immunosuppressive regulatory T cells. Nemvaleukin is currently being evaluated in two potentially registrational late-stage trials.

About Mural Oncology's IL-18 Program

IL-18 is a potent immune-stimulating cytokine, but its efficacy is blunted by IL-18 binding protein (IL-18BP), a high affinity decoy receptor that binds to, and neutralizes, IL-18, thereby rendering it ineffective. Native IL-18's potency is also limited by its short half-life. Mural Oncology's novel approach to protein engineering is designed to mitigate these issues. First, Mural introduced mutations to IL-18 that eliminate binding to IL-18BP while minimally impacting the native IL-18 structure. Second, it fused IL-18 to protein scaffolds which extend the half-life and increase IL-18's exposure. Together, these have demonstrated more durable immunological effect in preclinical studies. Mural intends to nominate a development candidate for its IL-18 program by the end of this year.

About Mural Oncology's IL-12 Program

Native IL-12 is a highly potent pro-inflammatory cytokine, but because of its very narrow therapeutic index, it can also be toxic with systemic exposure. To mitigate this hallmark toxicity, Mural, through its novel approach to protein engineering, split the IL-12p70 heterodimer into two inactive monomers: IL12p35 and IL-12p40. These individual subunits are then separately fused to antibody fragments and sequentially injected, which deliver and concentrate IL-12 specifically in the tumor microenvironment to limit systemic exposure. In preclinical studies, Mural's engineered IL-12 achieved the desired reduction in serum while maintaining tumor concentrations providing the potential to reduce systemic toxicities. Mural intends to nominate a development candidate for its IL-12 program by the end of this year.

About Mural Oncology

Mural Oncology is leveraging its novel protein engineering platform to develop cytokine-based immunotherapies for the treatment of cancer. By combining our expertise in cytokine biology and immune cell modulation and our protein engineering platform, we are developing medicines to deliver meaningful and clinical benefits to people living with cancer. Our mission is to broaden the potential, and reach, of cytokine-based immunotherapies to improve the lives of patients. Our lead candidate, nemvaleukin, is currently in potentially registrational trials in mucosal melanoma and platinum-resistant ovarian cancer. Mural Oncology has its registered office in Dublin, Ireland, and its primary facilities in Waltham, Mass. For more information, visit Mural Oncology's website at www.muraloncology.com and follow us on LinkedIn and X.

Forward-Looking Statements

Statements contained in this press release regarding matters that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Such statements include, but are not limited to, statements regarding: the company's pipeline and development programs, including the expected timing of clinical updates and candidate selection, the potential of the company's product candidates and programs to address unmet medical needs, the continued progress of its pipeline and programs, the amount of operating expense to be incurred by the company in future periods and the sufficiency of its cash resources to fund its operations for the period anticipated. Any forward-looking statements in this statement are based on management's current expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. Risks that contribute to the uncertain nature of the forward-looking statements include, among others, the

inherent risks and uncertainties associated with competitive developments, preclinical development, clinical trials, recruitment of patients, product development activities and regulatory approval requirements; that preclinical or interim results and data from ongoing clinical studies of the company's cytokine programs and product candidates may not be predictive of future or final results from such studies, results of future clinical studies or real-world results; future clinical trials or future stages of ongoing clinical trials may not be initiated or completed on time or at all; the company's product candidates, including nemvaleukin, could be shown to be unsafe or ineffective; changes in the cost, scope and duration of development activities; the U.S. Food and Drug Administration may make adverse decisions regarding the company's product candidates; the separation may adversely impact the company's ability to attract or retain key personnel that support the company's oncology business; and those other risks and uncertainties set forth in the company's filings with the Securities and Exchange Commission ("SEC"), including its Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2024 and in subsequent filings the company may make with the SEC. All forward-looking statements contained in this press release speak only as of the date of this press release. The company anticipates that subsequent events and developments will cause its views to change. However, the company undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date of this press release, except as required by law.

Mural Oncology plc and Subsidiaries
Consolidated Balance Sheets
(in thousands)

	June 30, 2024	December 31, 2023
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 121,587	\$ 270,852
Marketable securities	83,117	—
Receivable from Former Parent	1,005	5,548
Prepaid expenses	6,722	150
Other current assets	628	787
Total current assets	<u>213,059</u>	<u>277,337</u>
Property and equipment, net	9,713	11,403
Right-of-use assets	10,126	12,747
Restricted cash	1,969	258
Other assets	61	—
TOTAL ASSETS	<u>\$ 234,928</u>	<u>\$ 301,745</u>
LIABILITIES AND EQUITY		
CURRENT LIABILITIES:		
Accounts payable	\$ 3,108	\$ 5,973
Accrued expenses	16,167	16,946
Operating lease liabilities—short-term	5,350	6,098
Total current liabilities	<u>24,625</u>	<u>29,017</u>
Operating lease liabilities—long-term	5,730	8,911
Total liabilities	<u>30,355</u>	<u>37,928</u>
Preferred shares, nominal value \$0.01; 50,000,000 shares authorized at June 30, 2024 and December 31, 2023; no shares issued or outstanding at June 30, 2024 or December 31, 2023	—	—
Ordinary shares, nominal value \$0.01; 450,000,000 ordinary shares authorized at June 30, 2024 and December 31, 2023; 16,927,110 and 16,689,740 shares issued and outstanding at June 30, 2024 and December 31, 2023, respectively	169	167
Additional paid-in capital	297,796	294,507
Unrealized loss on marketable securities	(54)	—
Accumulated deficit	(93,338)	(30,857)
Total equity	<u>204,573</u>	<u>263,817</u>
TOTAL LIABILITIES AND EQUITY	<u>\$ 234,928</u>	<u>\$ 301,745</u>

Mural Oncology plc and Subsidiaries
Consolidated Statements of Operations and Comprehensive Loss
(in thousands except share and per share amounts)

	Three Months Ended June 30,	
	2024	2023
Operating expenses		
Research and development	\$ 27,544	\$ 42,526
General and administrative	6,733	4,731
Total operating expenses	34,277	47,257
Operating loss	(34,277)	(47,257)
Other income	2,713	—
Income tax provision	—	(2,907)
Net loss	\$ (31,564)	\$ (50,164)
Other comprehensive gain:		
Unrealized gain on marketable securities	\$ 20	\$ —
Other comprehensive gain	20	—
Comprehensive loss	\$ (31,544)	\$ (50,164)
Net loss per ordinary share - basic and diluted	\$ (1.86)	\$ (3.01)
Weighted average ordinary shares outstanding - basic and diluted	16,924,842	16,689,740

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