

**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): March 9, 2023

Prime Medicine, Inc.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-41536
(Commission
File Number)

84-3097762
(I.R.S. Employer
Identification No.)

Prime Medicine, Inc.
21 Erie Street
Cambridge, Massachusetts 02139
(Address of principal executive offices, including zip code)

(617) 564-0013
(Registrant's telephone number, including area code)

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:

- 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:

Title of each class	Trade Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.00001 par value per share	PRME	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 March 9, 2023, Prime Medicine, Inc. issued a press release announcing its financial results for the fourth quarter and year ended December 31, 2022 (the “Press Release”). A copy of the Press Release is furnished herewith as Exhibit 99.1.

The information set forth under Item 2.02 and in Exhibit 99.1 attached hereto is intended to be furnished and shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 (the “Exchange Act”) or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, except as expressly set forth by specific reference in such filing.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

99.1 [Press Release, dated March 9, 2023, furnished herewith.](#)

104 Cover Page Interactive Data File

SIGNATURE

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.

Prime Medicine, Inc.

Date: March 9, 2023

By: /s/ Keith Gottesdiener
Keith Gottesdiener
President and Chief Executive Officer

Prime Medicine Reports Fourth Quarter and Full Year 2022 Financial Results and Provides Business Update

— Announced preclinical data providing further proof-of-concept for Prime Editing’s ability to achieve restoration of genetic function, as well as new preliminary safety analyses demonstrating no detected off-target activity —

— Nominated PM359, first development candidate for the treatment of Chronic Granulomatous Disease (CGD) —

— Successfully completed upsized initial public offering, raising \$199 million in gross proceeds —

Cambridge, Mass., March 9, 2023 – Prime Medicine, Inc. (Nasdaq: PRME), a biotechnology company committed to delivering a new class of differentiated one-time curative genetic therapies, today reported financial results and provided a business update for the fourth quarter and full year ended December 31, 2022.

“In 2022, we made important progress in our efforts to build Prime Medicine and demonstrate the promise of Prime Editors as a potentially best-in-class genetic medicine approach,” said Keith Gottesdiener, M.D., President and Chief Executive Officer of Prime Medicine. “In addition to closing our upsized initial public offering in October, we recently disclosed new preclinical proof-of-concept data in multiple indications and announced new preliminary safety analyses demonstrating minimal or no off-target editing in two preclinical models. We believe this progress, coupled with advancements in our chemistry, manufacturing and controls (CMC) and delivery capabilities and Prime Editing platform, provides a tremendous foundation as we aim to maximize Prime Editing’s broad therapeutic potential.”

Dr. Gottesdiener continued, “Today, we are delighted to share the achievement of a key milestone, the selection of PM359 as our first development candidate for the treatment of chronic granulomatous disease (CGD). We designed and optimized PM359 to achieve high efficiency and highly precise editing of hematopoietic stem cells (HSC), and have observed long-term *in vivo* engraftment of Prime Edited HSCs in a mouse model of CGD. We look forward to advancing PM359 into investigational new drug (IND)-enabling studies later this year, while continuing to advance our broader portfolio toward additional preclinical proof-of-concept readouts.”

Recent Business Updates

Pipeline

- In February 2023, Prime Medicine nominated PM359 as its first development candidate for the treatment of CGD.
- In January 2023, Prime Medicine announced new preclinical data for several programs, including:
 - Friedrich’s ataxia (FRDA): Preclinical proof-of-concept data demonstrated that Prime Editing-mediated removal of pathological repeats *in vitro* resulted in correction of hypermethylation at the *FXN* gene, restoring gene expression back to wild-type levels. FRDA is caused by GAA-repeat nucleotide sequence expansions in intron 1 of the *FXN* gene encoding the frataxin protein, which plays important roles in mitochondria.
 - Cystic fibrosis (CF): Preclinical proof-of-concept data demonstrated greater than 70 percent precise editing of the G542X mutational hotspot *in vitro*, as well as functional restoration of swelling and cystic fibrosis transmembrane conductance regulator (CFTR) protein function in patient-derived intestinal organoids. CF is caused by loss of function mutations in the *CFTR* gene; F508del and mutations at seven additional hotspots in the *CFTR* gene, including G542X, are found in 98 percent of CF patients.
 - Wilson’s disease (WD) and CGD: Preclinical safety data demonstrated that no guide-dependent Prime Editing activity was detected across hundreds of identified potential off-target sites.

Prime Editing Platform

- In January 2023, Prime Medicine announced new preclinical data utilizing its PASSIGE™ (Prime Assisted Site-Specific Integrase Gene Editing) technology in a one-step, non-viral process, which resulted in an approximately 60 percent precise insertion of a 3.5 kilobase transgene of interest at a single targeted site in primary human T cells, resulting in positive expression of the gene product by these cells.

CMC and Delivery

- In January 2023, Prime Medicine announced additional proof-of-concept preclinical data showing lipid nanoparticle (LNP) delivery of Prime Editors to rodent liver, as well as new preclinical data demonstrating that dual adeno-associated virus (AAV) delivery to the central nervous system achieved high efficiency transduction in murine models, with a high level of precise editing in transduced cells.

Corporate

- In October 2022, Prime Medicine completed an upsized initial public offering of common stock at \$17.00 per share, raising net proceeds of approximately \$180.2 million, after deducting underwriting discounts, commissions and estimated offering expenses.

Anticipated Upcoming Milestones

Prime Medicine expects the following activities and next steps to drive the Prime Editing platform forward:

Pipeline

- Initiate investigational new drug (IND)-enabling studies of PM359 for the treatment of CGD in 2023.
- Expand preclinical proof-of-concept *in vivo*, including sharing data from *in vivo* rodent studies and large animal studies in several programs in the second half of 2023.
- Share *in vitro* preclinical data in additional liver, eye and neuromuscular programs.
- First IND filing expected as early as 2024 and additional IND filings anticipated in 2025.

Platform

- Continue to develop and optimize non-viral and viral delivery systems and share additional proof-of-concept data from *in vivo* rodent and large animal studies in the second half of 2023.
- Further explore and demonstrate superior off-target profiles for Prime Editing programs.
- Expand Prime Editing using proprietary recombinase and/or retrotransposon technologies for new and existing programs.
- Maximize Prime Editing's broad therapeutic potential and create value through strategic business development that extends the reach and impact of Prime Editing to areas beyond Prime Medicine's current areas of focus.

Fourth Quarter and Full Year 2022 Financial Results:

- **Research and Development (R&D) Expenses:** R&D expenses were \$29.1 million for the fourth quarter of 2022 and \$86.7 million for the year ended December 31, 2022, as compared to \$52.9 million for the fourth quarter of 2021 and \$70.6 million for the year ended December 31, 2021.
- **General and Administrative (G&A) Expenses:** G&A expenses were \$9.6 million for the fourth quarter of 2022 and \$29.8 million for the year ended December 31, 2022, as compared to \$7.2 million for the fourth quarter of 2021 and \$13.9 million for the year ended December 31, 2021.
- **Net Loss:** Net loss was \$39.3 million for the fourth quarter of 2022 and \$121.8 million for the year ended December 31, 2022, as compared to \$62.9 million for the fourth quarter of 2021 and \$165.4 million for the year ended December 31, 2021.
- **Cash Position:** As of December 31, 2022, cash, short-term investments and related party short term investments were \$293.9 million, as compared to \$269.6 million as of December 31, 2021. This increase was primarily due to net proceeds of \$180.2 million from Prime Medicine's initial public offering of stock, which was completed in October 2022, partially offset by cash used to fund operating activities for the year ended December 31, 2022.

Financial Guidance

Based on its current operating plans, Prime Medicine expects that its cash, cash equivalents and short-term investments as of December 31, 2022 will be sufficient to fund its anticipated operating expenses and capital expenditure requirements into 2025.

About Prime Medicine

Prime Medicine is a biotechnology company committed to delivering a new class of differentiated, one-time, curative genetic therapies to address the widest spectrum of diseases. The company is deploying Prime Editing technology, a versatile, precise, efficient and broad gene editing technology, which is designed to make only the right edit at the right position within a gene. With the potential to repair approximately 90 percent of known disease-causing genetic mutations across many organs and cell types, medicines based on Prime Editing could offer a one-time curative genetic therapeutic option to a broad set of patients.

Cautionary Note Regarding Forward Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, implied and express statements about Prime Medicine's beliefs and expectations regarding: the initiation, timing, progress and results of its research and development programs, preclinical studies and future clinical trials and the release of data related thereto, including the initiation of IND-enabling studies for PM359; its ability to advance its portfolio toward additional preclinical proof-of-concept readouts; its ability to demonstrate, and the timing of, preclinical proof-of-concept in vivo for multiple programs; its development and optimization of various non-viral and viral delivery systems; its ability to demonstrate superior off-target profiles for Prime Editing programs; its expansion of Prime Editing using proprietary recombinase and/or retrotransposon technologies as well as the use of its PASSIGE technology; its ability advance any product candidates that Prime Medicine may identify and successfully complete any clinical studies, including the manufacture of any such product candidates; its ability to quickly leverage programs within its initial target indications and to progress additional programs, including those beyond the reach of Prime Editing's current areas of focus, to further develop its pipeline and maximize therapeutic potential; the timing of its regulatory filings, including its anticipated initial IND submission as early as 2024 with additional filings anticipated in 2025; the implementation of its strategic plans for its business, programs and technology; and its estimates of expenses, capital requirements, and needs for additional financing as well as its cash runway into 2025. The words "may," "might," "will," "could," "would," "should," "expect," "plan," "anticipate," "intend," "believe," "expect," "estimate," "seek," "predict," "future," "project," "potential," "continue," "target" and similar words or expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

Any forward-looking statements in this press release are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release, including, without limitation, risks associated with: uncertainties related to the authorization, initiation and conduct of preclinical and other development requirements for potential product candidates, including uncertainties related to regulatory approvals; risks related to the development and optimization of new technologies, the results of preclinical studies, or clinical studies not being predictive of future results in connection with future studies; the scope of protection Prime Medicine is able to establish and maintain for intellectual property rights covering its Prime Editing technology; Prime Medicine's ability to identify and enter into future license agreements and collaborations; and general economic, industry and market conditions, including rising interest rates and inflation. These and other risks and uncertainties are described in greater detail in the section entitled "Risk Factors" in Prime Medicine's most recent Quarterly Report on Form 10-Q, as well as any subsequent filings with the Securities and Exchange Commission. In addition, any forward-looking statements represent Prime Medicine's views only as of today and should not be relied upon as representing its views as of any subsequent date. Prime Medicine explicitly disclaims any obligation to update any forward-looking statements. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements.

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Condensed Consolidated Balance Sheet Data (unaudited)

(in thousands)

	December 31, 2021	December 31, 2022
Cash, cash equivalents, and short term investments	\$ 293,921	\$ 269,620
Total assets	360,314	301,856
Total liabilities	44,044	62,926
Series A and B preferred stock	—	395,800
Total stockholders' equity (deficit)	316,270	(156,240)

Condensed Consolidated Statement of Operations (unaudited)

(in thousands, except share and per share data)

	Three Months Ended December 31,		Year Ended December 31,	
	2022	2021	2022	2021
Operating expenses:				
Research and development	\$ 29,061	\$ 52,889	\$ 86,725	\$ 70,550
General and administrative	9,625	7,187	29,819	13,924
Total operating expenses	38,686	60,076	116,544	84,474
Loss from operations	(38,686)	(60,076)	(116,544)	(84,474)
Other income (expense):				
Change in fair value of preferred stock tranche right liability	—	—	—	(74,319)
Change in fair value of anti-dilution obligation	—	—	—	(6,681)
Change in fair value of related party short-term investment	(1,709)	(1,466)	(8,128)	(391)
Other income (expense), net	926	12	1,903	12
Total other expense, net	(783)	(1,454)	(6,225)	(81,379)
Net loss before income taxes	(39,469)	(61,530)	(122,769)	(165,853)
Provision for (benefit from) income taxes	(186)	1,381	(948)	(486)
Net loss	(39,283)	(62,911)	(121,821)	(165,367)
Accretion of preferred stock to redemption value	—	—	—	(1,468)
Cumulative dividend on preferred stock	(1,314)	(6,362)	(20,193)	(17,284)
Net loss attributable to common stockholders	\$ (40,597)	\$ (69,273)	\$ (142,014)	\$ (184,119)
Net loss per share attributable to common stockholders, basic and diluted	\$ (0.56)	\$ (4.21)	\$ (4.19)	\$ (14.19)
Weighted-average common shares outstanding, basic and diluted	74,194,068	16,468,363	33,891,264	12,973,495
Comprehensive Loss:				
Net loss	\$ (39,283)	\$ (62,911)	\$ (121,821)	\$ (165,367)
Change in unrealized losses on investments, net of tax	70	(18)	(357)	(27)
Total other comprehensive loss	70	(18)	(357)	(27)
Comprehensive Loss	\$ (39,213)	\$ (62,929)	\$ (122,178)	\$ (165,394)