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 9, 2016**

Blueprint Medicines Corporation

(Exact name of registrant as specified in its charter)

Delaware	**001-37359**	**26-3632015**
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

38 Sidney Street, Suite 200 **Cambridge, Massachusetts**	**02139**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(617) 374-7580**

(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))

Item 2.02 Results of Operations and Financial Condition.

On August 9, 2016, Blueprint Medicines Corporation (the "Company") announced its financial results for the quarter ended June 30, 2016. The full text of the press release issued in connection with the announcement is furnished as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated by reference herein.

The information in this Current Report on Form 8-K, including 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, 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 under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

The following exhibit relating to Item 2.02 of this Current Report on Form 8-K shall be deemed to be furnished and not filed:

Exhibit No.	Description
99.1	Press release issued by Blueprint Medicines Corporation on August 9, 2016

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.

BLUEPRINT MEDICINES CORPORATION

Date: August 9, 2016

By: /s/ Jeffrey W. Albers
Jeffrey W. Albers
Chief Executive Officer

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press release issued by Blueprint Medicines Corporation on August 9, 2016

Blueprint Medicines Reports Second Quarter 2016 Financial Results

— Advancing Phase 1 clinical trials and expect to share preliminary data by end of 2016 —
—Maintaining strong balance sheet and expect cash to be sufficient into early 2018 —

CAMBRIDGE, Mass., August 9, 2016 – Blueprint Medicines Corporation (NASDAQ: BPMC), a leader in discovering and developing highly selective kinase medicines for patients with genomically defined diseases, today reported financial results and provided a business update for the second quarter ended June 30, 2016.

“During the second quarter of 2016, we focused on execution across our pipeline of discovery and clinical-stage programs,” said Jeff Albers, Chief Executive Officer of Blueprint Medicines. “We look forward to a number of milestones in the second half of 2016, including preliminary data readouts for our three Phase 1 clinical trials, which we believe will demonstrate both the strength of our platform and our ability to effectively develop kinase therapies against difficult-to-drug targets. These data will help inform our clinical plans in the future, with the goal of developing treatments to dramatically improve the lives of people with cancer and other life-threatening diseases.”

Corporate Highlights:

- In April 2016, at the American Association for Cancer Research (AACR) Annual Meeting, Blueprint Medicines presented new preclinical data demonstrating that its RET inhibitors, including its drug candidate BLU-667, showed potent inhibition of activity in RET fusion positive lung adenocarcinoma and papillary thyroid cancer cell lines as well as medullary thyroid cancer cell lines driven by an activating RET point mutation. Blueprint Medicines’ RET inhibitors retained *in vitro* and *in vivo* activity against RET resistant mutants that Blueprint Medicines predicts may arise in patients, which provides a potential opportunity for a meaningful and durable clinical response in RET-driven disease. Blueprint Medicines remains on track to file an IND for BLU-667 by the end of 2016.
- In April 2016, Blueprint Medicines announced the appointment of Dr. Lynn Seely to its Board of Directors.
- In the third quarter of 2016, Blueprint Medicines achieved a pre-clinical milestone of $1.0M under its collaboration with Alexion Pharma Holding (Alexion), which is expected to be paid during the third quarter of 2016.

Second Quarter 2016 Financial Results:

- **Cash Position**: As of June 30, 2016, cash, cash equivalents, and investments were $172.6 million, as compared to $162.7 million as of December 31, 2015. This increase was primarily due to the $45.0 million upfront payment received in March 2016 under Blueprint Medicines’ cancer immunotherapy collaboration with F. Hoffmann-La Roche Ltd and Hoffmann-La Roche Inc. (collectively, Roche), offset by cash used in operating activities.
- **Collaboration Revenue**: Collaboration revenues were $7.1 million for the second quarter of 2016, as compared to $2.7 million for the second quarter of 2015. This increase was due to increased activity

in Blueprint Medicines' collaboration with Alexion and Blueprint Medicines entering into a collaboration with Roche in March 2016.

- **R&D Expenses**: Research and development expenses were $21.3 million for the second quarter of 2016, as compared to $11.2 million for the same period in 2015. This increase was primarily attributable to increased manufacturing and clinical expenses associated with advancing BLU-285 and BLU-554 into clinical trials, increased pre-clinical expenses associated with advancing BLU-667 towards an IND filing, continuing to build Blueprint Medicines' platform and advance its discovery pipeline, and increased personnel-related expenses.
- **G&A Expenses**: General and administrative expenses were $4.7 million for the second quarter of 2016, as compared to $3.8 million for the same period in 2015. This increase was primarily attributable to increased professional fees.
- **Net Loss**: Net loss was $18.9 million for the second quarter of 2016, or a basic and diluted net loss per share available to common stockholders of $0.70, as compared to a net loss of $13.0 million for the same period in 2015, or a basic and diluted net loss per share available to common stockholders of $0.81.

Financial Guidance:

Blueprint Medicines expects that its cash, cash equivalents and investments balance will be at least $120 million at December 31, 2016. Blueprint Medicines expects that its existing cash, cash equivalents and investments will be sufficient to enable it to fund its operating expenses and capital expenditure requirements into early 2018.

Clinical Programs:

Blueprint Medicines' lead drug candidates are BLU-285, a selective inhibitor of both Exon 17 mutant KIT and D842V mutant PDGFRα, and BLU-554, a selective inhibitor of the FGFR4 receptor. Enrollment continues to progress in the dose escalation portion of Blueprint Medicines' Phase 1 clinical trials for BLU-285 in unresectable, treatment-resistant gastrointestinal stromal tumors and advanced systemic mastocytosis and BLU-554 in advanced hepatocellular carcinoma. Blueprint Medicines expects to share preliminary data from the dose escalation portion of each of these Phase 1 clinical trials by the end of 2016. For each Phase 1 clinical trial, Blueprint Medicines anticipates that the preliminary data will include safety, pharmacokinetics and pharmacodynamic measures across a range of dose levels and any initial assessments of clinical activity that may be available.

Conference Call Information

Blueprint Medicines will host a live conference call and audio webcast today at 8:30 a.m. EDT. The conference call may be accessed by dialing 1-855-728-4793 (domestic) or 1-503-343-6666 (international) and referring to conference ID 33938424. An audio webcast of the conference call will also be available in the Investors section of Blueprint Medicines' website at http://ir.blueprintmedicines.com. The archived webcast will be available on Blueprint Medicines' website approximately two hours after the conference call and will be available for 30 days following the call.

About Blueprint Medicines

Blueprint Medicines is developing a new generation of highly selective and potent kinase medicines to improve the lives of patients with genomically defined diseases. The Company's approach is rooted in a deep understanding of the genetic blueprint of cancer and other diseases driven by the abnormal activation of

kinases. Blueprint Medicines is advancing three programs in clinical development for subsets of patients with gastrointestinal stromal tumors, hepatocellular carcinoma and systemic mastocytosis, as well as multiple programs in research and preclinical development. For more information, please visit www.blueprintmedicines.com.

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, statements regarding plans and timelines for the clinical development of BLU-285 and BLU-554; the timing of clinical data or proof of concept for preclinical and clinical programs, including, without limitation, the timing and type of preliminary clinical data for Blueprint Medicines' Phase 1 clinical trials for BLU-285 and BLU-554; the timing of regulatory submissions or filings, including, without limitation, an investigational new drug application for BLU-667; expectations regarding Blueprint Medicines' existing cash, cash equivalents and investments; and Blueprint Medicines' strategy, business plans and focus. The words "may," "will," "could," "would," "should," "expect," "plan," "anticipate," "intend," "believe," "estimate," "predict," "project," "potential," "continue," "target" and similar 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 and uncertainties related to the delay of any current or planned clinical trials or the development of Blueprint Medicines' drug product candidates, including BLU-285 and BLU-554; Blueprint Medicines' advancement of multiple early-stage efforts; Blueprint Medicines' ability to successfully demonstrate the efficacy and safety of its drug product candidates; the preclinical and clinical results for Blueprint Medicines' drug product candidates, which may not support further development of such drug product candidates; and actions of regulatory agencies, which may affect the initiation, timing and progress of clinical trials; Blueprint Medicines' ability to develop and commercialize companion diagnostics for its current and future drug candidates, including a companion diagnostic for BLU-554 with Ventana Medical Systems, Inc.; and the success of Blueprint Medicines' rare genetic disease collaboration with Alexion Pharma Holding and its cancer immunotherapy collaboration with F. Hoffmann-La Roche Ltd and Hoffmann-La Roche Inc. These and other risks and uncertainties are described in greater detail in the section entitled "Risk Factors" in Blueprint Medicines' Quarterly Report on Form 10-Q for the quarter ended March 31, 2016, as filed with the Securities and Exchange Commission (SEC) on May 10, 2016, as amended by the Form 10-Q/A filed with the SEC on July 22, 2016, and other filings that Blueprint Medicines may make with the SEC in the future. Any forward-looking statements contained in this press release represent Blueprint Medicines' views only as of the date hereof and should not be relied upon as representing its views as of any subsequent date. Blueprint Medicines explicitly disclaims any obligation to update any forward-looking statements.

Blueprint Medicines Corporation

Selected Condensed Consolidated Balance Sheet Data

(in thousands)

(unaudited)

	June 30, 2016	December 31, 2015
Cash, cash equivalents and investments	$ 172,553	$ 162,707
Unbilled accounts receivable	3,351	3,414
Working capital (1)	150,366	151,776
Total assets	186,520	178,898
Deferred revenue	53,052	13,640
Term loan payable	5,705	7,338
Lease incentive obligation	3,659	3,948
Total stockholders' equity	112,562	143,979

(1) Blueprint Medicines defines working capital as current assets less current liabilities.

Blueprint Medicines Corporation

Condensed Consolidated Statements of Operations Data

(in thousands, except per share data)

(unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	**2015**	**2016**	**2015**
Collaboration revenue	$ 7,065	$ 2,687	$ 13,921	$ 3,339
Operating expenses:				
Research and development	21,273	11,243	38,908	20,476
General and administrative	4,688	3,840	9,334	6,610
Total operating expenses	25,961	15,083	48,242	27,086
Other income (expense):				
Other income (expense), net	131	(405)	192	(441)
Interest expense	(129)	(179)	(269)	(364)
Total other income (expense)	2	(584)	(77)	(805)
Net loss	$ (18,894)	$ (12,980)	$ (34,398)	$ (24,552)
Convertible preferred stock dividends	—	(883)	—	(3,153)
Net loss applicable to common stockholders	$ (18,894)	$ (13,863)	$ (34,398)	$ (27,705)
Net loss per share applicable to common stockholders — basic and diluted	$ (0.70)	$ (0.81)	$ (1.27)	$ (2.94)
Weighted-average number of common shares used in net loss per share applicable to common stockholders — basic and diluted	27,170	17,093	27,129	9,430

Contact:

Investor Relations:
Kristin Williams
Blueprint Medicines Corporation
617-714-6674
kwilliams@blueprintmedicines.com

Media Relations:
Rachel Hutman
W2O Group
301-801-5540
rhutman@wcgworld.com