FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

OMB APPROVAL OMB Number: 3235-0287 Estimated average burden hours per response: 0.5

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

				or S	Section 30(h) of the	Investn	nent C	company Act	of 1940					
Name and Address of Reporting Person*     Durso-Bumpus Debra				2. Issuer Name and Ticker or Trading Symbol Blueprint Medicines Corp [ BPMC ]							5. Relationship of Reporting Person(s) to Issue (Check all applicable)  Director 10% Owne			
(Last) C/O BLUEPRIN	(First)		ate of Earliest Trans 21/2024	saction	(Mont	h/Day/Year)	<b>V</b>	Officer (give title below)  CHIEF PEO		Other (specify pelow)				
45 SIDNEY STREET					Amendment, Date of	of Origin	nal File	ed (Month/Da	Line)	1 <u>~</u>				
(Street) CAMBRIDGE									Form filed by One Reporting Person Form filed by More than One Reporting Person					
Rule 10b5-1(c) Transaction Indication														
					Check this box to indi satisfy the affirmative						, instruction or written 0.	plan that is intend	ed to	
		Table I - N	on-Deriva	tive	Securities Ac	quire	d, Di	isposed o	f, or Be	eneficially	Owned			
1. Title of Security (Instr. 3)			2. Transaction Date (Month/Day/Year)		2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Disposed Of			5. Amount of Securities Beneficially Owned Following	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership	
						Code	v	Amount	(A) or (D)	Price	Reported Transaction(s) (Instr. 3 and 4)		(Instr. 4)	
Common Stock			06/21/20	24		M <sup>(1)</sup>		13,741	A	\$18	71,056	D		
Common Stock			06/21/2024			M <sup>(1)</sup>		7,041	Α	\$18	78,097	D		
Common Stock			06/21/20	24		M <sup>(1)</sup>		24,200	Α	\$36.05	102,297	D		
Common Stock			06/21/20	24		M <sup>(1)</sup>		15,500	A	\$54.13	117,797	D		
Common Stock			06/21/20	24		<b>S</b> <sup>(1)</sup>		1,567	D	\$105.82(2)	116,230	D		
Common Stock			06/21/20	24		<b>S</b> <sup>(1)</sup>		18,752	D	\$104.98(3)	97,478	D		
Common Stock			06/21/20	24		<b>S</b> <sup>(1)</sup>		40,353	D	\$104.14(4)	57,125	D		
Common Stock			06/21/20	24		S <sup>(1)</sup>		13.062	D	\$103.05(5)	44.063	D		

## Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

**S**<sup>(1)</sup>

300

D

\$102.44(6)

43,763

D

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transa Code ( 8)		of Deri Sec Acq (A) ( Disp of (I	wative urities uired or oosed O) (Instr. and 5)	6. Date Exerc Expiration Da (Month/Day/\)	ate	7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)		8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	v	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Stock Option (Right to Buy)	\$18	06/21/2024		M <sup>(1)</sup>			13,471	(7)	04/27/2025	Common Stock	13,471	\$0	0	D	
Stock Option (Right to Buy)	\$18	06/21/2024		M <sup>(1)</sup>			7,041	(7)	04/27/2025	Common Stock	7,041	\$0	0	D	
Stock Option (Right to Buy)	\$36.05	06/21/2024		M <sup>(1)</sup>			24,200	(8)	02/16/2027	Common Stock	24,200	\$0	0	D	
Stock Option (Right to Buy)	\$54.13	06/21/2024		M <sup>(1)</sup>			15,500	(9)	03/01/2030	Common Stock	15,500	\$0	13,000	D	

## Explanation of Responses:

Common Stock

- 1. Effected pursuant to a trading plan adopted on March 13, 2024 pursuant to Rule 10b5-1 under the Securities Exchange Act of 1934, as amended.
- 2. The price reported is a weighted average price. These shares were sold in multiple transactions ranging from \$105.53 to \$106.51 per share. The Reporting Person undertakes to provide to the Issuer, any security holder of the Issuer or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the range set forth in footnotes (2) through (6) in this form 4.
- 3. The price reported is a weighted average price. These shares were sold in multiple transactions ranging from \$104.52 to \$105.51 per share.

06/21/2024

- 4. The price reported is a weighted average price. These shares were sold in multiple transactions ranging from \$103.53 to \$104.51 per share.
- 5. The price reported is a weighted average price. These shares were sold in multiple transactions ranging from \$102.51 to \$103.51 per share.
- $6. \ The price reported is a weighted average price. These shares were sold in multiple transactions ranging from \$102.44 to \$102.45 per share.$
- 7. This option was granted on April 27, 2015 and is fully vested as of the transaction date.

8. This option was granted on February 16, 2017 and is fully vested as of the transaction date.

9. This option was granted on March 1, 2020 and is fully vested as of the transaction date.

/s/ Melissa Masse

06/25/2024

\*\* Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- \* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).
- \*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

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