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): May 9, 2017

Mirna Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation) 001-37566 (Commission File Number) 26-1824804 (IRS Employer Identification Number)

1250 South Capital of Texas Highway Austin, TX 78746

(Address of principal executive offices, including Zip Code)

Registrant's telephone number, including area code: (512) 901-0950

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:

- o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- o 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 May 9, 2017, Mirna Therapeutics, Inc. ("Mirna") issued a press release announcing its financial results for the three months ended March 31, 2017. The press release is attached hereto as Exhibit 99.1.

The information in this Item 2.02 of this Form 8-K and the Exhibit 99.1 attached hereto 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 or Sections 11 and 12(a)(2) of the Securities Act of 1933, as amended (the "Securities Act"), or incorporated by reference in any filing of Mirna under the Securities Act or the Exchange Act, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit	
No.	Description
99.1	Press release dated May 9, 2017.

SIGNATURES

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

MIRNA THERAPEUTICS, INC.

Date: May 9, 2017	By:	/s/ Alan Fuhrman
		Alan Eulyman
		Alan Fuhrman

Chief Financial Officer

Mirna Therapeutics Reports First Quarter 2017 Financial Results

AUSTIN, Texas-May 9, 2017-Mirna Therapeutics, Inc. (Nasdaq: MIRN), a biopharmaceutical company, today reported financial results for the first quarter of 2017 and provided a corporate update.

Following its late 2016 discontinuation of all research and development activities, the Company engaged a financial advisor and has been pursuing activities to evaluate strategic alternatives, including a possible merger or sale of the Company. Further operating cost and workforce reductions were also implemented to reduce overall cash burn.

"We are committed to serving our shareholders' best interests and are continuing our strategic discussions with third parties in an effort to consummate a transaction," said President and CEO Paul Lammers, M.D., M.Sc.

FIRST QUARTER 2017 FINANCIAL RESULTS

- **Cash Position and Guidance**: Cash, cash equivalents, and marketable securities totaled \$57.5 million as of March 31, 2017, compared to \$60.5 million as of December 31, 2016. The Company has no debt.
 - The Company expects its quarterly cash burn rate to range from \$1.5 million to \$2.0 million. This quarterly guidance includes contractual commitments and obligations, but excludes any one-time charges related to any strategic transaction should such be consummated, and contractual payments for executive severance and change-in-control provisions.
- **Research and development expenses:** Research and development expenses were approximately \$0.2 million for the three months ended March 31, 2017, compared to research and development expenses of \$4.5 million during the comparable period in 2016. The decrease was primarily due to the discontinuation of the Company's research and development activities, including the development of MRX34 and our microRNA pipeline, and a corresponding reduction in force, both of which were initiated in November 2016.
- **General and administrative expenses:** General and administrative expenses were approximately \$2.3 million for the three months ended March 31, 2017, compared to general and administrative expenses of \$2.1 million during the comparable period in 2016. The increase for the three months ended March 31, 2017 was primarily due to approximately \$0.5 million in legal fees for transaction costs related to the Company's evaluation of strategic alternatives. This increase was largely offset by a decline in personnel and operating expenses following the reduction in force initiated in November 2016 to reduce costs and streamline operations while the Company evaluates strategic alternatives.

- **Restructuring charges:** Restructuring charges were approximately \$2.6 million for the three months ended March 31, 2017, and \$0 for the three months ended March 31, 2016. The Company and its landlord agreed to terminate the Company's lease of approximately 23,578 square feet of office and laboratory space for consideration of \$3.8 million. As a result of the contingent settlement, the Company recognized incremental contract termination costs based on the contractual settlement amount of approximately \$2.3 million, which were recorded in restructuring charges during the three months ended March 31, 2017.
- **Net Loss:** Net loss was approximately \$5.0 million for the three months ended March 31, 2017, compared to a net loss of \$6.6 million for the comparable period in 2016. The results included non-cash, stock-based related compensation charges of \$364,000 and \$447,000 for the three months ended March 31, 2017 and March 31, 2016, respectively.

About Mirna Therapeutics, Inc.

Mirna is a biopharmaceutical company that has been focused on the development of microRNA-based oncology therapeutics. Mirna's first product candidate, MRX34, the first microRNA mimic to enter clinical development in oncology, was studied as a single agent in a multicenter Phase 1 clinical trial. In September 2016, Mirna voluntarily halted enrollment and dosing in the clinical study following multiple immune-related serious adverse events (SAEs) observed in patients dosed with MRX34 over the course of the trial. Subsequently, the U.S. Food and Drug Administration (FDA) notified the Company that the Investigational New Drug (IND) Application for MRX34 was placed on full clinical hold. The Company has since closed the IND and is currently evaluating strategic alternatives, including the possibility of a merger or sale of the Company.

Forward-Looking Statements

To the extent that statements contained in this press release are not descriptions of historical facts regarding Mirna, they are forward-looking statements reflecting the current beliefs and expectations of management made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, including statements regarding the evaluation of strategic alternatives and our expectations regarding our quarterly cash burn rate. Such forward-looking statements involve substantial risks and uncertainties that could cause our future results, performance or achievements to differ significantly from those expressed or implied by the forward-looking statements. We undertake no obligation to update or revise any forward-looking statements. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to our business in general, see our Quarterly Report on Form 10-Q filed with the U.S. Securities and Exchange Commission (SEC) on May 9, 2017.

Mirna Therapeutics, Inc. Condensed Balance Sheets (in thousands, except share data)

Assets		March 31,		December 31,	
		(unaudited)		2016	
Current Assets:		(unuuuneu)			
Cash and cash equivalents	\$	17,121	\$	16,432	
Short-term marketable securities		40,408		44,066	
Prepaid expenses and other current assets		620		882	
Total current assets		58,149		61,380	
Property and equipment, net		26		354	
Restricted cash		2,433		2,432	
Total assets	\$	60,608	\$	64,166	
Liabilities and Stockholders' Equity (Deficit)					
Current Liabilities:					
Accounts payable	\$	371	\$	361	
Accrued expenses		4,486		2,400	
Total current liabilities		4,857		2,761	
Lease obligations, long-term		_		1,053	
Total liabilities		4,857		3,814	
Stockholders' Equity (Deficit):					
Common stock, \$0.001 par value; 250,000,000 shares authorized at March 31, 2017 and December 31, 2016; 20,856,693 and 20,841,393 shares issued and outstanding at March 31, 2017 and December 31, 2016, respectively		21		21	
Additional paid in capital		163,518		163,126	
Accumulated deficit		(107,771)		(102,791)	
Other comprehensive loss		(17)		(4)	
Total stockholders' equity		55,751		60,352	
Total liabilities and stockholders' equity	\$	60,608	\$	64,166	

Mirna Therapeutics, Inc. Condensed Statement of Operations and Comprehensive Loss (unaudited) (in thousands)

		Three Months Ended March 31,		
		2017		2016
Operating expenses:				
Research and development	\$	242	\$	4,523
General and administrative		2,264		2,130
Restructuring charges		2,557		_
Total operating expenses		5,063		6,653
Other income:				
Interest income		86		82
Net loss attributable to common stockholders	\$	(4,977)	\$	(6,571)

Investors

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Media

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Source: Mirna Therapeutics, Inc.