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 14, 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 March 14, 2017, Mirna Therapeutics, Inc. ("Mirna") issued a press release announcing its financial results for the fourth quarter and year ended December 31, 2016. 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 March 14, 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: March 14, 2017 By: /s/ Alan Fuhrman

Alan Fuhrman

Chief Financial Officer

Mirna Therapeutics Reports Financial Results for the Fourth Quarter and Full Year Ended December 31, 2016

AUSTIN, Texas --March 14, 2017-- Mirna Therapeutics, Inc. (Nasdaq: MIRN), a biopharmaceutical company, today reported financial results for the fourth quarter and year ended December 31, 2016 and provided a corporate update.

Following its November 2016 decision to discontinue all research and development activities including the development of MRX34, Mirna began implementing operating cost reductions and organizational restructuring to reduce overall cash burn, including a reduction in its workforce. The Company engaged a financial advisor and has been pursuing activities to identify and evaluate strategic alternatives, including a possible merger or sale of the Company.

"Our strategic process is active and ongoing and we are pursuing discussions with third parties on a range of potential transactions," said President and CEO Paul Lammers, M.D., M.Sc. "We are committed to serving our shareholders' best interests through our efforts to identify, evaluate and potentially consummate a transaction that may result from these activities."

2016 FINANCIAL RESULTS

- **Cash Position and Guidance**: Cash, cash equivalents, and marketable securities totaled \$60.5 million as of December 31, 2016, compared to \$89.7 million as of December 31, 2015. The Company has no debt.
 - The Company expects its quarterly cash burn rate to remain within the range of \$2.1 million and \$2.3 million. This quarterly guidance includes contractual commitments and obligations for future minimum lease payments, but excludes any one-time charges related to any strategic transaction should such be consummated and contractual payments for executive severance or change-in-control provisions.
- **Research and development expenses:** Research and development expenses were approximately \$2.3 million and \$13.9 million for the quarter and year ended December 31, 2016 compared to research and development expenses of \$6.4 million and \$18.9 million during the comparable periods in 2015. The decrease was primarily due to the closing of the Company's Phase 1 clinical trial of MRX34 in September 2016 and discontinuing all research and development activities.
- **General and administrative expenses:** General and administrative expenses were approximately \$2.0 million and \$8.1 million for the quarter and year ended December 31, 2016, compared to general and administrative expenses of \$2.5 million and \$6.1 million during the comparable periods in 2015. The increase for the year ended December 31, 2016 was primarily attributable to increased employee compensation expense due to a higher headcount and higher outside professional and consulting costs, the majority of which were incurred to comply with public company operating and reporting requirements in the Company's first full year operating as a public company.
- **Restructuring charges:** Restructuring charges were approximately \$4.4 million for the quarter and year ended December 31, 2016 and \$0 for the year ended December 31, 2

015. In September 2016, Mirna announced its decision to close the ongoing Phase 1 study of MRX34 and voluntarily halted the enrollment and dosing of patients in the study prior to receiving notice from the U.S. Food and Drug Administration ("FDA") that its Investigational New Drug Application MRX34 had been placed on full clinical hold. Following the Company's announcement and notification from the FDA, Mirna's Board of Directors approved a reduction of the total number of full-time employees from 36 to 12. The restructuring charges recognized during the year ended December 31, 2016 included approximately \$1.5 million for employee severance and benefits, an accounting charge under U.S. Generally Accepted Accounting Principles ("U.S. GAAP") of \$1.5 million for lease facility termination costs, and \$1.4 million for non-cash impairment charges of property and equipment. The majority of these employee severance and related benefits are expected to be settled in the first quarter of 2017. The Company expects to incur additional restructuring charges under U.S. GAAP of approximately \$0.3 million through the six months ended June 30, 2017.

• **Net Loss:** Net loss was approximately \$8.7 million and \$26.3 million for the quarter and year ended December 31, 2016, compared to a net loss of \$8.8 million and \$25.0 million for the comparable periods in 2015. The results included non-cash, stock-based related compensation charges of \$1.6 million and \$1.0 million for the years ended December 31, 2016 and December 31, 2015, 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 is currently evaluating opportunities to enhance stockholder value.

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 with the goal of enhancing stockholder value, our expectations regarding projected restructuring charges, our expectations regarding the timing of settlement of employee severance and related benefits 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 Annual Report on Form (SEC) on March 14, 2017.	n 10-K filed with the U.S. Securities and Exchange Commission

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

		December 31,	December 31,		
Assets		2016		2015	
Current Assets:					
Cash and cash equivalents	\$	16,432	\$	89,713	
Short-term marketable securities		44,066		_	
Prepaid expenses and other current assets		882		829	
Total current assets		61,380		90,542	
Property and equipment, net		354		375	
Restricted cash		2,432		_	
Total assets	\$	64,166	\$	90,917	
Liabilities and Stockholders' Equity (Deficit)					
Current Liabilities:					
Accounts payable	\$	361	\$	3,687	
Accrued expenses		2,400		2,214	
Total current liabilities		2,761		5,901	
Lease obligations, long-term		1,053		_	
Total liabilities		3,814		5,901	
Stockholders' Equity (Deficit):					
Common stock, \$0.001 par value; 250,000,000 shares authorized at December 31, 2016 and December 31, 2015; 20,841,393 and 20,830,555 shares issued and outstanding at December 31, 2016, and 2016 and 2016 are shared as a second control of the contro		24		24	
31, 2016 and December 31, 2015, respectively		21		21	
Additional paid in capital		163,126		161,518	
Accumulated deficit		(102,791)		(76,523)	
Accumulated other comprehensive loss		(4)		-	
Total stockholders' equity	Φ.	60,352	Φ.	85,016	
Total liabilities and stockholders' equity	\$	64,166	\$	90,917	

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

		For the Quarter Ended December 31,			For the Year Ended December 31,				
	2016 2015		2015	2016		2015			
	(unaudited)		(unaudited)						
Operating expenses:									
Research and development	\$	2,341	\$	6,363	\$	13,930	\$	18,947	
General and administrative		1,999		2,462		8,118		6,080	
Restructuring charges		4,442		_		4,442		_	
Loss on disposal of assets		_		_		128		_	
Total operating expenses		8,782		8,825		26,618		25,027	
Other income:									
Interest income		88		36		350		44	
Net loss		(8,694)	\$	(8,789)	\$	(26,268)	\$	(24,983)	
Less: Accretion and dividends on convertible preferred stock		_		(101)		_		(4,320)	
Net loss attributable to common stockholders	\$	(8,694)	\$	(8,890)	\$	(26,268)	\$	(29,303)	

Investors

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Media

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Source: Mirna Therapeutics, Inc.