

**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): **December 31, 2015**

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)

2150 Woodward Street, Suite 100
Austin, TX 78744
(Address of principal executive offices, including Zip Code)

Registrant's telephone number, including area code: **(512) 901-0900**

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 1.01 Entry into a Material Definitive Agreement

On December 31, 2015, Mirna Therapeutics, Inc. ("Mirna" or the "Company") entered into a Patent License Agreement (the "License Agreement") with Rosetta Genomics Ltd. ("Rosetta"), licensing to the Company certain patents owned or controlled by Rosetta as specified therein (the "Licensed Patents"). Under the License Agreement, Rosetta has granted the Company a non-assignable, non-transferable, worldwide license to the Licensed Patents in connection with the development and commercialization of products that relate to the tumor suppressor microRNA mir-34 ("Products"). Such license is exclusive with respect to Products that relate to MRX34, the Company's lead product candidate.

Under the License Agreement, the Company is obligated to pay Rosetta an up-front, non-refundable payment of \$1.6 million. The Company shall also be obligated to pay low single-digit royalties on net sales of Products as well as royalties on sublicense revenues. Certain development and regulatory milestone payments may also be payable in connection with certain Products that relate to the TP53 gene.

The License Agreement ends on the date on which no patent applications comprised within the Licensed Patents are pending and all issued Licensed Patents have expired. The License Agreement may be terminated by the Company without cause upon 120 days' written notice to Rosetta, subject to certain conditions, including payment by the Company of an early termination fee ranging from \$2.0 million to \$3.5 million. The License Agreement may also be terminated by Rosetta, with written notice, of the Company's uncured material breach, insolvency, bankruptcy or general assignment for the benefit of the creditors.

The License Agreement also includes customary provisions regarding, among other things, representations and warranties, recordkeeping, intellectual property, confidentiality, limitation of liability, indemnification, and dispute resolution.

The foregoing description of the License Agreement is not complete and is qualified in its entirety by reference to the full text of the License Agreement, which Mirna intends to file as an exhibit to its Annual Report on Form 10-K for the fiscal year ended December 31, 2015.

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: January 7, 2016

By: /s/ Alan Fuhrman
Alan Fuhrman
Chief Financial Officer