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**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 4, 2016

**RESPIRERX PHARMACEUTICALS INC.**

(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction  
of incorporation)

1-16467  
(Commission  
File Number)

33-0303583  
(I.R.S. Employer  
Identification No.)

126 Valley Road, Suite C  
Glen Rock, New Jersey  
(Address of principal executive offices)

07452  
(Zip Code)

Registrant's telephone number, including area code: (201) 444-4947

(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))
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## **Item 1.01 Entry into a Material Definitive Agreement.**

### *Unit Exchange Agreements*

On May 4, 2016 and May 9, 2016, RespireRx Pharmaceuticals Inc. (the “Company”) entered into separately negotiated Unit Exchange Agreements (the “Unit Exchange Agreements”) with certain Unit Offering Purchasers (as defined below), whereby each such Unit Offering Purchaser exchanged its Warrants (each such exchanged warrant, an “Exchanged Warrant”) to purchase shares of the Company’s Common Stock, par value \$0.001 (“Common Stock”), that they had obtained in the Company’s offering (the “Unit Offering”) on August 28, 2015, September 28, 2015 or November 2, 2015 and cash in the amount of \$229,087 in the aggregate, in return for an aggregate of 15,272,469 shares of the Company’s Common Stock and new warrants to purchase an aggregate of up to 15,272,469 shares of Common Stock (each a “New Warrant”). In the aggregate, Exchanged Warrants to purchase 30,544,938 shares of Common Stock were exchanged and cancelled as a result of these transactions. The Unit Offering, was entered into with several accredited investors (each a “Unit Offering Purchaser”) on the dates noted above, and involved the sale of units, with each unit consisting of (i) one share of the Company’s Common Stock, and (ii) one Warrant to purchase two additional shares of Common Stock (each a “Warrant” and collectively, the “Warrants”). Those Warrants were exercisable until 5:00 p.m. on September 30, 2020 and would have been exercisable at the unit price of \$0.02103 for each share of Common Stock to be acquired upon exercise. A copy of the Purchase Agreement, including the form of Warrant, used in the Unit Offering was filed by the Company as Exhibit 10.1 to its Current Report on Form 8-K filed August 31, 2015. One of the participants in the Unit Exchange Agreements is a non-officer/director affiliate of the Company by virtue of his and his affiliates’ equity holdings in the Company. That participant and his affiliates exchanged Exchanged Warrants to purchase an aggregate of 28,642,892 shares of the Company’s Common Stock and cash in the amount of \$214,822 in the aggregate, in return for 14,321,446 shares of the Company’s Common Stock and New Warrants to purchase an aggregate of up to 14,321,446 shares of the Company’s Common Stock.

The New Warrants provide for the purchase of up to half as many shares of Common Stock as the Exchanged Warrants had provided in the aggregate, have the same expiration date as the Exchanged Warrants of September 30, 2020, and may be exercised at a price of \$0.015 for each share of Common Stock. The New Warrants also permit cashless exercise. Like the Exchanged Warrants, in the case of an acquisition in which the Company is not the surviving entity, the holders of the New Warrants would receive from any surviving entity or successor to the Company, in exchange for the New Warrants, replacement warrants from the surviving entity or successor to the Company, substantially in the form of the existing New Warrants and with an exercise price adjusted to reflect the nearest equivalent exercise price of common stock (or other applicable equity interest) of the surviving entity that would reflect the economic value of the New Warrants, but in the surviving entity.

The Company previously entered into a similar Unit Exchange Agreement and issued shares of common stock and a New Warrant on April 7, 2016. The Company filed Current Report on Form 8-K, and an amended Current Report on Form 8-K/A, on April 11, 2016 and April 12 2016, respectively, in connection with that prior issuance. After the closing of that exchange transaction and before the transactions discussed above, the Company also entered into a Unit Exchange Agreement and issued shares of Common Stock and a New Warrant on April 15, 2016 in which a Unit Offering Purchaser exchanged an Exchanged Warrant to purchase up to 2,000,000 shares of the Company’s Common Stock, and cash in the amount of \$15,000 in return for 1,000,000 shares of the Company’s Common Stock and a New Warrant to purchase an additional 1,000,000 shares of the Company’s Common Stock. Cumulatively to date, the Company has entered into Unit Exchange Agreements whereby Unit Offering Purchasers exchanged Exchanged Warrants to purchase up to 56,320,496 shares in the aggregate of the Company’s Common Stock, and cash in the amount of \$422,404 in the aggregate in return for an aggregate of 28,160,248 shares of the Company’s Common Stock and New Warrants to purchase an additional 28,160,248 shares in the aggregate of the Company’s Common Stock. As a result of these transactions, Warrants to purchase up to 57,299,108 shares of the Company’s Common Stock issued in the Unit Offering remain outstanding.

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This description of the Unit Exchange Agreement and the New Warrants does not purport to be complete and is qualified in its entirety by reference to the form of Unit Exchange Agreement (including the Form of New Warrant attached as Exhibit A thereto), a copy of which is attached as Exhibit 10.1 to the Company's Current Report on Form 8-K filed April 11, 2016, and is incorporated herein by reference. The Company may subsequently enter into similar exchanges with other holders of Warrants issued in the Unit Offering, though no assurance can be provided that this will occur.

#### *Note Exchange Agreements*

On May 4, 2016 through May 9, 2016, the Company entered into separately negotiated Note and Warrant Exchange Agreements (each a "Note Exchange Agreement") with certain Note Offering Purchasers (as defined below) whereby each such Note Offering Purchaser exchanged its 10% Convertible Notes ("Notes"), Warrants issued in connection therewith ("Note Offering Warrants") and extension warrants issued in connection thereto ("Extension Warrants" and, together with the Notes and the Note Offering Warrants, the "Securities"), that such Note Offering Purchaser had initially obtained in or in connection with the Company's offering (the "Note Offering") on December 9, 2014, December 31, 2014 or February 2, 2015 and cash in the amount of \$138,672 in the aggregate, in return for an aggregate of 19,635,590 shares of the Company's Common Stock. In the aggregate, \$204,952 principal amount and accrued interest of Notes, Note Offering Warrants to purchase 5,171,428 shares of Common Stock and Extension Warrants to purchase 2,752,623 shares of Common Stock were exchanged and cancelled as a result of these transactions. One of the participants in a Note Exchange Agreement is a non-officer/director affiliate of the Company by virtue of his and his affiliates' equity holdings in the Company. That participant exchanged Securities (consisting of, in the aggregate, \$28,498 principal amount and accrued interest of Notes, Note Offering Warrants to purchase 714,286 shares of Common Stock and Extension Warrants to purchase 382,837 shares of Common Stock, all of which were cancelled) and cash in the amount of \$19,200, in return for 2,725,579 shares of the Company's Common Stock.

The Company previously entered into similar Note Exchange Agreements and issued shares of Common Stock on April 8, 2016. The Company filed Current Report on Form 8-K, and an amended Current Report on Form 8-K/A, on April 11, 2016 and April 12, 2016, respectively, in connection with that prior issuance. After that issuance and before the transactions discussed in the paragraph above, the Company also entered into Note Exchange Agreements and issued shares of Common Stock on April 15, 2016 and May 2, 2016, with respect to the exchange of Securities (consisting of, in the aggregate, \$90,695 principal amount and accrued interest of Notes, Note Offering Warrants to purchase 2,285,714 shares of Common Stock and Extension Warrants to purchase 1,221,151 shares of Common Stock, all of which were cancelled) and cash in the amount of \$61,370, in return for 8,689,419 shares of the Company's Common Stock. Cumulatively to date, the Company has entered into Note Exchange Agreements with respect to the exchange of Securities (consisting of, in the aggregate, \$344,493 principal amount and accrued interest of Notes, Note Offering Warrants to purchase 8,671,428 shares of Common Stock and Extension Warrants to purchase 4,634,042 shares of Common Stock, all of which were cancelled) and cash in the amount of \$232,846 in the aggregate, in return for the issuance of an aggregate of 32,990,233 shares of the Company's Common Stock. As a result of these transactions, \$276,000 aggregate principal amount of Notes, Note Offering Warrants to purchase up to 7,885,714 shares of the Company's Common Stock and Exchange Warrants to purchase up to 4,269,642 shares of the Company's Common Stock, all issued in, or in connection with, the Note Offering, remain outstanding.

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The Note Offering, was entered into with several accredited investors (each a “Note Offering Purchaser”) during the period from November 2014 through February 2015, and involved the sale of Notes and Note Offering Warrants. The Notes initially were scheduled to mature, and Note Offering Warrants were initially exercisable through, September 15, 2015; however, on August 13, 2015, the Company elected, pursuant to the terms of the Notes, to extend the maturity date of the Notes to September 15, 2016, and to issue the Extension Warrants on and as of September 15, 2015. Concurrently with that election, the Company extended the term of the Note Offering Warrants to September 15, 2016. A copy of the Purchase Agreement, including the form of Note and form of Warrant, used in the Note Offering was filed by the Company as Exhibit 10.1 to its Current Report on Form 8-K filed November 12, 2014.

This description of the Note Exchange Agreements does not purport to be complete and is qualified in its entirety by reference to the form of Note Exchange Agreement, a copy of which is attached as Exhibit 10.2 to the Company’s Current Report on Form 8-K filed April 11, 2016, and is incorporated herein by reference. The Company may subsequently enter into similar exchanges with other holders of Securities issued in and in connection with the Note Offering, though no assurance can be provided that this will occur.

#### *Summary*

Funds raised from the Unit Exchange Agreements and the Note Exchange Agreements to date are \$655,250. In addition, as a result of these transactions, the Company has (i) expunged from the Balance Sheet convertible debt inclusive of accrued interest in the total amount of \$344,493 (with respect to a face amount of Notes in the amount of \$303,500), and (ii) reduced the warrants outstanding by a net of 41,465,718 shares.

The shares of Common Stock and the New Warrants issued in exchange for Exchanged Warrants and cash, and the shares of Common Stock issued in exchange for the Securities and cash were offered and exchanged without registration under the Securities Act of 1933, as amended (the “Securities Act”) in reliance on the exemptions provided by Section 4(a)(2) of the Securities Act. None of the shares of Common Stock issued in the exchanges described above, the New Warrant, or the Common Stock issuable upon exercise of the New Warrant have been registered under the Securities Act or any other applicable securities laws, and unless so registered, may not be offered or sold in the United States except pursuant to an applicable exemption from the registration requirements of the Securities Act.

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### **Item 3.02 Unregistered Sales of Equity Securities.**

The information provided in response to Item 1.01 of this report is incorporated by reference into this Item 3.02. The purchasers of shares of Common Stock and New Warrants sold in the exchanges described above made representations to the Company that they met the accredited investor definition of Rule 501 of the Securities Act, and the Company relied on such representations. The offer and sale of the shares of Common Stock and New Warrants in the exchanges were made in reliance on the exemption from registration afforded by Section 4(a)(2) of the Securities Act. The offering of the shares of Common Stock and New Warrants in the exchanges were made to existing security holders of the Company and were not conducted in connection with a public offering, and no public solicitation or advertisement was made or relied upon by any investor in connection with the offering. This Current Report on Form 8-K shall not constitute an offer to sell or the solicitation of an offer to buy, nor shall such securities be offered or sold in the United States absent registration or an applicable exemption from the registration requirements.

### **Item 9.01 Financial Statements and Exhibits**

(d) Exhibits.

A list of exhibits required to be filed as part of this report is set forth in the Exhibit Index, which is presented elsewhere in this document, and is incorporated herein by reference.

#### *Cautionary Statement Regarding Forward-Looking Statements*

This report contains certain “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 and we intend that such forward-looking statements be subject to the safe harbor created thereby. In some cases, forward-looking statements may be identified by words including “anticipates,” “believes,” “intends,” “estimates,” “expects,” “plans,” and similar expressions include, but are not limited to, statements regarding (i) future research plans, expenditures and results, (ii) potential collaborative arrangements, (iii) the potential utility of our proposed products, and (iv) the need for, and availability of, additional financing.

The forward-looking statements included herein are based on current expectations that involve a number of risks and uncertainties. These forward-looking statements are based on assumptions regarding our business and technology, which involve judgments with respect to, among other things, future scientific, economic and competitive conditions, and future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond our control. Although we believe that the assumptions underlying the forward-looking statements are reasonable, actual results may differ materially from those set forth in the forward-looking statements. In light of the significant uncertainties inherent in the forward-looking information included herein, the inclusion of such information should not be regarded as a representation by us or any other person that our objectives or plans will be achieved.

Factors that could cause or contribute to such differences include, but are not limited to, regulatory policies or changes thereto, available cash, research and development results, competition from other similar businesses, and market and general economic factors. This discussion should be read in conjunction with the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2015, including the section entitled “Item 1A. Risk Factors.” The Company does not intend to update or revise any forward-looking statements to reflect new information, future events or otherwise.

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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.

Date: May 10, 2016

RESPIRERX PHARMACEUTICALS INC.  
(Registrant)

By: /s/ James S. Manuso

James S. Manuso  
President and Chief Executive Officer

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## EXHIBIT INDEX

<b>Exhibit Number</b>	<b>Exhibit Description</b>
10.1	Form of Note Exchange Agreement, incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed April 11, 2016.
10.2	Form of Unit Exchange Agreement (including the Form of Warrant), incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed April 11, 2016.

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