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, 2014

Xenetic Biosciences, Inc.

(Exact name of registrant as specified in its charter)

Commission File Number: 333-178082

Nevada (State or other jurisdiction of incorporation or organization) 45-2952962 (IRS Employer Identification No.)

99 Hayden Avenue, Suite 230 Lexington, Massachusetts 02421 (Address of principal executive offices and zip code) 781-778-7720 (Registrant's telephone number, including area code)

Not Applicable (Former name or former address, if changed since last report)

under

Item 1.01 Entry into a Material Definitive Agreement

On December 31, 2014, Xenetic Biosciences, Inc. (the "Company") entered into an Intellectual Property Assignment (the "IP Assignment") with Dmitry Genkin, FDS Pharma and Lipoxen Technologies Limited, providing for the assignment of certain intellectual property rights by Dmitry Genkin and FDS Pharma to Lipoxen Technologies Limited, a wholly-owned subsidiary of the Company, and in consideration thereof, the Company's issuance of 3,244,784 shares of its common stock, par value \$0.01 per share ("Common Stock"), to FDS Pharma. Mr. Genkin is affiliated with FDS Pharma and our collaborators, Synbio and Pharmsynthez. Please refer to Part I - Item 1 of the Company's Annual Report on Form 10-K filed on April 15, 2014 (the "Form 10-K"), under the caption "Significant Co-Development Collaborations and Strategic Arrangements" and elsewhere in the Form 10-K for a further discussion of the Company's affiliations and collaborations.

On December 31, 2014, the Company issued (i) a warrant (the "Synbio Warrant") to purchase 6,745,000 shares of Common Stock to Synbio LLC, a principal shareholder and collaborator of the Company ("Synbio"), (ii) a warrant to purchase 1,600,000 shares of Common Stock to Firdaus Jal Dastoor, a director of the Company and (iii) a warrant (the "Serum Warrant") to purchase 3,200,000 shares of Common Stock to Serum Institute of India Limited, a principal shareholder and collaborator of the Company ("Serum") (collectively, the "Warrants"). The initial exercise price of these Warrants is the higher of \$0.77 per share or the Fair Market Value (as defined in the Warrants). These Warrants have a five-year term. The Synbio Warrant and Serum Warrant are subject to vesting. This vesting is contingent on the achievement, on the part of Synbio and Serum, of certain clinical and regulatory milestones (in the Russian Federation and the Commonwealth of Independent States with respect to the Synbio Warrant and in India or certain other territories outside the United States with respect to the Serum Warrant) within prescribed timelines in connection with certain drug candidates that are included within the Company's collaborative arrangements with those entities. In addition, the Synbio Warrant replaced the warrant dated August 4, 2011 issued by Lipoxen Plc to Synbio LLC. The warrant to Firdaus Jal Dastoor was issued in consideration of Dastoor's long-term valuable support to the Company. Please refer to the Company's Form 10-K, under the caption "Significant Co-Development Collaborations and Strategic Arrangements" and elsewhere in the Form 10-K for a further discussion of the Company's collaborative arrangements with those entities.

On December 31, 2014, subject to compliance with the applicable securities laws, the board of directors of the Company has approved the issuance of warrants to purchase an aggregate of 480,000 shares of Common Stock to certain non-director designees of Synbio, Serum and Pharmsynthez. The warrants to be issued to Synbio designees and Pharmsynthez designees are expected to be in substantially the same form as the Synbio warrant. The warrants to be issued to Serum designees are expected to be in substantially the same form as the Serum warrant. Accordingly, these warrants are expected to carry similar contingent vesting requirements.

The foregoing descriptions of the agreements do not purport to be complete and are qualified in their entirety by reference to the full text of the IP Assignment and the Warrants, which the Company intends to file as exhibits to its Annual Report on Form 10-K for the year ended December 31, 2014.

Item 3.02. Unregistered Sales of Equity Securities

The information included in Item 1.01 of this Current Report on Form 8-K with respect to the issuances of unregistered equity securities is incorporated by reference into this Item 3.02. These securities are offered and sold by the Company pursuant to an exemption from the registration either (a) under Section 4(a)(2) of the Securities Act of 1933, as amended (the "Securities Act"), in that the transactions are between an issuer and sophisticated investors and do not involve any public offering within the meaning of Section 4(a)(2) or (b) under Regulation S promulgated under the Securities Act in that offers, sales and issuances are not made to persons in the United States and no directed selling efforts are made in the United States.

SIGNATURES

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: January 7, 2015 XENETIC BIOSCIENCES, INC.

/S/ MICHAEL SCOTT MAGUIRE Michael Scott Maguire Chief Executive Officer and President