



**5,559,866 Series A Units consisting of Common Stock and Warrants and
1,340,538 Series B Units consisting of Pre-Funded Warrants and Warrants
(4,790,740 shares of Common Stock Underlying the Warrants)**

Issuer:	OncoGenex Pharmaceuticals, Inc.
Series A units offered by us:	5,559,866 Series A units, with each Series A unit consisting of one share of common stock and a Series A warrant to purchase up to one-half of one share of common stock at an initial exercise price of \$4.00 per share. Each Series A warrant will be exercisable at any time on or after the date of issuance until the fifth anniversary of the issuance of the Series A warrants.
Series B units offered by us:	1,340,538 Series B units to those purchasers whose purchase of Series A units in this offering would result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 9.99% of our outstanding common stock following the completion of this offering. Each Series B unit will consist of a Pre-Funded Series B warrant to purchase up to one share of common stock at an initial exercise price of \$0.01 per share and a Series B warrant to purchase up to one-half of one share of common stock at an initial exercise price of \$4.00 per share. Each Pre-Funded Series B warrant and Series B warrant will be exercisable at any time on or after the date of issuance until the fifth anniversary of the issuance of the Pre-Funded Series B warrants and Series B warrants, respectively.
Series A unit offering price:	\$3.48 per unit.
Series B unit offering price:	\$3.47 per unit.
Underwriting discounts and commissions:	6.0%
Net proceeds:	We expect the net proceeds from this offering to be approximately \$22.4 million, after deducting the estimated underwriting discounts and commissions and estimated offering expenses. We will not receive any proceeds from the sale of common stock issuable upon exercise of the warrants that we are offering unless and until such warrants are exercised. We intend to use the net proceeds we receive from this offering to advance our proprietary product apatorsen as well as for general corporate purposes. We may also potentially use a portion of the net proceeds to advance our pre-clinical product candidates or to in-license or acquire additional clinical or pre-clinical assets.
Recent developments:	<i>“At the Market” Equity Offering Program</i> From April 1, 2014 through the date of this free writing prospectus, we have offered and sold 809,214 shares of our common stock pursuant to our At-the-Market Issuance Sales Agreement with MLV & Co. LLC. These sales resulted in net proceeds to us of approximately \$2.9 million. Prior to these sales, we had not made any sales under this “at the market” equity offering program, and, as the date of this free writing prospectus, shares of our common stock having an aggregate value of approximately \$22.0 million remained available for sale under this offering program.

Based on our current expectations and operating plans, and before giving effect to the receipt of net proceeds from this offering, we believe that our cash, cash equivalents, short-term investments and receivables from our collaboration arrangement with Teva Pharmaceutical Industries Ltd. will be sufficient to fund our current planned operations into the third quarter of 2015.

Borealis 1 Phase 2 Trial

Our Borealis 1 Phase 2 trial in first-line metastatic bladder cancer was fully enrolled in July 2013. As a result of death events occurring more slowly than previously expected, the anticipated timing of the pre-specified number of events is currently projected to occur in the fourth quarter of 2014. These survival results are expected to be announced in first quarter of 2015. No conclusion regarding the possible outcome of the trial can or should be drawn from the fact that death events have occurred more slowly than expected.

Common stock to be outstanding immediately after this offering:

20,313,061 shares, which is based on 14,753,195 shares of common stock outstanding as of March 31, 2014 and excludes:

- 809,214 shares of our common stock sold after March 31, 2014 pursuant to our “at the market” equity offering program;
- 1,257,088 shares of common stock issuable upon the exercise of options outstanding as of March 31, 2014, at a weighted average exercise price of \$11.47 per share;
- 25,000 shares of common stock issuable upon the exercise of options granted after March 31, 2014, with an exercise price of \$3.62 per share;
- 557,149 shares of common stock subject to restricted stock units outstanding as of March 31, 2014;
- 472,000 shares of common stock subject to restricted stock units granted after March 31, 2014;
- 1,587,301 shares of common stock issuable upon the exercise of warrants outstanding as of March 31, 2014, with an exercise price of \$20.00 per share;
- 521,311 shares of common stock reserved for future issuance under our 2010 Performance Incentive Plan as of March 31, 2014;
- 750,000 shares of common stock reserved for future issuance under our 2010 Performance Incentive Plan after March 31, 2014;
- 2,779,933 shares of common stock issuable upon exercise of the Series A warrants;
- 1,340,538 shares of common stock issuable upon exercise of the Pre-Funded Series B warrants; and
- 670,269 shares of common stock issuable upon exercise of the Series B warrants.

Dilution:

Our net tangible book value as of March 31, 2014 was approximately \$29.6 million, or approximately \$2.01 per share of common stock based on 14,753,195 shares outstanding. Net tangible book value per share is determined by dividing our net tangible book value, which consists of tangible assets less total liabilities, by the number of shares of common stock outstanding on that date. Our net tangible book value as of March 31, 2014, assuming the exercise of all of the Pre-Funded Series B warrants being offered and after giving effect to our receipt of the estimated net proceeds from the sale of 5,559,866 Series A units at an offering price of \$3.48 per unit and 1,340,538 Series B units at an offering price of \$3.47 per unit, after deducting the estimated underwriting discounts and commissions and estimated offering expenses, would have been approximately \$52.0 million, or \$2.40 per share. This represents an immediate increase in net tangible book value of \$0.39 per share of common stock to our existing stockholders and an immediate dilution in net tangible book value of \$1.08 per share of common stock to purchasers in this offering.

Markets for common stock and warrants:

Our common stock is listed on The NASDAQ Capital Market under the symbol "OGXI." However, there is no established public trading market for the warrants, and we do not expect a market to develop. In addition, we do not intend to apply to list the warrants on any national securities exchange. The Series A warrants are immediately separable from the shares of our common stock being offered as part of the Series A units. The Series B warrants are immediately separable from the Pre-Funded Series B warrants being offered as part of the Series B units.

No sale of similar securities:

The underwriter will require all of our directors, executive officers and a consultant to agree not to offer, sell, agree to sell, directly or indirectly, or otherwise dispose of any shares of common stock or any securities convertible into or exchangeable for shares of common stock, subject to certain exceptions, without the prior written consent of Stifel, Nicolaus & Company, Incorporated for a period of 90 days after the date of this prospectus supplement. Notwithstanding the foregoing, if (a) during the last 17 days of this 90-day period, we release or publish financial results or results from operations or announce material news or a material event or (b) prior to the expiration of this 90-day period, we announce that we will release or publish financial results or results from operations during the 15-day period following the last day of the 90-day period, then in each case the above restrictions will be automatically extended until the expiration of the 18-day period beginning on the date of release of the earnings results or the announcement of the material news or material event, as applicable, subject to certain exceptions, unless Stifel, Nicolaus & Company, Incorporated waives, in writing, such extension.

Subject to certain exceptions, we have agreed that for a period of 90 days after the date of this prospectus supplement, subject to extension as described above, we will not, without the prior written consent of Stifel, Nicolaus & Company, Incorporated, offer, sell, contract to sell or otherwise dispose of any shares of common stock, including any sales under our "at the market" equity offering program, or any securities that are substantially similar to the common stock, including any securities that are convertible into or exchangeable for, or that represent the right to receive, shares of common stock or any such substantially similar securities, except for:

- the securities offered in this offering;
- the shares of common stock issuable upon conversion or exercise of convertible or exercisable securities outstanding on the date of this prospectus supplement; and
- the shares of our common stock that are issued under our existing equity incentive plans.

Trade Date:

June 27, 2014.

Settlement Date:

July 2, 2014.

Sole Book-Running Manager:

Stifel, Nicolaus & Company, Incorporated.

The issuer has filed a registration statement, including a prospectus, with the SEC for the offering to which this communication relates. You may access the registration statement and prospectus by clicking on the following link: <http://www.sec.gov/Archives/edgar/data/949858/000119312512460592/d430800ds3.htm>. Before you invest, you should read the prospectus in that registration statement and other documents the issuer has filed with the Securities and Exchange Commission, or SEC, for more complete information about the issuer and this offering. You may get these documents for free by visiting EDGAR on the SEC website at www.sec.gov. Alternatively, the Sole Book-Running Manager in the offering will arrange to send you the prospectus if you request it by contacting Stifel, Attention: Syndicate, One Montgomery Street, Suite 3700, San Francisco, CA 94104, by telephone at 415-364-2720 or by email at syndicateops@stifel.com.