UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

OncoGenex Pharmaceuticals, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

95-4343413 (I.R.S. Employer Identification No.)

1522 217th Place SE, Suite 100, Bothell, Washington 98021 (Address of Principal Executive Offices) (Zip Code)

> OncoGenex Pharmaceuticals, Inc. 2010 Performance Incentive Plan (Full title of the plan)

Scott Cormack Chief Executive Officer OncoGenex Pharmaceuticals, Inc. 1522 217th Place SE, Suite 100 Bothell, Washington 98021 (Name and address of agent for service)

(425) 686-1500 (Telephone number, including area code, of agent for service)

Copies to:

Alan C. Smith James D. Evans Fenwick & West LLP 1191 2nd Avenue, 10th Floor Seattle, Washington, 98101 (206) 389-4510

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

CALCULATION OF REGISTRATION FEE

		Proposed	Proposed	
	Amount	maximum	maximum	
Title of securities	to be	offering price	aggregate	Amount of
to be registered	registered(1)	per share	offering price	registration fee
Common stock, \$0.001 par value per share	750,000(2)	\$3.05(3)	\$2,287,500(3)	\$295(3)

Pursuant to Rule 416(a) under the Securities Act of 1933, as amended, this Registration Statement shall also cover any additional shares of the Registrant's common stock that become issuable in respect of the securities identified in the above table by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the Registrant's receipt of consideration that results in an increase in the number of the outstanding shares of the Registrant's common stock.
 Represents an additional 750,000 shares of common stock reserved for issuance under the Registrant's 2010 Performance Incentive Plan.

(2) Represents an additional 750,000 states of common stock resolved for issuance under the registrant's 2010 for formalice internet of nail.
 (3) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(c) and (h) under the Securities Act of 1933, as amended, based on the average of the high and low prices of the Registrant's common stock as reported by The NASDAQ Capital Market on August 1, 2014.

REGISTRATION OF ADDITIONAL SHARES PURSUANT TO GENERAL INSTRUCTION E

Pursuant to General Instruction E of Form S-8, OncoGenex Pharmaceuticals, Inc. (the "Registrant") is filing this Registration Statement with the Securities and Exchange Commission (the "Commission") to register an additional 750,000 shares of common stock under the Registrant's 2010 Performance Incentive Plan. This Registration Statement hereby incorporates by reference the contents of the Registrant's registration statements on Form S-8 filed with the Commission on August 13, 2010 (Registration No. 333-168820) and August 8, 2013 (Registration No. 333-190480).

PART II. INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8.	Exhibits.
Exhibit Number	Exhibit
4.1	Second Amended and Restated Certificate of Incorporation of OncoGenex Pharmaceuticals, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed with the Commission on May 29, 2013)
4.2	Fifth Amended and Restated Bylaws of OncoGenex Pharmaceuticals, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q filed with the Commission on August 2, 2012)
5.1	Opinion of Fenwick & West LLP
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm
23.2	Consent of Fenwick & West LLP (included in Exhibit 5.1)
24.1	Power of Attorney (included on the signature page of this Form S-8)
99.1	OncoGenex Pharmaceuticals, Inc. 2010 Performance Incentive Plan (incorporated by reference to Appendix A to the Registrant's Definitive Proxy Statement on

99.1 OncoGenex Pharmaceuticals, Inc. 2010 Performance Incentive Plan (incorporated by reference to Appendix A to the Registrant's Definitive Proxy Statement on Schedule 14A as filed with the Commission on April 24, 2014)

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Vancouver, Province of British Columbia, on August 7, 2014.

ONCOGENEX PHARMACEUTICALS, INC.

By: /s/ Scott Cormack Scott Cormack President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Scott Cormack as his or her true and lawful attorney-in-fact and agent with full power of substitution, for him or her in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his or her substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the date indicated.

Signature	Title	Date
/s/ Scott Cormack Scott Cormack	Director, President and Chief Executive Officer (Principal Executive Officer and Principal Financial Officer)	August 7, 2014
/s/ Neil Clendeninn Neil Clendeninn	Director	August 7, 2014
/s/ Jack Goldstein Jack Goldstein	Director	August 7, 2014
/s/ Martin Mattingly Martin Mattingly	Director	August 7, 2014
/s/ Stewart Parker Stewart Parker	Director	August 7, 2014
/s/ David Smith David Smith	Director	August 7, 2014

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EXHIBIT INDEX

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1191 SECOND AVENUE, 10TH FLOOR SEATTLE, WA 98101 TEL: 206.389.4510 FAX: 206.389.4511 WWW.FENWICK.COM

August 7, 2014

OncoGenex Pharmaceuticals, Inc. 1522 217th Place SE, Suite 100 Bothell, Washington 98021

Ladies and Gentlemen:

At your request, we have examined the Registration Statement on Form S-8 (the "*Registration Statement*") to be filed by OncoGenex Pharmaceuticals, Inc., a Delaware corporation (the "*Company*"), with the Securities and Exchange Commission (the "*Commission*") on or about August 7, 2014 in connection with the registration under the Securities Act of 1933, as amended (the "*Securities Act*"), of an aggregate of 750,000 shares of the Company's Common Stock (the "*Stock*") that are subject to issuance by the Company upon the exercise or settlement of awards granted or to be granted under the Company's 2010 Performance Incentive Plan (the "*Plan*").

In rendering this opinion, we have examined such matters of fact as we have deemed necessary in order to render the opinion set forth herein, which included examination of the following:

- (1) the Company's Second Amended and Restated Certificate of Incorporation, as amended, certified by the Secretary of State of the State of Delaware on May 28, 2013 (the "*Restated Certificate*");
- (2) the Company's Fifth Amended and Restated Bylaws, certified by the Company's Secretary on June 18, 2013 (the 'Bylaws');
- (3) the Registration Statement, together with the Exhibits filed as a part thereof or incorporated therein by reference;
- (4) The prospectus prepared in connection with the Registration Statement (the "*Prospectus*");
- (5) Copies of minutes of meetings of, and actions by the written consent of, the Board of Directors, the Company's incorporator and the Company's stockholders provided to us by the Company relating to the adoption, approval, authorization and/or ratification of (i) the Restated Certificate, (ii) the Bylaws, (iii) the Registration Statement and the issuance of Stock by the Company pursuant to the Registration Statement, and (iv) the adoption and amendment of the Plan;
- (6) The stock records for the Company that the Company has provided to us (consisting of a list of the stockholders, optionholders and warrantholders of the Company that was prepared by the Company and provided to us as of August 6, 2014 and a list of any outstanding options, warrants or other rights to purchase the Company's capital stock, and verifying the number of such issued and outstanding securities and a certificate of Computershare Trust Company, N.A., the Company's transfer agent, dated August 6, 2014 regarding the Company's outstanding shares of Common Stock as of August 5, 2014);
- (7) A Certificate of Good Standing issued by the Secretary of State of the State of Delaware dated August 6, 2014, stating that the Company is in good standing and has a legal corporate existence under the laws of the State of Delaware (the "*Certificate of Good Standing*"); and
- (8) A management certificate addressed to us and dated of even date herewith executed by the Company containing certain factual representations (the Management Certificate").

In our examination of documents for purposes of this opinion, we have relied on the accuracy of representations to us by officers of the Company with respect to the genuineness of all signatures on original documents, the authenticity and completeness of all documents submitted to us as originals, the conformity to

OncoGenex Pharmaceuticals, Inc. August 7, 2014 Page 2

originals and completeness of all documents submitted to us as copies, the legal capacity of all persons or entities executing the same, and the lack of any undisclosed termination, modification, waiver or amendment to any document referenced in clause (5) above to us.

We render this opinion only with respect to, and express no opinion herein concerning the application or effect of the laws of any jurisdiction other than, the existing laws of the existing federal laws of the United States of America and the Delaware General Corporation Law and reported judicial decisions relating thereto.

With respect to our opinion expressed in paragraph (1) below as to the valid existence and good standing of the Company under the laws of the State of Delaware, we have relied upon the Certificate of Good Standing and representations made to us by the Company.

Based upon the foregoing, it is our opinion that:

- 1. the Company is a corporation validly existing, in good standing, under the laws of the State of Delaware; and
- 2. the 750,000 shares of Stock that may be issued and sold by the Company upon the exercise or settlement of awards granted or to be granted under the Plan, when issued, sold and delivered in accordance with the Plan and Plan agreements entered into thereunder and in the manner and for the consideration stated in the Registration Statement and Prospectus, will be validly issued, nonassessable and, to our knowledge, fully paid.

We consent to the use of this opinion as an exhibit to the Registration Statement and further consent to all references to us, if any, in the Registration Statement, the Prospectus constituting a part thereof and any amendments thereto. This opinion is rendered as of the date first written above and based solely on our understanding of facts in existence as of such date after the aforementioned examination. This opinion is intended solely for use in connection with issuance and sale of shares subject to the Registration Statement and is not to be relied upon for any other purpose. We assume no obligation to advise you of any fact, circumstance, event or change in the law or the facts that may hereafter be brought to our attention whether or not such occurrence would affect or modify any of the opinions expressed herein.

Very truly yours,

/s/ Fenwick & West LLP

FENWICK & WEST LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the 2010 Performance Incentive Plan of OncoGenex Pharmaceuticals, Inc. of our reports dated March 11, 2014, with respect to the consolidated financial statements of OncoGenex Pharmaceuticals, Inc., and the effectiveness of internal control over financial reporting of OncoGenex Pharmaceuticals Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2013, filed with the Securities and Exchange Commission.

Vancouver, Canada August 7, 2014 /s/ Ernst & Young LLP Chartered Accountants