

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM S-3

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

FENNEC PHARMACEUTICALS INC.

(Exact Name of Registrant as Specified in Its Charter)

British Columbia, Canada
(State or other jurisdiction of
incorporation or organization)

20-0442384
(IRS Employer
Identification No.)

**PO Box 13628, 68 TW Alexander Drive
Research Triangle Park, NC 27709
(919) 636-4530**

(Address, including zip code, and telephone number,
including area code, of registrant's principal executive offices)

**Rostislav Raykov
Chief Executive Officer
Fennec Pharmaceuticals Inc.
PO Box 13628, 68 TW Alexander Drive
Research Triangle Park, NC 27709
(919) 636-4530**

(Name, address, including zip code, and telephone number,
including area code, of agent for service)

Copies of communications to:

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Approximate date of proposed sale to the public: From time to time after the effective date of this registration statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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

Large accelerated filer

Non-accelerated filer

(Do not check if a smaller reporting company)

Accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Security	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common stock, no par value per share	-		\$ 90,000,000(2)	\$ 11,205.00(3)

- (1) An indeterminate number of shares of common stock is being registered as may from time to time be offered hereunder at indeterminate prices. Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover any additional shares of the Registrant's securities that become issuable by reason of any stock split, stock dividends, recapitalization, or other similar transactions.
- (2) The proposed maximum aggregate offering price has been estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act.
- (3) The registration fee is calculated in accordance with Rule 457(o) under the Securities Act.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED OCTOBER 24, 2017

\$90,000,000
Common stock



Fennec Pharmaceuticals Inc. may offer from time to time up to an aggregate of \$90,000,000 of common stock in one or more offerings.

This prospectus describes the general manner in which these securities may be offered and sold. If necessary, the specific manner in which these securities may be offered and sold will be described in a supplement to this prospectus.

Our common stock is listed on The Nasdaq Capital Market ("NASDAQ") under the symbol "FENC" and on the Toronto Stock Exchange ("TSX") under the symbol "FRX.". The last reported sale price of the shares of our common stock on NASDAQ on October 5, 2017, was \$11.74 per share. The aggregate market value of our common stock held by non-affiliates pursuant to General Instruction I.B.6 of Form S-3 is \$104,347,526.70, which was calculated based on 8,888,205 shares of our common stock outstanding held by non-affiliates and at a price of \$11.74 per share, which was the closing price of our common stock on October 5, 2017. As of the date of this prospectus, we have not sold any common stock pursuant to General Instruction I.B.6 to Form S-3 during the prior 12 calendar month period that ends on and includes the date of this prospectus.

Investing in our securities involves risks. You should carefully consider the risks described under "Risk Factors" in Item 1A of our most recent Annual Report on Form 10-K and Item 1A of any subsequently filed Quarterly Reports on Form 10-Q (which documents are incorporated by reference herein), as well as the other information contained or incorporated by reference in this prospectus or in any prospectus supplement hereto before making a decision to invest in our securities. See "Where You Can Find More Information" below.

Neither the Securities and Exchange Commission nor any state securities commission or other regulatory body has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2017

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You should rely only on the information contained or incorporated by reference in this prospectus or any supplement to this prospectus. We have not authorized anyone to provide you with different information. We are not making an offer to sell or seeking an offer to buy these securities in any jurisdiction where the offer or sale is not permitted. You should not assume that the information contained in this prospectus or any supplement to this prospectus is accurate as of any date other than the date on the front cover of those documents. You should read all information supplementing this prospectus.

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission using a “shelf” registration process. Under the shelf registration process, we may offer from time to time up to an aggregate of \$90,000,000 of common stock in one or more offerings.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement, you should rely on the information in the prospectus supplement. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to a particular offering. For the securities being sold, the prospectus supplement will include the names of the underwriters, dealers or agents, if any, their compensation, the terms of the offering, and the net proceeds to the Company. The prospectus supplement may also contain additional information about certain United States federal income tax considerations relating to the securities covered by the prospectus supplement. You should read both this prospectus and any prospectus supplement, together with additional information described under the heading “Where You Can Find More Information.”

Unless the context suggests otherwise, references in this prospectus to “Fennec Pharmaceuticals,” the “Company,” “we,” “us” and “our” refer to Fennec Pharmaceuticals Inc. and its consolidated subsidiaries.

FENNEC PHARMACEUTICALS INC.

This is only a summary and may not contain all the information that is important to you. You should carefully read both this prospectus and any accompanying prospectus supplement and any other offering materials, together with the additional information described under the heading "Where You Can Find More Information". Unless otherwise noted, the terms "Fennec Pharmaceuticals", "the Company," "we," "us," and "our" refer to Fennec Pharmaceuticals Inc. and its wholly-owned subsidiaries.

We incorporated under the laws of Canada in September 1996. On August 25, 2011, we continued from the laws of Canada under the *Canada Business Corporations Act* (the "CBCA") to the laws of British Columbia in accordance with Section 302 of the *Business Corporations Act (British Columbia)* (the "Continuance").

Our principal executive offices are located at PO BOX 13628, 68 TW Alexander Drive, Research Triangle Park, NC 27709. Our telephone number is (919) 636-4530. Our website is www.fennecpharma.com. Information contained in our website does not constitute part of this prospectus.

We are a biopharmaceutical company focused on the development of Sodium Thiosulfate ("STS") for the prevention of platinum-induced ototoxicity in pediatric cancer patients.

FORWARD LOOKING STATEMENTS

This prospectus contains or incorporates by reference forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), which reflect our current views with respect to, among other things, our operations and financial performance. In some cases, you can identify these forward-looking statements by the use of words such as "outlook", "believes", "expects", "potential", "continues", "may", "will", "should", "seeks", "approximately", "predicts", "intends", "plans", "estimates", "anticipates" or the negative version of these words or other comparable words. Such forward-looking statements are subject to various risks and uncertainties. These forward-looking statements are not historical facts and are based on current expectations, estimates and projections about Fennec Pharmaceuticals's industry, management's beliefs and certain assumptions made by management, many of which, by their nature, are inherently uncertain and beyond our control.

Accordingly, there are or will be important factors that could cause actual outcomes or results to differ materially from those indicated in these statements. All statements other than statements of historical fact are forward-looking statements and are based on various underlying assumptions and expectations and are subject to known and unknown risks, uncertainties and assumptions, and may include projections of our future financial performance based on our growth strategies and anticipated trends in our business. We believe these factors include, but are not limited to, those described under "Risk Factors" in Item 1A of our most recent Annual Report on Form 10-K for the fiscal year ended December 31, 2016, filed with the SEC on March 29, 2017, and Item 1A of any subsequently filed Quarterly Reports on Form 10-Q, as such factors may be updated from time to time in our periodic filings with the SEC (which documents are incorporated by reference herein), as well as the other information contained or incorporated by reference in this prospectus or in any prospectus supplement hereto. These factors should not be construed as exhaustive and should be read in conjunction with the other cautionary statements that are included or incorporated by reference in this prospectus or in any prospectus supplement hereto. We undertake no obligation to publicly update or review any forward-looking statement, whether as a result of new information, future developments or otherwise.

WHERE YOU CAN FIND MORE INFORMATION

We are required to file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission (the "SEC"). You may read and copy any documents filed by us at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information about the public reference room. Our filings with the SEC are also available to the public through the SEC's Internet site at <http://www.sec.gov>. We make available free of charge on our website (<http://www.Fennecpharma.com>) our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with the SEC.

We have filed a registration statement on Form S-3 with the SEC relating to the securities covered by this prospectus. This prospectus is a part of the registration statement and does not contain all of the information in the registration statement. Whenever a reference is made in this prospectus to a contract or other document of ours, please be aware that the reference is only a summary and that you should refer to the exhibits that are part of the registration statement for a copy of the contract or other document. You may review a copy of the registration statement at the SEC's public reference room in Washington, D.C., as well as through the SEC's Internet site.

The SEC's rules allow us to "incorporate by reference" information into this prospectus. This means that we can disclose important information to you by referring you to another document. Any information referred to in this way is considered part of this prospectus from the date we file that document. Any reports filed by us with the SEC after the date of the initial registration statement and prior to effectiveness of the registration statement and any reports filed by us with the SEC after the date of this prospectus and before the date that the offerings of the securities by means of this prospectus are terminated will automatically update and, where applicable, supersede any information contained in this prospectus or incorporated by reference in this prospectus.

We incorporate by reference into this prospectus the following documents or information filed with the SEC:

- (1) Annual Report on Form 10-K for the year ended December 31, 2016, filed on March 29, 2017 (File No. 001-32295);
- (2) Quarterly Reports on Form 10-Q for the quarters ended March 31, 2017 and June 30, 2017 filed with the Commission on May 12, 2017 and August 14, 2017, respectively (File No. 001-32295);
- (3) Current Reports on Form 8-K as filed with the SEC on May 17, 2017, June 9, 2017, June 29, 2017, September 13, 2017, September 29, 2017 and October 16, 2017 (other than any reports or portions thereof that are furnished under Item 2.02 or Item 7.01 and any exhibits included with such Items) (File No. 001-32295);
- (4) the description of our capital stock contained in our Registration Statement on Form 8-A filed with the Commission on September 11, 2017 (File No. 001-32295), including any amendment or report filed for the purpose of updating such description; and
- (5) All documents filed by us under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement and prior to effectiveness of the registration statement and after the date of this prospectus and before the termination of the offerings to which this prospectus relates.

We will provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon his or her written or oral request, a copy of any or all documents referred to above which have been or may be incorporated by reference into this prospectus, excluding exhibits to those documents unless they are specifically incorporated by reference into those documents. You can request those documents from the Corporate Secretary, Fennec Pharmaceuticals Inc., at 68 TW Alexander Drive, Research Triangle Park, NC 27709. You may also contact the Corporate Secretary at (919) 636-4530.

USE OF PROCEEDS

Unless otherwise indicated in a prospectus supplement, we intend to use the net proceeds from our sale of securities pursuant to this prospectus to pursue the research and development of STS, as well as working capital and general corporate purposes, including to fund our ongoing research and development and product initiatives. We have not allocated the proceeds to these purposes as of the date of this prospectus. Allocation of the proceeds of a particular series of securities, or the principal reasons for the offering, if no allocation has been made, will be described in the applicable prospectus supplement.

DESCRIPTION OF CAPITAL STOCK

The following summary of the terms of our capital stock does not purport to be complete and is subject to and qualified in its entirety by reference to our Articles of Incorporation and our Bylaws, each of which may be further amended from time to time and both of which are incorporated herein by reference.

General

As of October [], 2017 our authorized capital stock consists of unlimited shares of common stock, no par value per share. As of September 30, 2017, 15,856,738 shares of common stock were issued and outstanding.

Common Stock

Pursuant to our Notice of Articles and Articles, as amended, we are authorized to issue an unlimited number of common shares, no par value. Each holder of a Share is entitled to one vote for each common share held on all matters submitted to a vote of shareholders. We have not provided for cumulative voting for the election of directors in our Notice of Articles or Articles, as amended. This means that the holders of a majority of the shares voted can elect all of the directors then standing for election. The holders of outstanding our common shares are entitled to receive dividends out of assets legally available at the times and in the amounts that our board of directors may determine from time to time.

Holders of common shares have no preemptive subscription, redemption or conversion rights or other subscription rights. Upon our liquidation, dissolution or winding-up, the holders of common shares are entitled to share in all assets remaining after payment of all liabilities. The rights of the holders of our common stock are subject to, and may be adversely affected by, the rights of holders of shares of any preferred stock that we may designate and issue in the future. Each outstanding common share is, and all common shares to be issued in this offering, when they are paid for, will be fully paid and non-assessable.

Computershare is the transfer agent for our common stock.

Our common stock is listed on the NASDAQ Capital Market under the symbol "FENC".

Exchange Controls, Restrictions on Voting or Ownership

There is currently no law, governmental decree or regulation in Canada that restricts the export or import of capital, or which would affect the remittance of dividends, interest or other payments by us to a non-resident holder of our common shares, other than applicable tax requirements.

There is currently no limitation imposed by the laws of Canada or by our Notice of Articles or Articles on the right of a non-resident to hold or vote our common shares, other than those imposed by the *Investment Canada Act* and the *Competition Act* (Canada). These acts will generally not apply except where control of an existing Canadian business or company, which has Canadian assets or revenue over a certain threshold, is acquired and will not apply to trading generally of securities listed on a stock exchange. A reviewable acquisition may not proceed unless the relevant minister is satisfied that the investment is likely to be of net benefit to Canada.

Shareholders' Rights Plan

The Company adopted a shareholder rights plan agreement (the "Rights Plan") on June 27, 2017. The Rights Plan was adopted to ensure, to the extent possible, that all of our shareholders are treated fairly and equally in connection with any take-over bid or other acquisition of control. Generally stated, the Rights Plan is designed to address this purpose by requiring any potential transaction that will result in a person (an "Acquiring Person") owning, in the aggregate, 20% or more of our outstanding common stock (inclusive of any shares of common stock held by the Acquirer, its associates and affiliates, and any person acting jointly or in concert with any of them (collectively, the "Acquirer Group")) to be structured as a formal take-over bid that satisfies certain minimum requirements relating primarily to the manner in which the bid must be made, the minimum number of days the bid must remain open, and the minimum number of shares that must be acquired under the bid. Non-compliant transactions may, through the operation of the Rights Plan and the rights issued thereunder, result in the Acquirer Group's common stock position in us being substantially diluted. Consequentially, the Rights Plan incentivizes the Acquirer to structure its proposed transaction in a manner that complies with the minimum requirements prescribed by the Rights Plan, thereby helping fulfill the purpose of the Rights Plan. One right (a "Right") is issued and attached to each share of common stock. This includes all common stock issued as of the effective date of the Rights Plan and all shares of common stock issued after the effective date of the Rights Plan but prior to the eighth trading day after the earlier of public announcement of a take-over bid (other than a take over bid that is a permitted bid or a competing permitted bid, as the case may be, under the Rights Plan) or the date upon which a permitted bid or competing permitted bid under the Rights Plan ceases to be such, or such later date as may be determined by our board of directors.

CERTAIN ERISA MATTERS

Unless otherwise indicated in the applicable prospectus supplement, the offered securities may, subject to certain legal restrictions, be held by (i) an "employee benefit plan" (as defined in Section 3(3) of the Employee Retirement Security Act of 1974, as amended ("ERISA")) that is subject to Title I of ERISA, (ii) a "plan" as defined in, and subject to, Section 4975 of the Code or (iii) a "benefit plan investor" within the meaning of Section 3(42) of ERISA. A fiduciary of any such employee benefit plan, plan, or benefit plan investor must determine that the purchase, holding and disposition of an interest in such offered security is consistent with its fiduciary duties and will not constitute or result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code.

PLAN OF DISTRIBUTION

We may from time to time offer and sell some or all of the securities covered by this prospectus. Registration of securities covered by this prospectus does not mean, however, that those securities necessarily will be offered or sold.

The securities covered by this prospectus may be sold from time to time, at market prices prevailing at the time of sale, at prices related to market prices, at a fixed price or prices subject to change or at negotiated prices, by a variety of methods including the following:

- on the NASDAQ Capital Market (including through at the market offerings);
- on the Toronto Stock Exchange (including through at the market offerings);
- in the over-the-counter market;
- in privately negotiated transactions;

- through broker/dealers, who may act as agents or principals;
- through one or more underwriters on a firm commitment or best-efforts basis;
- in a block trade in which a broker/dealer will attempt to sell a block of securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- through put or call option transactions relating to the securities;
- directly to one or more purchasers;
- through agents; or
- in any combination of the above.

In effecting sales, brokers or dealers engaged by us may arrange for other brokers or dealers to participate. Broker/dealer transactions may include:

- purchases of securities by a broker/dealer as principal and resales of the securities by the broker/dealer for its account pursuant to this prospectus;
- ordinary brokerage transactions; or
- transactions in which the broker/dealer solicits purchasers on a best efforts basis.

We have not entered into any agreements, understandings or arrangements with any underwriters or broker/dealers regarding the sale of the securities covered by this prospectus. At any time a particular offer of the securities covered by this prospectus is made, a revised prospectus or prospectus supplement, if required, will set forth the aggregate amount of securities covered by this prospectus being offered and the terms of the offering, including the name or names of any underwriters, dealers, brokers or agents. In addition, to the extent required, any discounts, commissions, concessions and other items constituting underwriters' or agents' compensation, as well as any discounts, commissions or concessions allowed or reallocated or paid to dealers, will be set forth in such revised prospectus supplement. Any such required prospectus supplement, and, if necessary, a post-effective amendment to the Registration Statement of which this prospectus is a part, will be filed with the SEC to reflect the disclosure of additional information with respect to the distribution of the securities covered by this prospectus.

To the extent required, the applicable prospectus supplement will set forth whether or not underwriters may over-allot or effect transactions that stabilize, maintain or otherwise affect the market price of the securities at levels above those that might otherwise prevail in the open market, including, for example, by entering stabilizing bids, effecting syndicate covering transactions or imposing penalty bids.

If we utilize a dealer in the sale of the securities being offered pursuant to this prospectus, we will sell the securities to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale.

We may also authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the revised prospectus or prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. The conditions to these contracts and the commission that we must pay for solicitation of these contracts will be described in a revised prospectus or prospectus supplement.

In connection with the sale of the securities covered by this prospectus through underwriters, underwriters may receive compensation in the form of underwriting discounts or commissions and may also receive commissions from purchasers of securities for whom they may act as agent. Underwriters may sell to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for whom they may act as agent.

Any underwriters, broker/dealers or agents participating in the distribution of the securities covered by this prospectus may be deemed to be “underwriters” within the meaning of the Securities Act, and any commissions received by any of those underwriters, broker/dealers or agents may be deemed to be underwriting commissions under the Securities Act.

We may agree to indemnify underwriters, broker/dealers or agents against certain liabilities, including liabilities under the Securities Act, and may also agree to contribute to payments which the underwriters, broker/dealers or agents may be required to make.

Certain of the underwriters, broker/dealers or agents who may become involved in the sale of the securities may engage in transactions with and perform other services for us in the ordinary course of their business for which they receive customary compensation.

Some or all of the securities may be new issues of securities with no established trading market. Any underwriters that purchase the securities for public offering and sale may make a market in such securities, but such underwriters will not be obligated to do so and may discontinue any market making at any time without notice. We make no assurance as to the liquidity of or the trading markets for any securities.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us LaBarge Weinstein LLP, Ottawa, Ontario. Underwriters, dealers or agents, if any, who we identify in a prospectus supplement may have their own counsel pass upon certain legal matters in connection with the shares of common stock offered under this prospectus.

EXPERTS

The consolidated financial statements of Fennec Pharmaceuticals Inc. appearing in Fennec Pharmaceuticals Inc.’s Annual Report (Form 10-K) for the year ended December 31, 2016, have been audited by Deloitte LLP, independent registered public accounting firm, as set forth in their report thereon, included therein, and incorporated herein by reference in reliance upon the authority of said firm as experts in accounting and auditing.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following is a reasonably itemized statement of all fees and expenses incurred or expected to be incurred by the Registrant in connection with the issuance and distribution of the securities being registered hereby, other than underwriting discounts and commissions, if any. All but the SEC registration fee are estimates and remain subject to future contingencies.

SEC registration fee	\$ 11,205.00
Printing expenses	\$ * (1)
Accounting fees and expenses	\$ * (1)
Legal fees and expenses	\$ * (1)
Miscellaneous	\$ * (1)
Total	<u>\$ * (1)</u>

⁽¹⁾ These fees are calculated based on the securities offered and the number of issuances and accordingly cannot be estimated at this time.

Item 15. Indemnification of Directors and Officers.

Business Corporations Act (British Columbia)

Division 5 of Part 5 of the *Business Corporations Act* (British Columbia) provides that a corporation may (a) indemnify an eligible party against all eligible penalties to which the eligible party is or may be liable and (b) after the final disposition of an eligible proceeding, pay the expenses (not including judgments, penalties, fines or amounts paid in settlement of a proceeding) actually and reasonably incurred by an eligible party in respect of that proceeding.

An “eligible party” means an individual who (a) is or was a director or officer of the corporation, (b) is or was a director or officer of another corporation (i) at a time when the other corporation is or was an affiliate of the corporation, or (ii) at the request of the corporation, or (c) at the request of the corporation, is or was, or holds or held a position equivalent to that of, a director or officer of a partnership, trust, joint venture or other unincorporated entity.

An “eligible proceeding” means a proceeding in which an eligible party or any of the heirs and personal or other legal representatives of the eligible party, by reason of the eligible party being or having been a director or officer of, or holding or having held a position equivalent to that of a director or officer of, the corporation or an associated corporation (a) is or may be joined as a party, or (b) is or may be liable for or in respect of a judgment, penalty or fine in, or expenses related to, the proceeding.

A corporation must, after the final disposition of an eligible proceeding, pay the expenses actually and reasonably incurred by the eligible party in respect of that proceeding if the eligible party (a) has not been reimbursed for those expenses, and (b) is wholly successful, on the merits or otherwise, in the outcome of the proceeding or is substantially successful on the merits in the outcome of the proceeding.

A corporation may pay, as they are incurred in advance of the final disposition of an eligible proceeding, the expenses actually and reasonably incurred by an eligible party in respect of that proceeding, provided the corporation first receives from the eligible party a written undertaking that, if it is ultimately determined that the payment of expenses is prohibited, the eligible party will repay the amounts advanced.

Notwithstanding any of the foregoing, a corporation must not indemnify an eligible party or pay the expenses of an eligible party if any of the following circumstances apply:

- if the indemnity or payment is made under an earlier agreement to indemnify or pay expenses and, at the time that the agreement to indemnify or pay expenses was made, the corporation was prohibited from giving the indemnity or paying the expenses by its memorandum or articles;
- if the indemnity or payment is made otherwise than under an earlier agreement to indemnify or pay expenses and, at the time that the indemnity or payment is made, the corporation is prohibited from giving the indemnity or paying the expenses by its memorandum or articles;
- if, in relation to the subject matter of the eligible proceeding, the eligible party did not act honestly and in good faith with a view to the best interests of the corporation or the associated corporation, as the case may be;
- in the case of an eligible proceeding other than a civil proceeding, if the eligible party did not have reasonable grounds for believing that the eligible party's conduct in respect of which the proceeding was brought was lawful.

If an eligible proceeding is brought against an eligible party by or on behalf of the corporation or by or on behalf of an associated corporation, the corporation must not (a) indemnify the eligible party in respect of the proceeding or (b) pay the expenses of the eligible party in respect of the proceeding.

A corporation may purchase and maintain insurance for the benefit of an eligible party or the heirs and personal or other legal representatives of the eligible party against any liability that may be incurred by reason of the eligible party being or having been a director or officer of, or holding or having held a position equivalent to that of a director or officer of, the corporation or an associated corporation.

Articles

Our Articles provide that, subject to the *Business Corporations Act* (British Columbia), the Company must indemnify an eligible party and their respective heirs and personal or other legal representatives against all eligible penalties to which such eligible party is or may be liable. The Company must, after the final disposition of an eligible proceeding, pay the expenses actually and reasonably incurred by such person in respect of that proceeding. Each eligible party is deemed to have contracted with the Company on this term. The Articles also provide that the Company may indemnify any person, subject to any restrictions in the *Business Corporations Act* (British Columbia).

Our Articles defines the following terms: (1) an “eligible penalty” means a judgment, penalty or fine awarded or imposed in, or an amount paid in settlement of, an “eligible proceeding”; (2) an “eligible party” means a director, former director or alternate director of the Company; (3) an “eligible proceeding” means a legal proceeding or investigative action (whether current, threatened, pending or completed), in which an eligible party or any of the heirs and personal or other legal representatives of the eligible party, by reason of the eligible party being or having been a director or alternate director of the Company (a) is or may be joined as a party, or (b) is or may be liable for or in respect of a judgment, penalty or fine in, or expenses related to, the proceeding; and (4) “expenses” has the meaning set out in the *Business Corporations Act* (British Columbia).

Our Articles provide that the Company may purchase and maintain insurance for the benefit of any person (or his or her heirs or legal personal representatives) who is or was a director, alternative director, officer, employee or agent, or held or holds such position or a position equivalent to the foregoing (each, an “insured party”) with respect to (i) the Company; (ii) a corporation at a time when the corporation was an affiliate of the Company; (iii) at the request of the Company, served in such capacity with respect to a corporation, partnership, trust, joint venture or other unincorporated entity, against any liability that may be incurred by him or her acting in such capacity.

We maintain liability insurance policies regarding our directors and officers against certain liabilities that they may incur in such capacities.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Item 16. Exhibits.

Reference is made to the information contained in the Exhibit Index filed as part of this Registration Statement, which information is incorporated herein by reference pursuant to Rule 411 under the Securities Act.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement;
 - (i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) to reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement; and
 - (iii) to include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement;

provided, however, that the undertakings set forth in paragraphs (i) and (ii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this Registration Statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of this Registration Statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
- (A) each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the Registration Statement as of the date the filed prospectus was deemed part of and included in the Registration Statement; and
 - (B) each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the Registration Statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the Registration Statement relating to the securities in the Registration Statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. *Provided, however,* that no statement made in a registration statement or prospectus that is part of the Registration Statement or made in a document incorporated or deemed incorporated by reference into the Registration Statement or prospectus that is part of the Registration Statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the Registration Statement or prospectus that was part of the Registration Statement or made in any such document immediately prior to such effective date.
- (5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this Registration Statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of an undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Durham, State of North Carolina, on October 24, 2017.

Fennec Pharmaceuticals Inc.

By: /s/ Rostislav Raykov
Rostislav Raykov
Chief Executive Officer, Director

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Rostislav Raykov and Robert Andrade, and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments, including post-effective amendments, to this registration statement, and any registration statement relating to the offering covered by this registration statement and filed pursuant to Rule 462(b) under the Securities Act of 1933, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully for all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys in fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

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

<u>Signature</u>	<u>Capacity</u>	<u>Date</u>
<u>/s/ Rostislav Raykov</u> Rostislav Raykov	Chief Executive Officer, Director (Principal Executive Officer)	October 24, 2017
<u>/s/ Robert Andrade</u> Robert Andrade	Chief Financial Officer (Principal Financial and Accounting Officer)	October 24, 2017
<u>/s/ Chris A. Rallis</u> Chris A. Rallis	Director	October 24, 2017
<u>/s/ Marco Brughera</u> Marco Brughera	Director	October 24, 2017
<u>/s/ Khalid Islam</u> Khalid Islam	Director	October 24, 2017
<u>/s/ Adrian Haigh</u> Adrian Haigh	Director	October 24, 2017

EXHIBIT INDEX

The following is a complete list of exhibits filed as part of this Registration Statement, which are incorporated herein.

Exhibit No.	Description	Location
1.1	Form of Underwriting Agreement for Common Stock	*
4.1	Notice of Articles dated August 25, 2011	Exhibit 3.2(i) to the Form 8-K of the Company filed August 26, 2011
4.2	Articles dated August 25, 2011	Exhibit 3.2(ii) to the Form 8-K of the Company filed August 26, 2011
4.3	Notice of Alteration dated September 3, 2014	Exhibit 3.1 to the Form 8-K of the Company filed September 9, 2014
4.4	Shareholder Rights Plan Agreement dated June 27, 2017 between Fenvec Pharmaceuticals Inc. and Computershare Trust Company of Canada	Schedule B to the Management Proxy Circular of the Company filed May 24, 2017
5.1	Opinion of LaBarge Weinstein LLP	Filed herewith
23.1	Consent of Deloitte LLP, Independent Registered Public Accounting Firm	Filed herewith
23.2	Consent of LaBarge Weinstein LLP	Contained in Exhibit 5.1 to this Registration Statement
24.1	Power of Attorney	Contained on the signature pages of this Registration Statement

* To be filed, if applicable, by amendment or pursuant to a document filed pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, and incorporated herein by reference.

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October 24, 2017

Fennec Pharmaceuticals Inc.
PO Box 13628, 68 TW Alexander Drive
Research Triangle Park, NC 27709

Ladies and Gentlemen:

Re: Fennec Pharmaceuticals Inc. - Registration Statement on Form S-3

We have acted as counsel to Fennec Pharmaceuticals Inc., a corporation incorporated pursuant to the laws of British Columbia (the "Company"), in connection with a Registration Statement on Form S-3 filed on or about October 24, 2017 with the Securities and Exchange Commission (the "Registration Statement") for the purpose of registering the sale from time to time up to an aggregate of \$90,000,000 common shares of the Company (the "Shares").

In rendering this opinion, we have examined: (i) the Articles of the Company, as amended; (ii) certain resolutions of the Board of Directors of the Company (the "Board") evidencing the corporate proceedings taken by the Company to authorize the issuance of the Shares, and (iii) such other documents as we have deemed appropriate or necessary as a basis for the opinion hereinafter expressed.

In rendering the opinion expressed below, we assumed the legal capacity of natural persons signing or delivering any instrument, the authenticity of all documents and records examined, the conformity with the original documents of all documents submitted to us as copies, and the genuineness of all signatures.

Based upon and subject to the foregoing, and such legal considerations as we deem relevant, we are of the opinion that the Shares will be validly issued, fully paid and non-assessable, assuming that (i) the Board or an authorized committee thereof will have specifically authorized the issuance of such Shares in exchange for consideration that the Board or such committee determines as adequate (the "Issuance Authorizing Resolutions"), and (ii) the Company has received the consideration provided for in the applicable Issuance Authorizing Resolutions.

The foregoing opinion is based solely on the present laws and applicable regulations of the Province of British Columbia and the laws of Canada in force therein. We express no opinion as to matters involving the laws of any other jurisdiction.

We hereby consent to the filing of this opinion as an Exhibit to the Registration Statement and to references made to this firm in the Registration Statement and all amendments thereto. In giving such consent we do not thereby admit that we are included in the category of persons whose consent is required under Section 7 of the *Securities Act of 1933*, as amended, or the rules and regulations promulgated thereunder. The opinions set forth in this letter are based upon the facts in existence and laws in effect on the date hereof and we expressly disclaim any obligation to update our opinions herein, regardless of whether changes in such facts or laws come to our attention after the delivery hereof.

Yours truly,

/s/ LaBarge Weinstein LLP



CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated March 29, 2017 relating to the consolidated financial statements of Fenec Pharmaceuticals Inc. (the “Company”) (the report expresses an unqualified opinion and includes an explanatory paragraph relating to the conditions and events that raise substantial doubt on the Company’s ability to continue as a going concern) appearing in the Annual Report on Form 10-K of Fenec Pharmaceuticals Inc. for the year ended December 31, 2016, and to the reference to us under the heading “Experts” in the Prospectus, which is part of this Registration Statement.

/s/ Deloitte LLP
Chartered Professional Accountants
Licensed Public Accountants
Ottawa, Canada

October 24, 2017
