FILED PURSUANT TO RULE 424(B)(5)
REGISTRATION NO.: 333-221093

PROSPECTUS SUPPLEMENT
(To Prospectus dated November 3, 2017)

FENNEC PHARMACEUTICALS INC.

Up to $25,000,000 of Common Shares

This prospectus supplement and the accompanying prospectus relate to the offer and sale from time to time of shares of our common shares, no par value per share (our "common shares"), having an aggregate offering price of up to $25,000,000 through H.C. Wainwright & Co., LLC (the "sales agent") as sales agent pursuant to the terms of the at the market offering agreement between us and the sales agent. Sales of our common shares, if any, may be made in transactions that are deemed to be "at-the-market offerings" as defined in Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"), including sales made directly on the Nasdaq Capital Market or sales made to or through a market maker other than on an exchange, at market prices prevailing at the time of sale or in negotiated transactions. In the event that any sales are made pursuant to the at the market offering agreement that are not made directly on the Nasdaq Capital Market or on any other existing U.S. trading market for our common shares at market prices at the time of sale, including, without limitation, any sales to the sales agent acting as principal or sales in negotiated transactions, we will file a prospectus supplement describing the terms of such transaction, the amount of shares sold, the price thereof, the applicable compensation, and such other information as may be required pursuant to Rule 424 and Rule 430B of the Securities Act, as applicable, within the time required by Rule 424 of the Securities Act.

Our common shares are listed on the Nasdaq Capital Market under the symbol "FENC" and on the Toronto Stock Exchange under the symbol "FRX." On October 28, 2020, the last reported sale price of our common shares on The Nasdaq Capital Market was $7.38 per share.

The sales agent will receive a commission of 3.0% of the gross sales price per common share sold through it as our sales agent under the at the market offering agreement. We have also agreed to reimburse certain expenses of the sales agent in connection with the at the market offering agreement as further described in the Plan of Distribution section of this prospectus supplement. Subject to the terms and conditions of the at the market offering agreement, the sales agent will use its commercially reasonable efforts to sell on our behalf any common shares to be offered by us under the at the market offering agreement. The offering of common shares pursuant to the at the market offering agreement will terminate upon the earlier of (i) the sale of all of our common shares provided for in this prospectus supplement or (ii) termination of the at the market offering agreement pursuant to its terms by either the sales agent or us.

Investing in our common shares involves a high degree of risk. Before buying any common shares, you should carefully consider the risks that we have described in "Risk Factors" beginning on page S-3 of this prospectus supplement, as well as those described in our filings under the Securities Exchange Act of 1934, as amended (the "Exchange Act").

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

No common shares distributed under this prospectus supplement will be offered or sold in Canada, including through the TSX or any other trading market in Canada. See "Plan of Distribution" beginning on page S-8 of this prospectus supplement.

H.C. Wainwright & Co.

The date of this prospectus supplement is October 30, 2020.

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Prospectus Supplement

Prospectus

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus relate to the sale of our common shares registered for sale under our Registration Statement on Form S-3 (File no. 333-221093) dated November 3, 2017 (the "Registration Statement") filed with the Securities Exchange Commission (the "SEC"). This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this common share offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference herein and therein. The second part, the accompanying prospectus, provides more general information. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement and the information contained in the accompanying prospectus or any document incorporated by reference therein filed prior to the date of this prospectus supplement, you should rely on the information in this prospectus supplement; provided that if any statement in one of these documents is inconsistent with a statement in another document having a later date — for example, a document incorporated by reference in the accompanying prospectus — the statement in the document having the later date modifies or supersedes the earlier statement.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were effective only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

Neither we nor the sales agent have authorized anyone to provide information different from that contained in this prospectus supplement and the accompanying prospectus, including any free writing prospectus that we have authorized for use in this offering. When you make a decision about whether to invest in our common shares, you should not rely upon any information other than the information in this prospectus supplement or the accompanying prospectus, including any free writing prospectus that we have authorized for use in this offering. Neither the delivery of this prospectus supplement or the accompanying prospectus, including any free writing prospectus that we have authorized for use in this offering, nor the sale of our common shares means that information contained in this prospectus supplement and the accompanying prospectus, including any free writing prospectus that we have authorized for use in this offering, is correct after their respective dates. It is important for you to read and consider all information contained in this prospectus supplement and the accompanying prospectus, including the information incorporated by reference into this prospectus supplement and the accompanying prospectus, and any free writing prospectus that we have authorized for use in connection with this offering, in making your investment decision. You should also read and consider the information in the documents to which we have referred you in the sections entitled "Where You Can Find More Information" and "Incorporation of Certain Information by Reference" in this prospectus supplement.

We are offering to sell, and seeking offers to buy, our common shares only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the accompanying prospectus and the offering of the common shares in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement and the accompanying prospectus must inform themselves about, and observe any restrictions relating to, the offering of the common shares and the distribution of this prospectus supplement and the accompanying prospectus outside the United States. This prospectus supplement and the accompanying prospectus do not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement and the accompanying prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

All references in this prospectus supplement and the accompanying prospectus to "Fennec," the "Company," "we," "us," "our," or similar references refer to Fennec Pharmaceuticals Inc. and its subsidiaries, except where the context otherwise requires or as otherwise indicated.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus supplement and the accompanying prospectus are only parts of a registration statement on Form S-3 (File No. 333-221093) that we filed with the SEC under the Securities Act and do not contain all the information set forth in the registration statement. Whenever a reference is made in this prospectus supplement or the accompanying prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference in this prospectus supplement and the accompanying prospectus for a copy of such contract, agreement or other document.

We are a public company and file proxy statements, annual, quarterly and special reports and other information with the SEC. The registration statement, such reports and other information can be accessed electronically by means of the SEC's home page on the internet (www.sec.gov).

We make our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports available through our website, free of charge, as soon as reasonably practicable after we file such material with, or furnish it to the SEC. Our website address is www.fennecpharma.com. We have included our website address in this prospectus supplement solely as an inactive textual reference. The information contained on, or that can be accessed through, our website is not part of this prospectus supplement.

INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" information from other documents that we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement and the accompanying prospectus. Information contained in this prospectus supplement and the accompanying prospectus and information that we file with the SEC in the future and incorporate by reference in this prospectus supplement and the accompanying prospectus will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings (other than Current Reports on Form 8-K furnished under Item 2.02 or Item 7.01 and exhibits filed on such form that are related to such items) we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the prospectus supplement and until the termination of this offering:

- our Annual Report on Form 10-K for the year ended December 31, 2019;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2020 and June 30, 2020;
- our Definitive Proxy Statement on Schedule 14A filed with the SEC on May 11, 2020;
- our Current Reports on Form 8-K filed with the SEC on February 11, 2020, February 28, 2020, March 5, 2020, April 13, 2020, May 4, 2020, June 23, 2020, June 26, 2020, August 11, 2020, September 21, 2020, and October 30, 2020; and
- the description of our common shares set forth in our registration statement on Form 8-A filed with the SEC on September 11, 2017, including any amendments or reports filed for the purpose of updating such description.

We will provide without charge to each person, including any beneficial owner, to whom this prospectus supplement 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 supplement, 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., PO Box 13628, 68 TW Alexander Drive, Research Triangle Park, North Carolina 27709. You may also contact the Corporate Secretary at (919) 636-4530.

FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents we have filed with the SEC that are incorporated by reference in this prospectus supplement or the accompanying prospectus contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These forward-looking statements may concern possible or anticipated future results of operations or business developments. These statements are based on management's current expectations or predictions of future conditions, events or results based on various assumptions and management's estimates of trends and economic factors in the markets in which we are active, as well as our business plans. Words such as "expects", "anticipates", "intends", "plans", "believes", "seeks", "estimates", "projects", "forecasts", "may", "should", variations of such words and similar expressions are intended to identify such forward-looking statements. The forward-looking statements may include, without limitation, statements regarding product development, product potential, regulatory environment, sales and marketing strategies, capital resources, operating performance, or sales of common shares pursuant to this offering. Forward-looking statements include, but are not limited to, statements about:

- our expectations regarding the use of our existing capital resources and any proceeds we may receive from the sale of common shares offered under this prospectus supplement;
- our efforts to pursue collaborations with other companies and third parties;
- the timing and success of our clinical trials;
- our ability to enroll patients in our clinical trials at the pace that we project;
- the impact from the recent coronavirus outbreak;
- whether the results of our trials will be sufficient to support domestic or foreign regulatory approvals for our product candidate;
- our ability to obtain and maintain regulatory approval of our product candidate;
- the benefits of the use of our product candidate;
- our ability to successfully commercialize our product candidate if approved;
- the rate and degree of market acceptance of our product candidate;
- our ability to maintain, or recognize the anticipated benefits of, orphan drug designation for our product candidate;
- our ability to protect our intellectual property;
- our corporate and development strategies;
- our expected results of operations;
- our anticipated levels of expenditures;
- the nature and scope of potential markets for our product candidate; and
- our ability to attract and retain key employees.

The forward-looking statements are not guarantees of future performance, and actual results may differ materially from those projected. The forward-looking statements are representative only as of the date they are made, and we assume no responsibility to update any forward-looking statements except as required by law. The forward-looking statements are subject to risks and uncertainties, which may cause results to differ materially from those set forth in the statements. Forward-looking statements should be evaluated together with the many uncertainties that affect our business and our market, particularly those discussed under the "Risk Factors" section of this prospectus supplement and under "Risk Factors" in Item 1A of our most recent Annual Report on Form 10-K for the fiscal year ended December 31, 2019 ("2019 Annual Report"), 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 supplement.

SUMMARY

This summary highlights selected information about us. It may not contain all the information that may be important to you in deciding whether to invest in our common shares. You should read this entire prospectus supplement and the accompanying prospectus, together with the information incorporated by reference, including the risk factors, financial data and related notes, before making an investment decision.

Company Overview

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

We have not received and do not expect to have significant revenues from our product candidate until we are either able to sell our product candidate after obtaining applicable regulatory approvals or we establish collaborations that provide us with up-front payments, licensing fees, milestone payments, royalties or other revenue. We generated a net loss from operations of approximately $12.8 million for the twelve months ended December 31, 2019, and net loss from operations of approximately $9.9 million for the twelve months ended December 31, 2018. As of December 31, 2019, our accumulated deficit was approximately $144.0 million.

We are incorporated under the Business Corporations Act (British Columbia, Canada). We have four wholly-owned subsidiaries: Oxiquant, Inc. and Fennec Pharmaceuticals, Inc., both Delaware corporations, Cadherin Biomedical Inc., a Canadian company, and Fennec Pharmaceuticals (EU) Limited ("Fennec Limited"), an Ireland company. With the exception of Fennec Pharmaceuticals, Inc., all subsidiaries are inactive.

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. The information contained on, or that can be accessed through, our website is not part of this prospectus supplement.

The Offering	
Issuer	Fennec Pharmaceuticals Inc.
Securities Offered	Common shares, no par value per share, having aggregate sales proceeds of up to $25,000,000.
Manner of Offering	"At the market offering" that may be made from time to time through our sales agent, H.C. Wainwright & Co., LLC. See "Plan of Distribution." Under the terms of the at the market offering agreement, we also may sell shares to the sales agent, as principal for its own account, at a price per share to be agreed upon at the time of sale. If we sell shares to the sales agent, acting as principal, we will enter into a separate terms agreement with that sales agent, setting forth the terms of such transaction, and we will describe the terms agreement in a separate prospectus supplement. No shares will be offered or sold in Canada, including through the TSX or any other trading market in Canada. The proceeds from this offering, if any, will vary depending on the number of shares that we offer and the offering price per share. There is no minimum amount required to be raised by this offering, and we may choose to raise less than the maximum $25,000,000 in gross offering proceeds permitted by this prospectus supplement.
Use of Proceeds	We presently intend to use the net proceeds from any sales of common shares resulting from this offering for obtaining regulatory approvals, the potential launch of PEDMARK™, and working capital and general corporate purposes. See "Use of Proceeds."
Risk Factors	Before deciding to invest in our common shares, you should read carefully the risks set forth under the heading "Risk Factors" beginning on page S-3 of this prospectus supplement, and the risk factors set forth under the heading "Item 1A. Risk Factors" of our 2019 Annual Report, as well as any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, in addition to the other information contained in this prospectus supplement and the accompanying prospectus and the information incorporated by reference herein and therein for certain considerations relevant to an investment in our common shares.
Exchange Listings	Our common shares are listed on the Nasdaq Capital Market under the symbol "FENC" and on the Toronto Stock Exchange under the symbol "FRX." On October 28, 2020, the last reported sale price of our common shares on the Nasdaq Capital Market was $7.38 per share.
Transfer Agent and Registrar	Computershare

RISK FACTORS

Investing in our common shares involves risks. In deciding whether to invest in our common shares, you should carefully consider the following risk factors and the risk factors included in our 2019 Annual Report, as well as any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, in addition to the other information contained in this prospectus supplement and the accompanying prospectus and the information incorporated by reference herein and therein. The risks and uncertainties described below and in our other filings with the SEC are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently deem immaterial, also may become important factors that affect us. If any of these risks occur, our business, financial condition or results of operations could be materially and adversely affected. In that case, the value of our common shares and your investment could decline. See "Forward-Looking Statements."

Additional Risks Related to Our Business

Should the clinical development process be successfully completed, our ability to derive revenues from the sale of therapeutics will depend upon our first obtaining FDA as well as foreign regulatory approvals, all of which are subject to a number of unique risks and uncertainties.

Even if we are able to demonstrate the safety and efficacy of our product candidate in clinical trials, if we fail to gain timely approval to commercialize PEDMARK™ from the U.S. Food and Drug Administration ("FDA") and other foreign regulatory authorities, we will be unable to generate the revenues we will need to build our business. The FDA or comparable regulatory authorities in other countries may delay, limit or deny approval of PEDMARK™ for various reasons. For example, such authorities may disagree with the design, scope or implementation of our clinical trials; or with our interpretation of data from our preclinical studies or clinical trials; or may otherwise take the position that PEDMARK™ fails to meet the requirements and standards for regulatory approval. There are numerous FDA personnel assigned to review different aspects of a New Drug Application ("NDA"), and uncertainties can be presented by their ability to exercise judgment and discretion during the review process. During the course of review, the FDA may request or require additional preclinical, clinical, chemistry, manufacturing, and control ("CMC"), or other data and information, and the development and provision of these data and information may be time consuming and expensive. Regulatory approvals may not be granted on a timely basis, if at all, and even if and when they are granted, they may not cover all the indications for which we seek approval. On February 10, 2020, we submitted a NDA to the FDA for PEDMARK™ for the prevention of ototoxicity associated with cisplatin chemotherapy in pediatric patients ≥1 month to 18 years of age with localized, non-metastatic, solid tumors. On April 10, 2020, we received notification from the FDA that the NDA was accepted for filing and the original application was granted Priority Review with a PDUFA target action date of August 10, 2020. On August 10, 2020, we received a Complete Response Letter ("CRL"). According to the CRL, after recent completion of a pre-approval inspection of the manufacturing facility of our drug product manufacturer, the FDA identified deficiencies resulting in a Form 483, which is a list of conditions or practices that are required to be resolved prior to the approval of PEDMARK™. We have developed a detailed plan and have dedicated, and continue to commit, significant resources to addressing the CRL, while, in parallel, working with our drug product manufacturer to be ready for re-inspection by the FDA. If the FDA determines that these actions were not sufficient, or based on the re-inspection FDA officials do not recommend approval relative to the drug product manufacturing facility, or if information deemed necessary by the FDA cannot be provided as part of our NDA submission or during the review period as deemed appropriate on a timely basis, such events could further delay the progress of our NDA and could require additional actions that cannot be completed by us during the review period, which may adversely impact our business. Further, while we may develop a product candidate with the intention of addressing a large, unmet medical need, the FDA may only approve the use of the drug for indications affecting a relatively small number of patients, thus greatly reducing the market size and our potential revenues. The approvals may also contain significant limitations in the form of warnings, precautions or contraindications with respect to conditions of use, which could further narrow the size of the market. In certain countries, even if the health regulatory authorities approve a drug, it cannot be marketed until pricing for the drug is also approved. Finally, even after approval can be obtained, we may be required to recall or withdraw a product as a result of newly discovered safety or efficacy concerns, either of which would have a materially adverse effect on our business and results of operations.

We have historically been engaged primarily in research and development activities, but plan to commercialize our lead product candidate, PEDMARK, ourselves. There can be no assurance that we will be able to successfully manage the balance of our research and development operations with our planned commercialization activities. Potential investors should be aware of the problems, delays, expenses and difficulties frequently encountered by companies balancing development of product candidates, which can include problems such as unanticipated issues relating to clinical trials and receipt of approvals from the FDA and foreign regulatory bodies, with commercialization efforts, which can include problems relating to managing manufacturing and supply, reimbursement, marketing problems and additional costs. Our product candidate may require significant additional research and clinical trials, and we will need to overcome significant regulatory burdens prior to commercialization in the United States and other countries. In addition, we may be required to spend significant funds on building out our commercial operations. There can be no assurance that after the expenditure of substantial funds and efforts, we will successfully develop and commercialize PEDMARK, generate any significant revenues or ever achieve and maintain a substantial level of sales of our product.

We are the target of securities litigation, which may be costly and time-consuming to defend.

Following periods of market volatility in the price of a company's securities or the reporting of unfavorable news, security purchasers have often instituted class action litigation. This risk is especially relevant for us because pharmaceutical companies like us have experienced significant stock price volatility in recent years. Moreover, we were named in a putative securities class action complaint as a result of the decline in our stock price following the August 10, 2020 announcement that we had received a CRL from the FDA regarding our NDA for PEDMARK™. The complaint alleges that prior to the receipt of the CRL from the FDA, we made material false and misleading statements or omissions and failed to disclose material adverse facts about our business operations and prospects. We believe the suit is without merit and intend to defend ourselves vigorously. Regardless of the outcome, however, we could incur substantial legal costs and our management's attention could be diverted from the operation of our business, causing our business to suffer.

There are limitations on the liability of our directors, and we may have to indemnify our officers and directors in certain instances.

Our Notice of Articles and Articles, as amended, limit, to the maximum extent permitted under British Columbia law, the personal liability of our directors for monetary damages for breach of their fiduciary duties as directors. These provisions may be in some respects broader than the specific indemnification provisions under British Columbia law. The indemnification provisions may require us, among other things, to indemnify such officers and directors against certain liabilities that may arise by reason of their status or service as directors or officers (other than liabilities arising from willful misconduct of a culpable nature), to advance their expenses incurred as a result of certain proceedings against them as to which they could be indemnified, and to obtain directors' and officers' insurance.

We believe that our limitation of officer and director liability assists us to attract and retain qualified employees and directors. However, in the event an officer, a director or the board of directors commits an act that may legally be indemnified under British Columbia law, we will be responsible to pay for such officer(s) or director(s) legal defense and potentially any damages resulting there from. Furthermore, the limitation on director liability may reduce the likelihood of derivative litigation against directors and may discourage or deter stockholders from instituting litigation against directors for breach of their fiduciary duties, even though such an action, if successful, might benefit our stockholders and us. Given the difficult environment and potential for incurring liabilities currently facing directors of publicly-held corporations, we believe that director indemnification is in our and our stockholders' best interests because it enhances our ability to attract and retain highly qualified directors and reduce a possible deterrent to entrepreneurial decision-making.

Nevertheless, limitations of director liability may be viewed as limiting the rights of stockholders, and the broad scope of the indemnification provisions contained in our certificate of incorporation and bylaws could result in increased expenses. Our board of directors believes, however, that these provisions will provide a better balancing of the legal obligations of, and protections for, directors and will contribute positively to

the quality and stability of our corporate governance. Our board of directors has concluded that the benefit to stockholders of improved corporate governance outweighs any possible adverse effects on stockholders of reducing the exposure of directors to liability and broadened indemnification rights.

Risks Related to This Offering

Future sales or issuances of our common shares may dilute the ownership interest of existing shareholders and depress the trading price of our common shares.

We cannot predict the effect, if any, that future sales of our common shares, including sales pursuant to the at the market offering agreement, or the availability of our common shares for future sale, will have on the market price of our common shares. Future sales or issuances of our common shares may dilute the ownership interests of our existing shareholders, including purchasers of common shares in this offering. In addition, future sales or issuances of substantial amounts of our common shares may be at prices below the offering price of the shares offered by this prospectus supplement and may adversely impact the market price of our common shares and the terms upon which we may obtain additional equity financing in the future. The perception that such sales or issuances may occur could also negatively impact the market price of our common shares.

The common shares offered hereby will be sold in "at the market" offerings, and investors who buy shares at different times will likely pay different prices.

Investors who purchase our common shares in this offering at different times will likely pay different prices. As a result, investors may experience different outcomes in their investment results. We will have discretion, subject to market demand, to vary the timing, prices and numbers of common shares sold, and there is no minimum or maximum sales price required in connection with this offering. Investors may experience a decline in the value of their common shares as a result of sales made at prices lower than the prices they paid.

The actual number of common shares we will issue pursuant to this offering, at any one time or in total, is uncertain.

Subject to certain limitations in the at the market offering agreement and compliance with applicable law, we have the discretion to deliver a sales notice to the sales agent at any time throughout the term of this offering. The number of common shares that are sold by the sales agent will fluctuate based on the market price of our common shares during the offering period and limits we set with the sales agent. Because the price per share of each common share sold will fluctuate based on the market price of our common shares during the offering period, it is not possible at this stage to predict the number of shares that will be ultimately issued or the amount of proceeds that we will receive from this offering.

You will likely experience immediate and substantial dilution in the net tangible book value per share of the common shares you purchase.

Since the price per common share pursuant to this offering is likely higher than the net tangible book value per common share, you will likely suffer substantial dilution in the net tangible book value of the common shares that you purchase in this offering. Based on an assumed offering price of $7.38 per common share, which was the last reported sale price of our common shares on the Nasdaq Capital Market on October 28, 2020, if you purchase common shares in this offering, you will suffer immediate and substantial dilution of approximately $5.30 per common share in the net tangible book value. See the section titled "Dilution" in this prospectus supplement for a more detailed discussion of the dilution you will likely incur if you purchase common shares in this offering. In addition, to the extent that outstanding stock options or warrants may be exercised or other common shares issued, you may experience further dilution. Furthermore, to the extent we need to raise additional capital in the future and we issue additional common shares or securities convertible or exchangeable for our common shares, our then-existing shareholders may experience dilution and the new securities may have rights senior to those of our common shares offered in this offering

Management has broad discretion over the use of the proceeds from this offering. We may use the proceeds of this offering in ways that do not improve our operating results or the market value of our common shares.

We will have broad discretion in determining the specific uses of the net proceeds from the sale of the common shares pursuant to this offering. Our allocations may change in response to a variety of unanticipated events. We will also have significant flexibility as to the timing and use of the net proceeds. As a result, investors will not have the opportunity to evaluate the economic, financial or other information on which we base our decisions on how to use the net proceeds. You will rely on the judgment of our management with only limited information about their specific intentions regarding the use of proceeds. We may spend most of the net proceeds of this offering in ways which you may not agree with. If we fail to apply these funds effectively, our business, results of operations and financial condition may be materially and adversely affected.

USE OF PROCEEDS

We intend to use the net proceeds from this offering for obtaining regulatory approvals, the potential launch of PEDMARK™, and working capital and general corporate purposes. Our management will retain broad discretion over the allocation of the net proceeds from the sale of the common shares. We have no current understandings, agreements or commitments for any material acquisitions.

Therefore, investors in our common shares will be relying on the judgment of our management, who will have broad discretion regarding the application of the proceeds of this offering. The amounts and timing of our actual expenditures will depend upon numerous factors, including our cash needs, regulatory approval of PEDMARK™, the rate of adoption of PEDMARK™ by the medical community, and efficiency of our product development. We may find it necessary or advisable to use portions of the proceeds from this offering for other purposes.

Pending the application of the net proceeds, we intend to invest the net proceeds in money market accounts and/or investment-grade, interest-bearing securities. Our management has broad discretion over how these proceeds are used and could spend the proceeds in ways with which you may not agree, and the proceeds may not be invested in a manner that yields a favorable or any return.

DILUTION

If you invest in our common shares, you will likely experience immediate and substantial dilution to the extent of the difference between the public offering price of our common shares in this offering and the adjusted net tangible book value per share of our common shares immediately after the offering.

Our net tangible book value per common share is determined by subtracting our total liabilities from our total tangible assets, which is total assets less intangible assets, and dividing this amount by the number of common shares outstanding. The historical net tangible book value of our common shares as of June 30, 2020 was approximately $35.7 million, or $1.41 per share, based on 25,356,034 common shares outstanding at June 30, 2020.

After giving effect to our sale in this offering of common shares in the aggregate amount of $25,000,000 at an assumed public offering price of $7.38 per share (the last reported sale price of our common shares on the Nasdaq Capital Market on October 28, 2020), and after deducting the sales agent commissions and our estimated offering expenses payable by us, our as adjusted net tangible book value as of June 30, 2020 would have been approximately $59.9 million, or $2.08 per share. This represents an immediate increase in net tangible book value of $0.67 per share to our existing shareholders and an immediate dilution of $5.30 per share to new investors purchasing common shares in this offering at the assumed public offering price. The following table illustrates this dilution on a per common share basis:

Assumed public offering price per common share		$7.38
Net tangible book value per common share as of June 30, 2020	$1.41	
Increase in net tangible book value per common share attributable to this offering based on assumed offering price	$0.67	
As adjusted net tangible book value per common share after this offering based on assumed offering price		$2.08
Dilution per common share to new investors based on assumed offering price		$5.30

The table above assumes for illustrative purposes that an aggregate of 3,387,534 common shares are sold at a price of $7.38 per share, the last reported sale price of our common shares on the Nasdaq Capital Market on October 28, 2020, for aggregate gross proceeds of approximately $25,000,000. The common shares sold in this offering, if any, will be sold from time to time at various prices. An increase of $1.00 per share in the price at which the shares are sold from the assumed public offering price of $7.38 per share shown in the table above, assuming all of our common shares in the aggregate amount of $25,000,000 are sold at that price, would increase the dilution in net tangible book value per share to new investors in this offering to $6.27 per share, after deducting commissions and estimated offering expenses payable by us. A decrease of $1.00 per common share in the price at which the shares are sold from the assumed public offering price of $7.38 per share shown in the table above, assuming all of our common shares in the aggregate amount of $25,000,000 are sold at that price, would decrease the dilution in net tangible book value per share to new investors in this offering to $4.33 per share, after deducting commissions and estimated offering expenses payable by us. This information is supplied for illustrative purposes only.

The table and discussion above are based on 25,356,034 common shares issued and outstanding on June 30, 2020 and excludes as of that date the following:

- 3,563,235 common shares issuable upon the exercise of outstanding options having a weighted average exercise price of $4.02 per share (Canadian denominated exercise prices converted using the June 30, 2020 exchange rate of 0.732952 CAD/USD);
- 39,130 common shares issuable upon the exercise of outstanding warrants having an exercise price of $6.80 per share; and
- 2,775,773 additional common shares reserved for issuance under our stock option plan.

To the extent that any of the outstanding warrants or options are exercised, there will be further dilution to new investors. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity securities, the issuance of these securities could result in further dilution to our shareholders.

PLAN OF DISTRIBUTION

We have entered into an at the market offering agreement with H.C. Wainwright & Co., LLC, the sales agent, under which we may issue and sell over a period of time, and from time to time, our common shares through the sales agent. This prospectus supplement relates to our ability to issue and sell over a period of time, and from time to time, up to $25,000,000 of our common shares through the sales agent. Sales of the shares to which this prospectus supplement and the accompanying prospectus relate, if any, will be made by means of ordinary brokers' transactions on the Nasdaq Capital Market, or otherwise at market prices prevailing at the time of sale or negotiated transactions, or as otherwise agreed with the sales agent. In the event that any sales are made pursuant to the at the market offering agreement which are not made directly on the Nasdaq Capital Market or on any other existing U.S. trading market for our common shares at market prices at the time of sale, including, without limitation, any sales to the sales agent acting as principal or sales in negotiated transactions, we will file a prospectus supplement describing the terms of such transaction, the amount of shares sold, the price thereof, the applicable compensation, and such other information as may be required pursuant to Rule 424 and Rule 430B under the Securities Act, as applicable, within the time required by Rule 424 under the Securities Act.

Upon written instructions from us, the sales agent will offer our common shares, subject to the terms and conditions of the at the market offering agreement, on a daily basis or as otherwise agreed upon by us and the sales agent. We will designate the maximum amount of common shares to be sold through the sales agent on a daily basis. Subject to the terms and conditions of the at the market offering agreement, the sales agent will use its commercially reasonable efforts to sell on our behalf all of the common shares so designated or determined. We may instruct the sales agent not to sell common shares if the sales cannot be effected at or above the price designated by us in any such instruction. We or the sales agent may suspend the offering of our common shares being made through the sales agent under the at the market offering agreement upon proper notice to the other party.

For its service as sales agent in connection with the sale of our common shares pursuant to this offering, we will pay the sales agent an aggregate fee of 3.0% of the gross sales price per common shares sold through it acting as our sales agent. The remaining sales proceeds, after deducting any expenses payable by us and any transaction fees imposed by any clearing firm, execution broker, governmental, regulatory or self-regulatory organization in connection with the sales, will equal our net proceeds for the sale of such shares. We have agreed to reimburse the sales agent for certain of its expenses in an amount not to exceed $50,000.

The sales agent will provide written confirmation to us following the close of trading on the Nasdaq Capital Market on each day in which common shares are sold by it on our behalf under the at the market offering agreement. Each confirmation will include the number of shares sold on that day, the gross sales price per share, the compensation payable by us to the sales agent and the proceeds to us net of such compensation and expenses for which we are responsible.

Settlement for sales of common shares will occur, unless the parties agree otherwise, on the second business day following the date on which any sales were made in return for payment of the proceeds to us net of compensation and expenses paid by us to the sales agent. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

Unless otherwise required, we will report at least quarterly the number of common shares sold through the sales agent under the at the market offering agreement, the net proceeds to us and the compensation paid by us to the sales agent in connection with the sales of common shares.

In connection with the sale of common shares on our behalf, the sales agent may be deemed to be an "underwriter" within the meaning of the Securities Act, and the compensation paid to the sales agent may be deemed to be underwriting commissions or discounts. We have agreed, under the at the market offering agreement, to provide indemnification and contribution to the sales agent against certain civil liabilities, including liabilities under the Securities Act.

To the extent required by Regulation M, as our sales agent, the sales agent will not engage in any transactions that stabilize our common shares while the offering is ongoing under this prospectus supplement.

The common shares offered pursuant to the at the market offering agreement have not been registered or qualified for distribution in any Province or Territory of Canada. The sales agent will not sell, offer to sell or solicit offers to purchase common shares in Canada, including through the Toronto Stock Exchange or any other trading markets in Canada, or to or from persons resident in any Province or Territory of Canada or to or from any person acquiring such common shares for the benefit of another person resident in any Province or Territory of Canada.

In the ordinary course of their business, the sales agent and/or its affiliates may perform investment banking, broker-dealer, financial advisory or other services for us for which they may receive separate fees.

We estimate that the total expenses from this offering payable by us, excluding compensation payable to the sales agent under the at the market offering agreement, will be approximately $75,000.

The offering of common shares pursuant to the at the market offering agreement will terminate upon the earlier of (i) the sale of all of our common shares provided for in this prospectus supplement or (ii) termination of the at the market offering agreement pursuant to its terms by either the sales agent or us.

LEGAL MATTERS

The validity of the common shares being offered by this prospectus supplement will be passed on for us by LaBarge Weinstein LLP, Ottawa, Ontario. Certain legal matters in connection with this offering will be passed upon for the sales agent by Ellenoff Grossman & Schole LLP, New York, New York.

EXPERTS

The consolidated financial statements of Fennec Pharmaceuticals Inc. appearing in our 2019 Annual Report have been audited by Haskell & White 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.

$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 Toranto 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 November 3, 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 theeffective 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 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 reallowed 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.

FENNEC PHARMACEUTICALS INC.

Up to $25,000,000 of Common Shares

PROSPECTUS SUPPLEMENT

October 30, 2020

H.C. Wainwright & Co.