

ONCOLYTICS BIOTECH INC
Form SUPPL
October 24, 2014

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File No. 333-197633

PROSPECTUS SUPPLEMENT

(To Base Shelf Prospectus dated August 1, 2014)

Up to US\$20,000,000 of common shares

We are hereby qualifying for distribution common shares of Oncolytics Biotech Inc. having an aggregate offering price of up to US\$20,000,000 (this “**Offering**”). We have entered into an equity distribution agreement dated October 24, 2014 (the “**Equity Distribution Agreement**”) with Canaccord Genuity Inc., as exclusive agent (the “**Agent**”), relating to the sale of common shares offered by this prospectus supplement and the accompanying short form base prospectus dated August 1, 2014. In accordance with the Equity Distribution Agreement, and except as noted below, we may distribute common shares having an aggregate offering price of US\$20,000,000 through the Agent, as our agent or as principal for the distribution of the common shares. See “Plan of Distribution” beginning on page S-15 of this prospectus supplement for more information regarding these arrangements.

The Agent will be entitled to compensation at a fixed commission rate of 3.0% of the gross sales price per share sold for services rendered in connection with this Offering. See “Plan of Distribution.”

We estimate the total expenses of this Offering, excluding the Agent’s fee, will be approximately US\$150,000.

No underwriter or dealer involved in this Offering, no affiliate of such an underwriter or dealer, and no person acting jointly or in concert with such an underwriter or dealer has over-allotted, or will over-allot, common shares in connection with this Offering or effect any other transactions that are intended to stabilize or maintain the market price of the common shares.

Our common shares are listed on the Nasdaq Capital Market (“**NASDAQ**”) under the symbol “**ONCY**” and on the Toronto Stock Exchange (“**TSX**”) under the symbol “**ONC**”. On October 23, 2014, the last reported sale price of our common shares was US\$0.4938 per common share on NASDAQ and C\$0.55 per common share on the TSX.

Sales of common shares, if any, under this prospectus supplement and the accompanying prospectus may be made in transactions that are deemed to be “at-the-market distributions” as defined in National Instrument 44-102 – Shelf Distributions (“**NI 44-102**”), including sales made directly on the NASDAQ or other existing trading markets for the common shares in the United States. The common shares will be distributed at market prices prevailing at the time of the sale of such common shares. As a result, prices may vary as between purchasers and during the period of distribution. No common shares will be sold on the TSX or on other trading markets in Canada as at-the-market distributions.

In connection with the sale of our common shares on our behalf, the Agent will be deemed to be an “underwriter” within the meaning of the *United States Securities Act of 1933, as amended* (the “**U.S. Securities Act**”) and the compensation of the Agent will be deemed to be underwriting commissions or discounts.

Investing in our common shares is speculative and bears certain risks. See “Risk Factors” beginning on page S-12 of this prospectus supplement and on page 10 of the accompanying prospectus and the risk factors discussed or referred to in our Annual Information Form and Annual MD&A which are incorporated by reference into this prospectus supplement and the accompanying prospectus.

This offering is made by a Canadian issuer that is permitted under a multi-jurisdictional disclosure system adopted by the United States and Canada to prepare this prospectus supplement and the accompanying prospectus in accordance with Canadian disclosure requirements. Prospective investors should be aware that such requirements are different from those applicable to issuers in the United States. Financial statements incorporated herein by reference have been prepared in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”), and may not be comparable to financial statements of United States companies.

Prospective investors should be aware that the acquisition, holding or disposition of the common shares may have tax consequences both in the United States and in Canada. Such consequences for investors who are resident in, or citizens of, the United States may not be described fully herein. Prospective investors should read the tax discussion contained in this prospectus supplement under the heading “Certain US Federal Income Tax Considerations” and should consult their own tax advisor with respect to their own particular circumstances.

The enforcement by investors of civil liabilities under the US federal securities laws may be affected adversely by the fact that we are governed by the laws of Canada, that some or all of our officers and directors are residents of Canada, and that a substantial portion of our assets and the assets of said persons are located outside the United States.

NEITHER THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION (THE “SEC”) NOR ANY STATE SECURITIES REGULATOR HAS APPROVED OR DISAPPROVED OF THE SECURITIES OFFERED HEREBY OR DETERMINED IF THIS PROSPECTUS SUPPLEMENT OR THE ACCOMPANYING PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENCE.

Canaccord Genuity

The date of this prospectus supplement is October 24, 2014.

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IMPORTANT NOTICE ABOUT INFORMATION IN THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this 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 is the accompanying prospectus, which provides more general information. If the description of the common shares varies between this prospectus supplement and the accompanying prospectus, investors should rely on the information in this prospectus supplement. Before you invest, you should carefully read this prospectus supplement, the accompanying prospectus, all information incorporated by reference herein and therein, as well as the additional information described under “Where You Can Find Additional Information” on page S-[26] of this prospectus supplement. These documents contain information you should consider when making your investment decision. This prospectus supplement may add, update or change information contained in the accompanying prospectus. To the extent that any statement that we make in this prospectus supplement is inconsistent with statements made in the accompanying prospectus or any documents incorporated by reference therein filed prior to the date of this prospectus supplement, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying prospectus and such documents incorporated by reference therein.

You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. We have not, and the Agent has not, authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. 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 offering of the common shares in certain jurisdictions may be restricted by law. You should assume that the information contained in this prospectus supplement and the accompanying prospectus, as well as information we have previously filed with the SEC and with the securities regulatory authority in each of the provinces and territories of Canada, except Québec, that is incorporated by reference herein and in the accompanying prospectus, is accurate only as of its respective date. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus supplement does 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 by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

Certain statistical information and other data relating to the pharmaceutical and biotechnology industry included in this prospectus supplement and the prospectus are derived from recognized industry reports published by industry analysts, industry associations and/or independent consulting and data compilation organizations. Market data and industry forecasts used throughout this prospectus supplement and the prospectus were obtained from various publicly available sources. Although the Corporation believes that these independent sources are generally reliable, the accuracy and completeness of the information from such sources is not guaranteed and has not been independently verified.

This prospectus supplement is deemed to be incorporated by reference into the prospectus solely for the purposes of this offering. Other documents are also incorporated or deemed to be incorporated by reference into this prospectus supplement and into the prospectus. See “Documents Incorporated by Reference.”

In this prospectus supplement, “**Oncolytics**,” the “**Corporation**,” “**we**,” “**us**,” and “**our**” refer to Oncolytics Biotech Inc. and its subsidiaries.

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FORWARD-LOOKING STATEMENTS

This prospectus supplement and the accompanying prospectus contain certain information that may constitute “forward-looking information” and “forward-looking statements” (“**forward-looking information**”) within the meaning of applicable Canadian securities laws and the *United States Private Securities Litigation Reform Act of 1995*, respectively. Forward-looking information typically contains statements with words such as “anticipate”, “believe”, “expect”, “plan”, “estimate”, “intend”, “may” or similar words suggesting future outcomes. Forward-looking information in this prospectus supplement includes, but is not limited to, statements with respect to: clinical trial study timing, product development timing, our ability to attract and retain business partners, future levels of government funding, competition from other biotechnology companies, our ability to obtain the capital required for research, product development, operations and marketing and the intended uses for the proceeds of this offering. This forward-looking information is subject to various risks and uncertainties, including those discussed below, that could cause actual results and experience to differ materially from the anticipated results or other expectations expressed. Our statements of “belief”, “estimates”, “expectations” and other similar statements are based primarily upon our results derived to date from our research and development program with animals and early stage human results and upon which we believe we have a reasonable scientific basis to expect the particular results to occur. It is not possible to predict, based upon studies in animals or early stage human results, whether a new therapeutic will be proved to be safe and effective in humans.

There can be no assurance that the particular results expected by us will occur. Forward-looking information is provided for the purpose of assisting you in understanding our current views of future outcomes, and may not be appropriate for other purposes. Readers are cautioned not to place undue reliance on this forward-looking information, which is provided as of the date of this prospectus unless otherwise stated.

Some of the assumptions, risks and factors which could cause future outcomes to differ materially from those set forth in the forward-looking information contained herein include, but are not limited to: (i) the assumption that we will be able to obtain sufficient and suitable financing to support operations, clinical trials and commercialization of products, (ii) the risk that we may not be able to capitalize on partnering and acquisition opportunities, (iii) the assumption that we will obtain favourable clinical trial results in the expected timeframe, (iv) the assumption that we will be able to adequately protect proprietary information and technology from competitors, (v) the risks relating to the uncertainties of the regulatory approval process, (vi) the impact of competitive products and pricing and the assumption that we will be able to compete in the targeted markets, and (vii) the risk that we may be unable to retain key personnel or maintain third party relationships, including relationships with key collaborators.

By its nature, forward-looking information involves numerous assumptions, inherent risks and uncertainties, both general and specific, that contribute to the possibility that the predictions, forecasts, projections or other forward-looking statements will not occur.

See “Risk Factors” beginning on page S-12 in this prospectus supplement and on page 10 of the accompanying prospectus and the risk factors discussed or referred to in our Annual Information Form and Annual MD&A which are incorporated by reference into this prospectus supplement and the accompanying prospectus.

Except as required by law, we undertake no obligation to publicly update any forward-looking information, whether as a result of new information, future events or otherwise.

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PRESENTATION OF FINANCIAL INFORMATION

Unless otherwise indicated, all financial information included and incorporated by reference in this prospectus supplement is prepared in accordance with IFRS. Since January 1, 2011, we have prepared our financial statements in accordance with IFRS. Prior to the adoption of IFRS, we followed Canadian Generally Accepted Accounting Principles (“**Canadian GAAP**”). While IFRS has many similarities to Canadian GAAP, some of our accounting policies have changed as a result of our transition to IFRS. Our financial statements incorporated by reference in this prospectus supplement and the prospectus and in the documents incorporated by reference herein and therein may not be comparable to financial statements prepared in accordance with United States generally accepted accounting principles.

CURRENCY AND EXCHANGE RATE INFORMATION

In this prospectus supplement, unless otherwise specified or the context otherwise requires, all dollar amounts are expressed in United States dollars. All references to “US\$” and “\$” are to the lawful currency of the United States and all references to “C\$” are to the lawful currency of Canada. In this prospectus supplement, where applicable, and unless otherwise indicated, amounts are converted from United States dollars to Canadian dollars and vice versa by applying the noon rate of exchange of the Bank of Canada on October 23, 2014. The following table sets forth: (i) the rates of exchange for Canadian dollars, expressed in U.S. dollars, in effect at the end of the periods indicated; (ii) the average rates of exchange in effect during such periods; (iii) the high rates of exchange in effect during such periods; and (iv) the low rates of exchange in effect during such periods, such rates, in each case, based on the noon rates of exchange for conversion of one Canadian dollar to U.S. dollars as reported by the Bank of Canada.

	Years Ended December 31,			Nine Months ended September 30, 2014
	2011	2012	2013	
Low	\$0.9430	\$0.9710	\$0.9839	\$ 0.8888
High	\$1.0583	\$1.0418	\$1.0697	\$ 0.9422
Average ⁽¹⁾	\$1.0110	\$0.9996	\$1.0299	\$ 0.9139
End	\$0.9833	\$1.0051	\$0.9402	\$ 0.8913

Note:

(1) The average of the inverse of the noon buying rate on the last day of each month during the applicable period.

On October 23, 2014, the inverse of the noon exchange rate quoted by the Bank of Canada for Canadian dollars was C\$1.00 = \$0.8899.

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PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights certain information about us, this offering and selected information contained elsewhere in or incorporated by reference into this prospectus supplement or the prospectus. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in the common shares. For a more complete understanding of the Corporation and this offering, we encourage you to read and consider carefully the more detailed information in this prospectus supplement and the prospectus, including the information incorporated by reference in this prospectus supplement and the prospectus, and the information included in any free writing prospectus that the Corporation has authorized for use in connection with this offering, including the information under the heading “Risk Factors” in this prospectus supplement on page S-12. All capitalized terms used in this summary refer to those definitions contained elsewhere in this prospectus supplement and/or the prospectus, as applicable.

Oncolytics Biotech Inc.

Our Business

We focus on the discovery and development of oncolytic viruses for the treatment of cancers that have not been successfully treated with conventional therapeutics. Recent scientific advances in oncology, virology, and molecular biology have created opportunities for new approaches to the treatment of cancer. The product candidate we are presently developing may represent a novel treatment for Ras-mediated cancers. We may develop this product candidate to be used as an alternative to existing cytotoxic or cytostatic therapies or as an adjuvant therapy to conventional chemotherapy, radiation therapy, or surgical resections. It could also potentially be used to treat certain cellular proliferative disorders for which no current therapy exists.

Our technologies are based primarily on discoveries made in the Department of Microbiology and Infectious Diseases at the University of Calgary in the 1990s. Oncolytics was formed in 1998 to explore the natural oncolytic capability of the reovirus, a virus that preferentially replicates in cells with an activated Ras pathway.

Our lead product candidate, REOLYSIN®, may represent a novel treatment for certain tumour types and some cellular proliferative disorders. This lead product is a virus that is able to replicate specifically in, and hence kill, certain tumour cells both in tissue culture as well as in a number of animal models without damaging normal cells.

REOLYSIN is developed from the reovirus. This virus has been demonstrated to replicate specifically in tumour cells bearing an activated Ras pathway. Activating mutations of Ras occur in approximately thirty per cent of all human tumours directly, but considering its central role in signal transduction, activation of the Ras pathway has been shown to play a role in approximately two-thirds of all tumours.

The functionality of REOLYSIN is based upon the finding that tumours bearing an activated Ras pathway are deficient in their ability to activate the anti-viral response mediated by the host cellular protein, Protein Kinase R ("PKR"). Since PKR is responsible for preventing reovirus replication, tumour cells lacking the activity of PKR are susceptible to reovirus infections. As normal cells do not possess Ras activations, these cells are able to thwart reovirus infections by the activity of PKR. In a tumour cell with an activated Ras pathway, reovirus is able to freely replicate and hence kill the host tumour cell. The result of this replication is progeny viruses that are then free to infect surrounding cancer cells. This cycle of infection, replication and cell death is believed to be repeated until there are no longer any tumour cells carrying an activated Ras pathway available.

The following schematic illustrates the molecular basis of how the reovirus kills cancer cells.

We have been issued over 380 patents including 55 U.S. and 19 Canadian patents as well as issuances in other jurisdictions. We have an extensive patent portfolio covering the oncolytic reovirus that we use in our clinical trial program including a composition of matter patent that expires in 2028. Our patent portfolio also includes methods for treating proliferative disorders using modified adenovirus, herpes simplex virus, parapoxvirus and vaccinia virus.

Corporate Information

Oncolytics Biotech Inc. was incorporated pursuant to the provisions of the Business Corporations Act (Alberta) on April 2, 1998 as 779738 Alberta Ltd. On April 8, 1998, we amended our articles and changed our name to Oncolytics Biotech Inc. On July 29, 1999, we further amended our articles by removing the private company restrictions and subdividing our 2,222,222 common shares issued and outstanding into 6,750,000 common shares. On February 9, 2007, we further amended our articles to permit our shareholder meetings to be held at any place in Alberta or at any other location as determined by our directors.

Our head office and principal place of business is located at 210, 1167 Kensington Crescent N.W., Calgary, Alberta T2N 1X7. Our registered office is located at 3700, 400 – 3rd Avenue S.W., Calgary, Alberta, T2P 4H2.

We have two direct wholly-owned subsidiaries: Oncolytics Biotech (Barbados) Inc., which is incorporated pursuant to the laws of Barbados and Valens Pharma Ltd., which is incorporated pursuant to the laws of the Province of Alberta; and two indirect wholly-owned subsidiaries: Oncolytics Biotech (U.S.), Inc., which is incorporated pursuant to the laws of Delaware, and Oncolytics Biotech (U.K.) Ltd., which is incorporated pursuant to the laws of England and Wales, both of which are wholly-owned direct subsidiaries of Oncolytics Biotech (Barbados) Inc.

SUMMARY OF THE OFFERING

Issuer:	Oncolytics Biotech Inc.
Offering:	Common shares having an aggregate offering price of up to US\$20,000,000.
Manner of Offering:	“At-the-market” offering that may be made from time to time through our sales agent, the Agent. See “Plan of Distribution” on page S-15.
Common shares outstanding before this Offering:	89,566,597 common shares.
Common shares to be outstanding immediately after this Offering⁽¹⁾⁽²⁾:	Up to 130,068,825 common shares, assuming an offering price of \$0.4938 per common share, which was the last reported sale price of our common shares on the NASDAQ on October 23, 2014. The actual number of common shares issued will vary depending on the sales price of this Offering.
Use of Proceeds:	We intend to use the net proceeds from this Offering, if any, for general corporate purposes. See “Use of Proceeds”.
NASDAQ Symbol:	ONCY
TSX Symbol:	ONC
Risk Factors:	You should carefully read and consider the information set forth in “Risk Factors” beginning on page S-12 of this prospectus supplement and page 10 of the prospectus before investing in our common shares.

Notes:

(1) On a non-diluted basis.

Unless otherwise stated, all information contained in this prospectus supplement reflects an assumed public (2) offering price of \$0.4938 per share, which was the last reported sale price of our common shares on the NASDAQ on October 23, 2014.

RECENT DEVELOPMENTS

U.S. Randomized Phase 2 Pancreatic Cancer Study

On September 16, 2014, we announced overall and KRAS-mutated patient data from our two-arm randomized phase 2 study of carboplatin, paclitaxel plus REOLYSIN® (test arm) versus carboplatin and paclitaxel alone (control arm) in the first line treatment of patients with recurrent or metastatic pancreatic cancer (NCI-8601). The trial was sponsored by the U.S. National Cancer Institute (NCI) through a clinical trials agreement between the Cancer Therapy Evaluation Program, Division of Cancer Treatment and Diagnosis and Oncolytics. We provided clinical supplies of REOLYSIN® for the study and paid for the immune and genetic testing of the patients.

The overall objectives of the study were to determine the progression free survival of the overall patient population and the patient population according to KRAS mutation status.

Overall patient population

The study enrolled 73 patients; 37 were in the control arm, 36 were in the test arm. The median progression free survival for the control arm was 5.16 months (95% confidence interval (CI) = 2.267 to 6.176) versus 5.26 months for the test arm (95% CI = 3.187 to 6.307) (see Figure 1).

Figure 1 - Kaplan-Meier plot of the Progression Free Survival (PFS) of the control arm versus the test arm of the overall patient population.

KRAS mutated patient population

As part of the study design, patients were screened for KRAS status at codon 12. Of the 60 patients where KRAS status could be determined (mutant vs wild type), 44 (73%) had mutations in the KRAS gene (n = 23 in the control arm, n = 21 in the test arm). Median progression free survival in the test arm was 5.72 months (95% CI = 3.187 to 6.767) versus 4.11 months in the control arm (95% CI = 1.938 to 6.176) (see Figure 2). This translates into a 1.61

month (39%) improvement in median progression free survival in the test arm versus the control arm. Three patients on the test arm and one on the control arm had not progressed as of the time of analysis.

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Figure 2 - Kaplan-Meier plot of the Progression Free Survival (PFS) of the control arm versus the test arm of the KRAS mutated patient population

Crossover patient population

Patients on the control arm who progressed on carboplatin and paclitaxel had the option of adding REOLYSIN® to their regimen. At the time of the analysis, 16 patients crossed over to the test arm regime. The best responses after crossover were one partial response (PR), six stable disease (SD), seven progressive disease (PD), and two not evaluable, giving a disease control rate (complete response (CR) + PR + SD) of 50% in the carboplatin and paclitaxel failed group.

The study was an open-label, multi-institution, two-arm phase 2 randomized study of patients with metastatic pancreatic cancer. Patients were randomized to receive either carboplatin, paclitaxel plus REOLYSIN® (test arm) or carboplatin and paclitaxel alone (control arm). Patients in both arms received treatment every three weeks (21-day cycles) and standard intravenous doses of paclitaxel and carboplatin on day one only. In the test arm, patients also received intravenous REOLYSIN® at a dose of 3×10^{10} TCID₅₀ on days one through five. Tumor response assessment was done by computed tomography (CT) scan and conducted every eight weeks. Patients who progressed on carboplatin and paclitaxel (control arm) had REOLYSIN® added. If patients experienced significant toxicity related to carboplatin and/or paclitaxel, they could continue with single agent REOLYSIN®.

The primary endpoint of the trial is to assess improvement in progression-free survival with REOLYSIN®, carboplatin and paclitaxel relative to carboplatin and paclitaxel alone in patients with metastatic pancreatic cancer. The primary endpoint is progression free survival in both arms. Secondary endpoints include safety, overall response rate, overall survival, immune factors and to prospectively establish and validate the relationship between Ras mutations in tumor samples and response to REOLYSIN®.

RISK FACTORS

Prospective purchasers of common shares should consider carefully the risk factors set out herein and contained in and incorporated by reference in the accompanying base shelf prospectus. Discussions of certain risks affecting the Corporation in connection with its business are set forth under “Risk Factors” in the accompanying prospectus and in our Annual Information Form, our Annual MD&A and our other disclosure documents filed with the various securities regulatory authorities which are incorporated by reference in this prospectus supplement and the accompanying prospectus.

Volatility of Market Price of common shares

The market price of the common shares may be volatile. The volatility may affect the ability of holders of common shares to sell the common shares at an advantageous price. Market price fluctuations in the common shares may be due to the Corporation's operating results failing to meet the expectations of securities analysts or investors in any quarter, downward revision in securities analysts' estimates, governmental regulatory action, adverse change in general market conditions or economic trends, acquisitions, dispositions or other material public announcements by the Corporation or its competitors, along with a variety of additional factors, including, without limitation, those set forth under “Forward-Looking Statements” in this prospectus supplement. In addition, the market price for securities in the stock markets, including NASDAQ and the TSX, recently experienced significant price and trading fluctuations. These fluctuations have resulted in volatility in the market prices of securities that often has been unrelated or disproportionate to changes in operating performance. These broad market fluctuations may adversely affect the market price of the common shares.

The Corporation will have broad discretion over the use of the net proceeds from this offering and the Corporation May Not Use These Proceeds in a Manner Desired by the Corporation's Shareholders

Management will have broad discretion with respect to the use of the net proceeds, if any, from this offering and investors will be relying on the judgment of management regarding the application of these proceeds. Management could spend most of the net proceeds from this offering in ways that the Corporation's shareholders may not desire or that do not yield a favorable return. You will not have the opportunity, as part of your investment in the common shares, to influence the manner in which the net proceeds of this offering are used. At the date of this prospectus supplement, the Corporation intends to use the net proceeds from this offering as described under the heading “Use of Proceeds”. However, the Corporation's needs may change as the business and the industry the Corporation addresses evolve. As a result, the proceeds to be received in this offering may be used in a manner significantly different from the Corporation's current expectations.

The Corporation Does Not Currently Intend to Pay any Cash Dividends on its common shares in the Foreseeable Future; Therefore, the Corporation's Shareholders May Not be Able to Receive a Return on their common shares Until They Sell Them

The Corporation has never paid or declared any cash dividends on its common shares. The Corporation does not anticipate paying any cash dividends on its common shares in the foreseeable future because, among other reasons, the Corporation currently intends to retain any future earnings to finance its business. The future payment of dividends will be dependent on factors such as cash on hand and achieving profitability, the financial requirements to fund growth, the Corporation's general financial condition and other factors the board of directors of the Corporation may consider appropriate in the circumstances. Until the Corporation pays dividends, which it may never do, its shareholders will not be able to receive a return on their common shares unless they sell them.

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We Expect to be Treated as a “Passive Foreign Investment Company” for the Current Taxable Year and for the Foreseeable Future

Generally, a foreign corporation will be a passive foreign investment company (“**PFIC**”) if, for any tax year, (a) 75% or more of its gross income for such tax year is passive income or (b) 50% or more of the value of its assets either produce passive income or are held for the production of passive income, based on the quarterly average of the fair market value of such assets. Based on current business plans and financial projections, we expect that we will be a PFIC for the current taxable year and for the foreseeable future. If we are treated as PFIC for any taxable year, a U.S. investor may be subject to materially adverse tax treatment with respect to their common shares. For a more detailed discussion of the tax consequences of PFIC classification for a U.S. investor, see “Certain U.S. Federal Income Tax Considerations.”

DOCUMENTS INCORPORATED BY REFERENCE

This prospectus supplement is deemed to be incorporated by reference into the prospectus solely for the purposes of this offering.

We are incorporating by reference in this prospectus supplement certain information contained in documents filed by us with certain securities regulatory authorities in Canada and the SEC. This means that we are disclosing important information to you by referring you to those documents. The information incorporated by reference is deemed to be part of this prospectus supplement, except for any information superseded by information contained directly in this prospectus supplement or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein.

You may obtain copies of the documents incorporated by reference in this prospectus supplement on request without charge from our Corporate Secretary at 210, 1167 Kensington Crescent N.W., Calgary, Alberta T2N 1X7 Telephone: (403) 670-7377, as well as through the sources described below under “Where You Can Find Additional Information”.

The following documents are specifically incorporated by reference in and form an integral part of the prospectus and this prospectus supplement:

- (a) our annual information form, which is comprised of our Annual Report on Form 20-F dated March 19, 2014, for the year ended December 31, 2013 (the “**Annual Information Form**”);

- (b) our management information circular dated May 9, 2014, relating to the annual general meeting of shareholders held on June 18, 2014;

- (c) our audited consolidated financial statements, together with the notes thereto, as at December 31, 2013 and 2012, which comprise the consolidated statements of financial position as at December 31, 2013 and 2012, and the consolidated statements of loss and comprehensive loss, changes in equity, and cash flows for the years ended December 31, 2013 and 2012, together with the auditor's report thereon;

- (d) our management's discussion and analysis of financial condition and results of operations dated March 12, 2014, for the year ended December 31, 2013 (the "**Annual MD&A**");

- (e) our management's discussion and analysis of financial condition and results of operations dated August 6, 2014, for the six month period ended June 30, 2014; and

- (f) our unaudited interim condensed consolidated financial statements, together with the notes thereto, for the six month period ended June 30, 2014.

Any documents of the type referred to above, any material change reports (excluding confidential material change reports), and any business acquisition reports filed by us with the securities regulatory authorities in Canada after the date of this prospectus supplement and prior to the termination of this offering will be deemed to be incorporated by reference in this prospectus supplement.

When new documents of the type referred to in the paragraphs above are filed by us with the securities regulatory authorities in Canada during the currency of this prospectus supplement, such documents will be deemed to be incorporated by reference in this prospectus supplement and the previous documents of the type referred to in the paragraphs above and all material change reports, unaudited interim consolidated financial statements (and management's discussion and analysis relating thereto) and certain prospectus supplements filed by us with the securities regulatory authorities in Canada before the commencement of our financial year in which the new documents are filed will no longer be deemed to be incorporated by reference in this prospectus supplement.

In addition, to the extent that any document or information incorporated by reference into this prospectus supplement is included in any report on Form 6-K, Form 40-F, Form 20-F, Form 10-K, Form 10-Q or Form 8-K (or any respective successor form) that is filed with or furnished to the SEC after the date of this prospectus supplement until the date that all common shares offered hereunder are sold, such document or information shall be deemed to be incorporated by reference as an exhibit to the registration statement of which this prospectus supplement forms a part. In addition, we may incorporate by reference into this prospectus supplement other information from documents that we file with or furnish to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act, if and to the extent expressly provided therein.

Any statement contained in this prospectus supplement or in a document incorporated or deemed to be incorporated by reference in this prospectus supplement shall be deemed to be modified or superseded for purposes of this prospectus supplement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. The modifying or superseding statement need not state that it has modified or superseded a prior statement or include any other information set forth in the document that it modifies or supersedes. The making of a modifying or superseding statement shall not be deemed an admission for any purposes that the modified or superseded statement, when made, constituted a misrepresentation, an untrue statement of a material fact or an omission to state a material fact that is required to be stated or that is necessary to make a statement not misleading in light of the circumstances in which it was made. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement.

DOCUMENTS FILED AS PART OF THE REGISTRATION STATEMENT

In addition to the documents specified in this prospectus supplement and in the prospectus under “Documents Incorporated by Reference”, the Equity Distribution Agreement described in this prospectus supplement and the consents of legal counsel will be filed with the SEC and will form part of the registration statement of which this prospectus supplement forms a part.

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USE OF PROCEEDS

The amount of proceeds from this offering will depend upon the number of common shares sold and the market price at which they are sold. There can be no assurance that we will be able to sell any common shares under or fully utilize the Equity Distribution Agreement with the Agent as a source of financing. We intend to use the net proceeds, if any, from this Offering for general corporate purposes.

The amounts and timing of our actual expenditures will depend on numerous factors, such as the amount of cash used in our operations. We therefore cannot estimate with certainty the amount of net proceeds to be used for the purposes described above. We may find it necessary or advisable to use the net proceeds for other purposes, and we will have broad discretion in the application of the net proceeds. Pending the uses described above, we plan to invest the net proceeds from this offering in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

CONSOLIDATED CAPITALIZATION

Since June 30, 2014, the Corporation has issued an aggregate of 2,029,200 common shares for aggregate net proceeds of US\$2,592,980 as described under the heading “Prior Sales” in the prospectus. Except as otherwise described in this prospectus supplement and in the accompanying prospectus, there have been no material changes in our consolidated share and loan capital, on a consolidated basis, since the date of our most recently filed unaudited financial statements for the six month period ended June 30, 2014.

PLAN OF DISTRIBUTION

Sales of the common shares will be made in transactions that are deemed to be “at-the-market distributions” as defined in NI 44-102, including sales made directly on the NASDAQ or other existing trading markets in the United States. Subject to the terms and conditions of the Equity Distribution Agreement and upon delivery of a placement notice from us, the Agent will solicit offers to purchase our common shares directly on the NASDAQ or other existing trading markets in the United States. We will instruct the Agent as to the number of common shares to be sold by them from time to time. No common shares will be sold on the TSX or on other trading markets in Canada as at-the-market distributions. We may instruct the Agent not to sell common shares if the sales cannot be effected at or above the price designated by us from time to time. We or the Agent may suspend the offering of the common shares upon notice and subject to other conditions.

We will pay the Agent commissions, in cash, for its services in acting as agent in the sale of our common shares. The Agent will be entitled to compensation at a fixed commission rate of 3.0% of the gross sales price per share sold. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. We have also agreed to reimburse the Agent for certain specified expenses, including the fees and disbursements of its legal counsel, in an amount not to exceed US\$60,000. We estimate that the total expenses for the offering, excluding compensation and reimbursements payable to the Agent under the terms of the Equity Distribution Agreement, will be approximately US\$90,000.

Settlement for sales of our common shares will occur on the third business day following the date on which any sales are made, or on such other date as is industry practice for regular-way trading, in return for payment of the net proceeds to us. Sales of our common shares as contemplated in this prospectus will be settled through the facilities of The Depository Trust Company or by such other means as we and the Agent may agree upon. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

The Agent will use its commercially reasonable efforts, consistent with its sales and trading practices, to solicit offers to purchase the common shares under the terms and subject to the conditions set forth in the Equity Distribution Agreement. In connection with the sale of the common shares on our behalf, the Agent will be deemed to be an “underwriter” within the meaning of the United States Securities Act, and the compensation of the Agent will be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to the Agent against certain civil liabilities, including liabilities under the United States Securities Act.

The offering of common shares pursuant to the Equity Distribution Agreement will terminate upon the earlier of (i) the sale of all common shares subject to the Equity Distribution Agreement, or (ii) termination of the Equity Distribution Agreement as permitted therein. We and the Agent may each terminate the Equity Distribution Agreement at any time upon ten days’ prior notice.

The Agent and its affiliates may in the future provide various investment banking, commercial banking and other financial services for us and our affiliates, for which services they may in the future receive customary fees. To the extent required by Regulation M, the Agent will not engage in any market making activities involving our common shares while the offering is ongoing under this prospectus supplement.

No underwriter or dealer involved in the offering, no affiliate of such an underwriter or dealer, and no person or company acting jointly or in concert with such an underwriter or dealer has over-allotted, or will over-allot, the common shares in connection with the offering or effect any other transaction that are intended to stabilize or maintain the market price of the common shares.

The TSX has conditionally approved the listing of the common shares offered by this prospectus supplement. Listing is subject to us fulfilling all of the requirements of the TSX. The NASDAQ has authorized, upon official notice of issuance, the listing of the common shares offered hereunder.

TRADING PRICE AND VOLUME

Our outstanding common shares are listed and posted for trading on NASDAQ under the trading symbol “ONCY” and on the TSX under the trading symbol “ONC”. The following table sets forth the market price ranges and the aggregate volume of trading of the common shares on NASDAQ and the TSX for the periods indicated:

Period	NASDAQ	TSX
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	High	Low	Close	Volume	High	Low	Close	Volume
	(\$)	(\$)	(\$)	(Shares)	(C\$)	(C\$)	(C\$)	(Shares)
2013								
October	3.39	2.25	2.67	11,269,600	3.49	2.31	2.78	2,665,900
November	2.72	1.64	1.85	16,758,800	2.83	1.70	1.95	5,936,900
December	1.88	1.45	1.55	8,457,300	1.99	1.54	1.66	2,096,000
2014								
January	1.92	1.53	1.57	16,358,000	2.10	1.65	1.75	2,673,400
February	1.79	1.45	1.72	5,967,943	1.98	1.61	1.90	918,938
March	2.07	1.61	1.81	12,113,726	2.31	1.78	2.00	907,737
April	2.00	1.40	1.46	6,638,510	2.20	1.54	1.68	893,221
May	1.50	1.20	1.32	4,907,935	1.65	1.30	1.44	1,315,417
June	1.39	1.24	1.28	3,548,126	1.52	1.34	1.37	1,380,819
July	1.69	1.28	1.34	6,649,708	1.79	1.38	1.46	1,111,594
August	1.40	1.25	1.38	3,096,653	1.55	1.37	1.50	1,133,162
September	1.42	0.55	0.58	13,634,290	1.56	0.62	0.64	4,873,375
October 1 to 23	0.58	0.40	0.49	6,462,623	0.64	0.45	0.55	3,367,278

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PRIOR SALES

During the twelve month period preceding the date of this prospectus supplement, the Corporation issued an aggregate of 4,807,779 common shares, the particulars of which are set forth in the following table:

Date of Issue	Number of common shares Issued	Issue Price per common share or Exercise Price	
December 4, 2013	35,000	C\$	1.6500
December 5, 2013	10,000	C\$	1.6500
February 27, 2014	292,793	US\$	1.5540
February 27, 2014	612,223	US\$	1.6640
March 11, 2014	101,884	US\$	1.6733
April 3, 2014	101,944	US\$	1.7267
April 7, 2014	101,944	US\$	1.7267
April 14, 2014	101,734	US\$	1.5399
April 17, 2014	101,760	US\$	1.5633
April 22, 2014	101,734	US\$	1.5400
April 25, 2014	101,723	US\$	1.5300
May 1, 2014	101,633	US\$	1.4500
June 2, 2014	101,415	US\$	1.2567
June 3, 2014	101,408	US\$	1.2500
June 5, 2014	101,415	US\$	1.2567
June 9, 2014	101,415	US\$	1.2567
June 11, 2014	101,415	US\$	1.2567
June 13, 2014	101,415	US\$	1.2567
June 17, 2014	101,415	US\$	1.2567
June 19, 2014	101,415	US\$	1.2567
June 23, 2014	101,464	US\$	1.3000
June 30, 2014	101,430	US\$	1.2700
July 2, 2014	101,423	US\$	1.2633
July 3, 2014	101,423	US\$	1.2633
July 22, 2014	101,588	US\$	1.4100
July 24, 2014	101,565	US\$	1.3900
July 28, 2014	101,486	US\$	1.3200
July 30, 2014	101,532	US\$	1.3600
August 1, 2014	101,430	US\$	1.2700
August 8, 2014	101,464	US\$	1.3000
August 12, 2014	101,464	US\$	1.3000
August 14, 2014	101,419	US\$	1.2600
August 18, 2014	101,419	US\$	1.2600
August 20, 2014	101,419	US\$	1.2600
August 22, 2014	101,441	US\$	1.2800
August 26, 2014	101,445	US\$	1.2833
August 28, 2014	101,445	US\$	1.2833

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September 2, 2014	101,445	US\$	1.2833
September 4, 2014	101,445	US\$	1.2833
September 8, 2014	101,453	US\$	1.2900
September 10, 2014	101,464	US\$	1.3000
September 12, 2014	101,430	US\$	1.2700

During the twelve month period preceding the date of this prospectus supplement, the Corporation granted options exercisable for an aggregate of 1,716,000 common shares, the particulars of which are set forth in the following table:

Date of Grant	Number and Type of Securities Issued	Exercise Price
December 11, 2013	1,416,000 options	C\$ 1.74
February 3, 2014	200,000 options	C\$ 1.69
June 18, 2014	100,000 options	C\$ 1.46

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CERTAIN U.S. FEDERAL INCOME TAX CONSIDERATIONS

The following is a general summary of certain U.S. federal income tax considerations applicable to a U.S. Holder (as defined below) arising from and relating to the acquisition, ownership and disposition of common shares acquired pursuant to this prospectus supplement.

This summary is for general information purposes only and does not purport to be a complete analysis or listing of all potential U.S. federal income tax considerations that may apply to a U.S. Holder arising from and relating to the acquisition, ownership and disposition of common shares.

In addition, this summary does not take into account the individual facts and circumstances of any particular U.S. Holder that may affect the U.S. federal income tax considerations applicable to such U.S. Holder. Except as specifically set forth below, this summary does not discuss applicable tax reporting requirements. Accordingly, this summary is not intended to be, and should not be construed as, legal or U.S. federal income tax advice with respect to any particular U.S. Holder. This summary does not address the U.S. state and local, U.S. federal estate and gift, U.S. federal alternative minimum tax, or non-U.S. tax consequences to U.S. Holders relating to the acquisition, ownership, and disposition of common shares.

Each U.S. Holder should consult its own tax advisor regarding the U.S. federal, U.S. state and local, and non-U.S. tax consequences relating to the acquisition, ownership, and disposition of common shares. No ruling from the U.S. Internal Revenue Service (the “**IRS**”) has been requested, or will be obtained, regarding the U.S. federal income tax considerations applicable to U.S. Holders as discussed in this summary. This summary is not binding on the IRS, and the IRS is not precluded from taking a position that is different from, and contrary to, the positions taken in this summary. In addition, because the authorities on which this summary is based are subject to various interpretations, the IRS and the U.S. courts could disagree with one or more of the positions taken in this summary.

Authorities

This summary is based on the Internal Revenue Code of 1986, as amended (the “**Code**”), Treasury Regulations (whether final, temporary, or proposed), U.S. court decisions, published IRS rulings, published administrative positions of the IRS, and the Convention Between Canada and the United States of America with Respect to Taxes on Income and on Capital, signed September 26, 1980, as amended (the “**Canada-U.S. Tax Convention**”), that are applicable and, in each case, as in effect, as of the date of this prospectus supplement. Any of the authorities on which this summary is based could be changed in a material and adverse manner at any time, and any such change could be applied on a retroactive or prospective basis and could affect the U.S. federal income tax considerations described in this summary. This summary does not discuss the potential effects, whether adverse or beneficial, of any proposed legislation that, if

enacted, could be applied on a retroactive or prospective basis.

U.S. Holders

For purposes of this summary, a “**U.S. Holder**” is a beneficial owner of common shares acquired pursuant to this prospectus supplement that is (a) an individual who is a citizen or resident of the U.S. for U.S. federal income tax purposes, (b) a corporation, or other entity classified as a corporation for U.S. federal income tax purposes, that is created or organized in or under the laws of the U.S. or any state in the U.S., including the District of Columbia, (c) an estate if the income of such estate is subject to U.S. federal income tax regardless of the source of such income, or (d) a trust if (i) such trust has validly elected to be treated as a U.S. person for U.S. federal income tax purposes or (ii) a U.S. court is able to exercise primary supervision over the administration of such trust and one or more U.S. persons have the authority to control all substantial decisions of such trust.

U.S. Holders Subject to Special U.S. Federal Income Tax Rules Not Addressed

This summary does not address the U.S. federal income tax considerations applicable to U.S. Holders that are subject to special provisions under the Code, including: (a) U.S. Holders that are tax-exempt organizations, qualified retirement plans, individual retirement accounts, or other tax-deferred accounts; (b) U.S. Holders that are financial institutions, underwriters, insurance companies, real estate investment trusts, or regulated investment companies or that are broker-dealers, dealers, or traders in securities or currencies that elect to apply a mark-to-market accounting method; (c) U.S. Holders that have a “functional currency” other than the U.S. dollar; (d) U.S. Holders that own common shares as part of a straddle, hedging transaction, conversion transaction, constructive sale, or other arrangement involving more than one position; (e) U.S. Holders that acquired common shares in connection with the exercise of employee stock options or otherwise as compensation for services; (f) U.S. Holders that hold common shares other than as a capital asset within the meaning of Section 1221 of the Code; or (g) U.S. Holders that own or will own, directly, indirectly, or by attribution, 10% or more, by voting power or value, of our outstanding shares. The summary also does not address the U.S. federal income tax considerations applicable to U.S. Holders who are (a) certain U.S. expatriates or former long-term residents of the U.S.; (b) persons that have been, are, or will be a resident or deemed to be a resident in Canada for purposes of the *Income Tax Act* (Canada) (the “**Tax Act**”); (c) persons that use or hold, will use or hold, or that are or will be deemed to use or hold common shares in connection with carrying on a business in Canada; (d) persons whose common shares constitute “taxable Canadian property” under the Tax Act; or (e) persons that have a permanent establishment in Canada for the purposes of the Canada-U.S. Tax Convention. U.S. Holders and others that are subject to special provisions under the Code, including U.S. Holders described immediately above, should consult their own tax advisors.

If an entity or arrangement that is classified as partnership (or “pass-through” entity) for U.S. federal income tax purposes holds common shares, the U.S. federal income tax consequences applicable to such partnership (or “pass-through” entity) or arrangement and the partners of such partnership (or owners of such “pass-through” entity) or arrangement generally will depend on the activities of the partnership (or “pass-through” entity) or arrangement and the status of such partners (or owners). Partners of entities or arrangements that are classified as partnerships (and owners of “pass-through” entities) for U.S. federal income tax purposes should consult their own tax advisor regarding the U.S. federal income tax consequences relating to the acquisition, ownership, and disposition of common shares.

Passive Foreign Investment Company Rules

If we were a “passive foreign investment company” under the meaning of Section 1297 of the Code (a “**PFIC**”) for any year during a U.S. Holder’s holding period, then certain potentially adverse rules will affect the U.S. federal income tax consequences to a U.S. Holder resulting from the acquisition, ownership and disposition of common shares. In addition, in any year in which we are classified as a PFIC, such holder may be required to file an annual report with the IRS containing such information as Treasury Regulations and/or other IRS guidance may require.

PFIC Status

We generally will be a PFIC if, for any tax year, (a) 75% or more of our gross income for such tax year is passive income (the “**income test**”) or (b) 50% or more of the value of our assets either produce passive income or are held for the production of passive income, based on the quarterly average of the fair market value of such assets (the “**asset test**”).

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For purposes of the PFIC income test and asset test described above, if we own, directly or indirectly, 25% or more of the total value of the outstanding shares of another corporation, we will be treated as if we (a) held a proportionate share of the assets of such other corporation and (b) received directly a proportionate share of the income of such other corporation. In addition, for purposes of the income test and asset test, “passive income” does not include any interest, dividends, rents, or royalties that are received or accrued by us from a “related person,” to the extent such items are properly allocable to the income of such related person that is not passive income. Under certain attribution rules, if we are a PFIC, U.S. Holders will be deemed to own their proportionate share of any of our subsidiaries which is also a PFIC (a “**Subsidiary PFIC**”), and will be subject to U.S. federal income tax on (i) a distribution on the shares of a Subsidiary PFIC and (ii) a disposition or deemed disposition of shares of a Subsidiary PFIC, both as if the holder directly held the shares of such Subsidiary PFIC, even though such U.S. Holder had not received the proceeds of those distributions or dispositions.

We believe we were a PFIC for one or more prior taxable years, and based on current business plans and financial projections, we expect that we will be a PFIC for the current taxable year and for the foreseeable future. The determination of whether we were (or a Subsidiary PFIC was), or will be, a PFIC for a tax year depends, in part, on the application of complex U.S. federal income tax rules, which are subject to differing interpretations. In addition, whether we (or a Subsidiary PFIC) will be a PFIC for any tax year depends on our assets and income (and each Subsidiary PFIC’s assets and income) over the course of each such tax year and, as a result, cannot be predicted with certainty as of the date of this prospectus supplement. Accordingly, there can be no assurance that the IRS will not challenge any determination made by us (or a Subsidiary PFIC) concerning our PFIC status or that we (and each Subsidiary PFIC) were not, or will not be, a PFIC for any tax year. Each U.S. Holder should consult its own tax advisor regarding our PFIC status and the status of each Subsidiary PFIC.

Default PFIC Rules

If we are a PFIC, the U.S. federal income tax consequences to a U.S. Holder of the acquisition, ownership, and disposition of common shares will depend on whether such U.S. Holder is eligible to make and actually makes an election to treat us (and/or a Subsidiary PFIC) as a “qualified electing fund” or “QEF” (a “**QEF Election**”) or has made a “mark-to-market election” (a “**Mark-to-Market Election**”) with respect to common shares. A U.S. Holder that does not make either a QEF Election or a Mark-to-Market Election will be referred to in this summary as a “**Non-Electing U.S. Holder**”.

A Non-Electing U.S. Holder will be subject to the default PFIC rules with respect to (a) any gain recognized on the sale or other taxable disposition (including a pledge) of common shares and (b) any “excess distribution” received on the common shares. A distribution generally will be an “excess distribution” to the extent that such distribution (together with all other distributions received in the current tax year) exceeds 125% of the average distributions received during the shorter of the three preceding tax years or a U.S. Holder’s holding period for the common shares).

Any gain recognized on the sale or other taxable disposition of common shares of a PFIC (including an indirect disposition of offered shares of a Subsidiary PFIC), and any excess distribution received on such common shares (or a distribution by a Subsidiary PFIC to its shareholder that is deemed to be received by a U.S. Holder) must be ratably allocated over a Non-Electing U.S. Holder's holding period for the common shares. The amount of any such gain or excess distribution allocated to the tax year of disposition or distribution of the excess distribution and to years before the first taxable year in which the entity became a PFIC, if any, would be taxed as ordinary income. The amounts allocated to any other tax year would be subject to U.S. federal income tax at the highest tax rate applicable to ordinary income in each such year, and an interest charge generally applicable to the underpayments of tax would be imposed in respect of the tax attributable to each such year. A Non-Electing U.S. Holder that is not a corporation must treat any such interest paid as "personal interest," which is not deductible.

If a Non-Electing U.S. Holder holds common shares during any tax year which we are a PFIC, such Non-Electing U.S. Holder's common shares will be treated as equity in a PFIC, regardless of whether we cease to be a PFIC in one or more subsequent years. A Non-Electing U.S. Holder may terminate this deemed PFIC status with respect to common shares if we cease to be a PFIC and the Non-Electing U.S. Holder makes a "deemed sale" election with respect to its common shares. If such election is made, the U.S. Holder will be deemed to have sold such common shares on the last day of the last tax year for which we were a PFIC, and such U.S. Holder will recognize gain from such deemed sale (which will be taxed as discussed above). After the deemed sale election, a Non-Electing U.S. Holder's common shares with respect to which the deemed sale election was made will not be treated as shares in a PFIC unless we subsequently become a PFIC.

QEF Election

A U.S. Holder that makes a timely and effective QEF Election for the first tax year in which its holding period of its common shares begins, generally, will not be subject to the default PFIC rules discussed above with respect to its common shares. However, a U.S. Holder that makes a timely and effective QEF Election will be subject to U.S. federal income tax on such U.S. Holder's pro rata share of (a) our net capital gain, which will be taxed as long-term capital gain to such U.S. Holder, and (b) our ordinary earnings, which will be taxed as ordinary income to such U.S. Holder. Generally, "net capital gain" is the excess of (a) net long-term capital gain over (b) net short-term capital loss, and "ordinary earnings" are the excess of (a) "earnings and profits" over (b) net capital gain. A U.S. Holder that makes a QEF Election will be subject to U.S. federal income tax on such amounts for each tax year in which we are a PFIC, regardless of whether such amounts are actually distributed to such U.S. Holder by us. However, for any tax year in which we are a PFIC and have no net income or gain, U.S. Holders that have made a QEF Election would not have any income inclusions as a result of the QEF Election. If a U.S. Holder that made a QEF Election has an income inclusion, such a U.S. Holder may, subject to certain limitations, elect to defer payment of current U.S. federal income tax on such amounts, subject to an interest charge. If such U.S. Holder is not a corporation, any such interest paid will be treated as "personal interest," which is not deductible.

A U.S. Holder that makes a QEF Election generally (a) may receive a tax-free distribution from us to the extent that such distribution represents our "earnings and profits" that were previously included in income by the U.S. Holder because of such QEF Election and (b) will adjust such U.S. Holder's tax basis in the common shares to reflect the amount included in income or allowed as a tax-free distribution because of such QEF Election. In addition, a U.S. Holder that makes a QEF Election generally will recognize capital gain or loss on the sale or other taxable disposition of common shares.

The procedure for making a QEF Election, and the U.S. federal income tax consequences of making a QEF Election, will depend on whether such QEF Election is timely. A QEF Election will be treated as "timely" if such QEF Election is made for the first year in the U.S. Holder's holding period for the common shares in which we were a PFIC. A U.S. Holder may make a timely QEF Election by filing the appropriate QEF Election documents at the time such U.S. Holder files a U.S. federal income tax return for such year.

A QEF Election will apply to the tax year for which such QEF Election is made and to all subsequent tax years, unless such QEF Election is invalidated or terminated or the IRS consents to revocation of such QEF Election by the U.S. Holder. If a U.S. Holder makes a QEF Election and, in a subsequent tax year, we cease to be a PFIC, the QEF Election will remain in effect (although it will not be applicable) during those tax years in which we are not a PFIC. Accordingly, if we become a PFIC in another subsequent tax year, the QEF Election will be effective and the U.S. Holder will be subject to the QEF rules described above during a subsequent tax year in which we qualify as a PFIC. The QEF Election is made on a shareholder-by-shareholder basis and, once made, can be revoked only with the consent of the IRS. A U.S. Holder generally makes a QEF Election by attaching an appropriately completed IRS Form 8621 (Return by a Shareholder of a Passive Foreign Investment Company or Qualified Electing Fund), including the information provided in a PFIC annual information statement, to a timely filed U.S. federal income tax return for the

tax year to which the election relates. Retroactive QEF Elections generally may be made only by filing a protective statement with such return and if certain other conditions are met or with the consent of the IRS. In order to comply with the requirements of a QEF Election, a U.S. Holder must receive certain information from us.

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We will make available to U.S. Holders, upon their written request, information as to our status as a PFIC and the status of any Subsidiary PFIC in which we own more than 50% of such Subsidiary PFIC's total aggregate voting power, and for each year we are a PFIC, provide to a U.S. Holder, upon written request, all information and documentation that a U.S. Holder making a QEF Election with respect to us and such more than 50% owned Subsidiary PFIC is required to obtain for U.S. federal income tax purposes. We may elect to provide such information to U.S. Holders through our website. Because we may hold 50% or less of the aggregate voting power of one or more Subsidiary PFICs at any time, U.S. Holders should be aware that there can be no assurance that we will satisfy record keeping requirements that apply to a QEF, or that we will supply U.S. Holders with information that such U.S. Holders require to report under the QEF rules, in the event that we are a PFIC and a U.S. Holder wishes to make a QEF Election with respect to any such Subsidiary PFIC. With respect to Subsidiary PFICs for which we do not or the U.S. Holders do not obtain the required information, U.S. Holders will continue to be subject to the rules discussed above that apply to Non-Electing U.S. Holders with respect to the taxation of gains and excess distributions. Each U.S. Holder should consult its own tax advisor regarding the availability of, and procedure for making, a QEF Election with respect to us and any Subsidiary PFIC.

Mark-to-Market Election

A U.S. Holder may make a Mark-to-Market Election only if the common shares are marketable stock. The common shares generally will be "marketable stock" if the common shares are regularly traded on (a) a national securities exchange that is registered with the SEC, (b) the national market system established pursuant to section 11A of the Securities and Exchange Act of 1934, or (c) a foreign securities exchange that is regulated or supervised by a governmental authority of the country in which the market is located, provided that (i) such foreign exchange has trading volume, listing, financial disclosure, and other requirements and the laws of the country in which such foreign exchange is located, together with the rules of such foreign exchange, ensure that such requirements are actually enforced and (ii) the rules of such foreign exchange effectively promote active trading of listed stocks. If such stock is traded on such a qualified exchange or other market, such stock generally will be "regularly traded" for any calendar year during which such stock is traded, other than in de minimis quantities, on at least 15 days during each calendar quarter.

A U.S. Holder that makes a Mark-to-Market Election with respect to its common shares generally will not be subject to the default PFIC rules discussed above. A U.S. Holder that makes a Mark-to-Market Election will include in ordinary income, for each tax year in which we are a PFIC, an amount equal to the excess, if any, of (a) the fair market value of the common shares, as of the close of such tax year over (b) such U.S. Holder's adjusted tax basis in such common shares. A U.S. Holder that makes a Mark-to-Market election will be allowed a deduction in an amount equal to the excess, if any, of (a) such U.S. Holder's adjusted tax basis in the common shares, over (b) the fair market value of such common shares as of the close of such tax year (but only to the extent of the net amount of previously included income as a result of the Mark-to-Market Election for prior tax years).

A U.S. Holder that makes a Mark-to-Market Election generally also will adjust such U.S. Holder's tax basis in the common shares to reflect the amount included in gross income or allowed as a deduction because of such

Mark-to-Market Election. In addition, upon a sale or other taxable disposition of common shares, a U.S. Holder that makes a Mark-to-Market Election will recognize ordinary income or loss (not to exceed the excess, if any, of (a) the amount included in ordinary income because of such Mark-to-Market Election for prior tax years over (b) the amount allowed as a deduction because of such Mark-to-Market Election for prior tax years). Any distributions we made would be subject to the rules discussed below under “U.S. Federal Income Tax Consequences of the Acquisition, Ownership, and Disposition of common shares—Distributions on common shares”.

A Mark-to-Market Election applies to the tax year in which such Mark-to-Market Election is made and to each subsequent tax year, unless the common shares cease to be “marketable stock” or the IRS consents to revocation of such election. Each U.S. Holder should consult its own tax advisor regarding the availability of, and procedure for making, a Mark-to-Market Election.

Although a U.S. Holder may be eligible to make a Mark-to-Market Election with respect to the common shares, no such election may be made with respect to the stock of any Subsidiary PFIC that a U.S. Holder is treated as owning because such stock is not marketable. Hence, the Mark-to-Market Election will not be effective to eliminate the interest charge described above with respect to deemed dispositions of Subsidiary PFIC stock or distributions from a Subsidiary PFIC.

Other PFIC Rules

The IRS has issued proposed Treasury Regulations that, subject to certain exceptions, would cause a U.S. Holder that had not made a timely QEF Election to recognize gain (but not loss) upon certain transfers of common shares that would otherwise be tax-deferred (e.g., gifts and exchanges pursuant to corporate reorganizations). However, the specific U.S. federal income tax consequences to a U.S. Holder may vary based on the manner in which common shares are transferred.

In any year in which we are classified as a PFIC, a U.S. Holder will be required to file an annual report with the IRS containing such information as Treasury Regulations and/or other IRS guidance may require. A failure to satisfy such reporting requirements may result in an extension of the time period during which the IRS can assess a tax. U.S. Holders should consult their own tax advisors regarding the requirements of filing such information returns under these rules, including the requirement to file an IRS Form 8621.

Certain additional adverse rules will apply with respect to a U.S. Holder if we are a PFIC, regardless of whether such U.S. Holder makes a QEF Election. For example, a U.S. Holder that uses common shares as security for a loan will, except as may be provided in Treasury Regulations, be treated as having made a taxable disposition of such common shares.

Special rules also apply to the amount of foreign tax credit that a U.S. Holder may claim on a distribution from a PFIC. Subject to such special rules, foreign taxes paid with respect to any distribution in respect of stock in a PFIC are generally eligible for the foreign tax credit. The rules relating to distributions by a PFIC and their eligibility for the foreign tax credit are complicated, and a U.S. Holder should consult with its own tax advisor regarding the availability of the foreign tax credit with respect to distributions by a PFIC.

The PFIC rules are complex, and each U.S. Holder should consult its own tax advisor regarding the PFIC rules and how the PFIC rules may affect the U.S. federal income tax consequences of the acquisition, ownership, and disposition of common shares.

U.S. Federal Income Tax Consequences of the Acquisition, Ownership, and Disposition of common shares

The following discussion is subject to the rules described above under the heading “Passive Foreign Investment Company Rules”.

Distributions on Common Shares

Subject to the PFIC rules discussed above, a U.S. Holder that receives a distribution, including constructive distribution, with respect to common shares will be required to include the amount of such distribution in gross income as a dividend (without reduction for any Canadian income tax withheld from such distribution) to the extent of our current or accumulated “earnings and profits,” as computed for U.S. federal income tax purposes. A dividend generally will be taxed to a U.S. Holder at ordinary income tax rates. To the extent that a distribution exceeds our current and accumulated “earnings and profits,” such distribution will be treated first as a tax-free return of capital to the extent of a U.S. Holder’s tax basis in the common shares and thereafter as gain from the sale or exchange of such common shares. See “Sale or Other Taxable Disposition of common shares” below. However, we do not intend to maintain the calculations of earnings and profits in accordance with U.S. federal income tax principles, and each U.S. Holder should therefore assume that any distribution by us with respect to the common shares will constitute ordinary dividend income. Dividends received on common shares generally will not be eligible for the “dividends received deduction”.

Subject to applicable limitations, dividends paid with respect to the common shares to non-corporate U.S. Holders, including individuals, generally will be eligible for the preferential tax rates applicable to long-term capital gains for dividends, provided certain holding period and other conditions are satisfied, including that we not be classified as a PFIC in the tax year of distribution or in the preceding tax year. Since we expect to be classified as a PFIC for the foreseeable future, dividends received on common shares generally are expected not to be considered “qualified dividend income,” and thus are not expected to be eligible for the preferential tax rates applicable to long-term capital gains for the foreseeable future. The dividend rules are complex, and each U.S. Holder should consult its own tax advisor regarding the application of such rules.

Sale or Other Taxable Disposition of Common Shares

Subject to the PFIC rules discussed above, upon the sale or other taxable disposition of common shares, a U.S. Holder generally will recognize capital gain or loss in an amount equal to the difference between (i) the amount of cash plus the fair market value of any property received and (ii) such U.S. Holder’s tax basis in such common shares sold or otherwise disposed of. While gain or loss recognized on such sale or other disposition generally would be long-term capital gain or loss if, at the time of the sale or other disposition, the common shares have been held for more than one year, the PFIC rules discussed above may render such gain ordinary income. Preferential tax rates apply to long-term capital gain of a U.S. Holder that is an individual, estate, or trust. There are currently no preferential tax rates for long-term capital gain of a U.S. Holder that is a corporation. Deductions for capital losses are subject to significant limitations under the Code.

Foreign Tax Credit

Subject to the PFIC rules discussed above, a U.S. Holder that pays (whether directly or through withholding) Canadian income tax with respect to dividends paid on the common shares generally will be entitled, at the election of such U.S. Holder, to receive either a deduction or a credit for such Canadian income tax paid. This election is made on a year-by-year basis and applies to all foreign taxes paid (whether directly or through withholding) by a U.S. Holder during a year. Complex limitations apply to the foreign tax credit, including the general limitation that the credit cannot exceed the proportionate share of a U.S. Holder’s U.S. federal income tax liability that such U.S. Holder’s “foreign source” taxable income bears to such U.S. Holder’s worldwide taxable income for the same tax year. In applying this limitation, a U.S. Holder’s various items of income and deduction must be classified, under complex rules, as either “foreign source” or “U.S. source”.

Generally, dividends paid by a foreign corporation should be treated as foreign source for this purpose, and gains recognized on the sale of stock of a foreign corporation by a U.S. Holder should be treated as U.S. source for this purpose, except as otherwise provided in an applicable income tax treaty, and if an election is properly made under the Code. However, the amount of a distribution with respect to the common shares that is treated as a “dividend” may be lower for U.S. federal income tax purposes than it is for Canadian federal income tax purposes, resulting in a reduced

foreign tax credit allowance to a U.S. Holder. In addition, this limitation is calculated separately with respect to specific categories of income. The foreign tax credit rules are complex, and each U.S. Holder should consult its own tax advisor regarding the foreign tax credit rules.

Receipt of Foreign Currency

The amount of any distribution paid in foreign currency to a U.S. Holder in connection with the ownership of common shares, or on the sale, exchange or other taxable disposition of our common shares, generally will be equal to the U.S. dollar value of such foreign currency based on the exchange rate applicable on the date of actual or constructive receipt (regardless of whether such foreign currency is converted into U.S. dollars at that time). If the foreign currency received is not converted into U.S. dollars on the date of receipt, a U.S. Holder will have a tax basis in the foreign currency equal to its U.S. dollar value on the date of receipt. A U.S. Holder that receives foreign currency and converts such foreign currency into U.S. dollars at a conversion rate other than the rate in effect on the date of receipt may have a foreign currency exchange gain or loss, which generally would be treated as U.S. source ordinary income or loss for foreign tax credit purposes. Different rules apply to U.S. Holders who use the accrual method with respect to foreign currency received upon the sale, exchange or other taxable disposition of the common shares. Each U.S. Holder should consult its own tax advisor regarding the U.S. federal income tax consequences of receiving, owning, and disposing of foreign currency.

Additional Tax on Passive Income

Individuals, estates and certain trusts whose income exceeds certain thresholds will be required to pay a 3.8% Medicare surtax on “net investment income” including, among other things, dividends and net gain from dispositions of property (other than property held in certain trades or businesses). U.S. Holders should consult their own tax advisors regarding the effect, if any, of this tax on their ownership and disposition of common shares.

Information Reporting; Backup Withholding Tax

Under U.S. federal income tax law and Treasury Regulations, certain categories of U.S. Holders must file information returns with respect to their investment in, or involvement in, a foreign corporation. For example, U.S. return disclosure obligations (and related penalties) are imposed on U.S. Holders that hold certain specified foreign financial assets in excess of certain threshold amounts. The definition of specified foreign financial assets includes not only financial accounts maintained in foreign financial institutions, but also, unless held in accounts maintained by a financial institution, any stock or security issued by a non-U.S. person, any financial instrument or contract held for investment that has an issuer or counterparty other than a U.S. person and any interest in a foreign entity. U.S. Holders may be subject to these reporting requirements unless their common shares are held in an account at certain financial institutions. Penalties for failure to file certain of these information returns are substantial. U.S. Holders should consult their own tax advisors regarding the requirements of filing information returns, including the requirement to file an IRS Form 8938.

Payments made within the U.S., or by a U.S. payor or U.S. middleman, of dividends on, and proceeds arising from certain sales or other taxable dispositions of the common shares may be subject to information reporting and backup withholding tax, at the current rate of 28%, if a U.S. Holder (a) fails to furnish such U.S. Holder’s correct U.S. social security or other taxpayer identification number (generally on Form W-9), (b) furnishes an incorrect U.S. taxpayer identification number, (c) is notified by the IRS that such U.S. Holder has previously failed to properly report items subject to backup withholding tax, or (d) fails under certain circumstances to certify, under penalty of perjury, that such U.S. Holder has furnished its correct U.S. taxpayer identification number and that the IRS has not notified such U.S. Holder that it is subject to backup withholding tax.

Backup withholding is not an additional tax. Any amounts withheld under the U.S. backup withholding tax rules generally will be allowed as a credit against a U.S. Holder’s U.S. federal income tax liability, if any, or will be refunded, if such U.S. Holder furnishes required information to the IRS.

The discussion of reporting requirements set forth above is not intended to constitute a complete description of all reporting requirements that may apply to a U.S. Holder. A failure to satisfy certain reporting requirements may result

in an extension of the time period during which the IRS can assess a tax, and under certain circumstances, such an extension may apply to assessments of amounts unrelated to any unsatisfied reporting requirement. Each U.S. Holder should consult its own tax advisor regarding the information reporting and backup withholding tax rules.

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LEGAL MATTERS AND INTEREST OF EXPERTS

The auditors of the Corporation are Ernst & Young LLP, Chartered Accountants, 1000, 440 – 2nd Avenue S.W., Calgary, Alberta, T2P 5E9. Ernst & Young LLP is independent of the Corporation in accordance with the Rules of Professional Conduct as outlined by the Institute of Chartered Accountants of Alberta. Ernst & Young LLP is registered with the U.S. Public Corporation Accounting Oversight Board.

Certain legal matters relating to this offering will be passed upon on our behalf by McCarthy Tetrault LLP with respect to certain Canadian legal matters and by Dorsey & Whitney LLP with respect to certain U.S. legal matters. The Agent is being represented in connection with this offering by Goodwin Procter LLP, New York, New York. .

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We are a public company and file annual, quarterly and special reports, proxy statements and other information with the Canadian securities regulatory authorities and the SEC. You may read and copy, for a fee, any document we file at the SEC's public reference room at 100 F Street, Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference room. Our SEC filings are also available to the public at the SEC's website at <http://www.sec.gov>. These documents are also available through the Internet on the Canadian System for Electronic Document Analysis and Retrieval (SEDAR) which can be accessed at <http://www.sedar.com>.

Base Shelf Prospectus

Dated August 1, 2014

Cdn.\$150,000,000

**Common Shares
Subscription Receipts
Warrants
Units**

We may from time to time during the 25-month period that this prospectus (the “**Prospectus**”), including any amendments, remains valid, sell under this Prospectus up to Cdn. \$150,000,000 (or the equivalent in other currencies or currency units) in one or more offerings, aggregate initial offering price of our common shares (“**Common Shares**”), subscription receipts (“**Subscription Receipts**”), warrants to purchase Common Shares (“**Warrants**”) and/or units comprised of one or more of the other securities described in this Prospectus in any combination, (“**Units**” and, together with the Common Shares, Subscription Receipts and Warrants, the “**Securities**”). We may offer Securities in such amounts and, in the case of the Subscription Receipts, Warrants and Units, with such terms, as we may determine in light of market conditions. We may sell the Subscription Receipts and Warrants in one or more series.

Prospective purchasers should note that we are a development stage entity and that an investment in the Securities should be considered highly speculative due to various risk factors listed under the heading “*Risk Factors*” on pages 8 to 17 of the Corporation’s AIF (as defined herein). Prospective investors should carefully review these risk factors prior to investing in the Securities of the Corporation. In particular, prospective purchasers should note the following risks namely, all of our potential products, including REOLYSIN®, are in the research and development stage and will require further development and testing before they can be marketed commercially; any failure or delay in clinical trials for our products, including REOLYSIN®, may cause us to incur additional costs or delay or prevent the commercialization of our products and could severely harm our business; pharmaceutical products are subject to intense regulatory approval processes; we have limited manufacturing experience and intend to rely on third parties to commercially manufacture our products, if and when developed; and we have no operating revenues and a history of losses. For detailed description of “*Risk Factors*” see page 10 of this Prospectus.

The specific variable terms of any offering of Securities will be set forth in a supplement to this Prospectus relating to such Securities (each, a “**Prospectus Supplement**”) including where applicable: (i) in the case of the Common Shares, the number of Common Shares offered, the currency (which may be Canadian dollars or any other currency), the issue price and any other specific terms; (ii) in the case of Subscription Receipts, the number of Subscription Receipts offered, the currency (which may be Canadian dollars or any other currency), the issue price, the terms and procedures for the exchange of the Subscription Receipts and any other specific terms; (iii) in the case of Warrants, the designation, the number of Warrants offered, the currency (which may be Canadian dollars or any other currency), number of Common Shares that may be acquired upon exercise of the Warrants, the exercise price, dates and periods of exercise, adjustment procedures and any other specific terms; and (iv) in the case of Units, the designation, the number of Units offered, the offering price, the currency (which may be Canadian dollars or any other currency), terms of the Units and of the securities comprising the Units and any other specific terms.

We are permitted, as a foreign issuer in the United States, under a multi-jurisdictional disclosure system adopted by the United States and Canada (“MJDS”), to prepare this Prospectus in accordance with Canadian disclosure requirements. You should be aware that such requirements are different from those of the United States. We have prepared our financial statements incorporated herein by reference in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board and adopted by the Accounting Standards Board of Canada and they are subject to Canadian auditing and auditor independence standards in addition to the standards of the Public Company Accounting Oversight Board (United States) and the United States Securities and Exchange Commission (“SEC”) independence standards. Therefore, they may not be comparable to the financial statements of United States companies.

You should be aware that the purchase of the Securities described herein may have tax consequences both in the United States and Canada. Such consequences for investors who are resident in, or citizens of, the United States may not be described fully herein. You should read the tax discussion contained in the applicable Prospectus Supplement with respect to a particular offering of securities. See “*Certain Income Tax Considerations*” at page 15 of this Prospectus.

Your ability to enforce civil liabilities under United States federal securities laws may be affected adversely by the fact that we are incorporated under the laws of Canada, the majority of our officers and directors and some of the experts named in this Prospectus are residents of Canada, and a substantial portion of our assets and the assets of said persons are located outside the United States. See “*Enforceability of Civil Liabilities*” at page 6 of this Prospectus.

NEITHER THE SEC NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED THE SECURITIES OFFERED HEREBY, OR PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENCE.

All shelf information permitted under applicable laws to be omitted from this Prospectus will be contained in one or more Prospectus Supplements that will be delivered to purchasers together with this Prospectus. Each Prospectus Supplement will be incorporated by reference into this Prospectus for the purposes of securities legislation as of the date of the Prospectus Supplement and only for the purposes of the distribution of the Securities to which the Prospectus Supplement pertains. You should read this Prospectus and any applicable Prospectus Supplement before you invest in the Securities.

Our outstanding securities are listed for trading on the Toronto Stock Exchange under the trading symbol “**ONC**” and on the NASDAQ Capital Market under the trading symbol “**ONCY**”. Unless otherwise specified in any applicable Prospectus Supplement, the Subscription Receipts, Warrants and Units will not be listed on any securities exchange. **There is no market through which the Subscription Receipts, Warrants or Units may be sold and purchasers may not be able to resell the Subscription Receipts, Warrants or Units purchased under this Prospectus. This may affect the pricing of these securities in the secondary market, the transparency and availability of trading prices, the liquidity of the securities, and the extent of issuer regulation. See the “Risk Factors” section of the applicable Prospectus Supplement.**

We may sell the Securities to or through underwriters, dealers, placement agents or other intermediaries or directly to purchasers or through agents. See detailed discussion on “*Plan of Distribution*” at page 14 of this Prospectus. The Prospectus Supplement relating to a particular offering of Securities will identify each person who may be deemed to be an underwriter with respect to such offering and will set forth the terms of the offering of such Securities, including, to the extent applicable, the initial public offering price, the proceeds that we will receive, the underwriting discounts or commissions and any other discounts or concessions to be allowed or re-allowed to dealers. The lead underwriter or underwriters with respect to Securities sold to or through underwriters, if any, will be named in the related Prospectus Supplement.

Subject to applicable securities legislation, in connection with any offering of Securities under this Prospectus, the underwriters, if any, may over-allot or effect transactions which stabilize or maintain the market price of the Securities offered at a level above that which might otherwise prevail in the open market. These transactions, if commenced, may be discontinued at any time.

You should rely only on the information contained in this Prospectus. We have not authorized anyone to provide you with information different from that contained in this Prospectus. No underwriters have been involved in the preparation of this Prospectus or performed any review of the contents of this Prospectus.

Our head office and principal place of business is located at 210, 1167 Kensington Crescent N.W., Calgary, Alberta, T2N 1X7. Our registered office is located at 3700, 400 – 3rd Avenue S.W., Calgary, Alberta, T2P 4H2.

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ABOUT THIS PROSPECTUS AND OTHER MATTERS

In this Prospectus and any Prospectus Supplement, unless otherwise indicated, references to “we”, “us”, “our”, “issuer” “Oncolytics” or the “Corporation” are to Oncolytics Biotech Inc.

In this Prospectus and in any Prospectus Supplement, unless otherwise specified or the context otherwise requires, all references to “dollars”, “Cdn.\$” or “\$” are to Canadian dollars and all references to “US\$” are to United States dollars.

Unless otherwise indicated, all financial information included and incorporated by reference in this Prospectus and any Prospectus Supplement is determined using International Financial Reporting Standards as issued by the International Accounting Standards Board and adopted by the Accounting Standards Board of Canada (“IFRS”). Our financial statements incorporated by reference in this Prospectus and any Prospectus Supplement and in the documents incorporated by reference herein and therein may not be comparable to financial statements prepared in accordance with United States generally accepted accounting principles.

This Prospectus provides you with a general description of the Securities that the Corporation may offer. Each time the Corporation sells Securities under this Prospectus, the Corporation will provide a Prospectus Supplement that will contain specific information about the terms of that offering of Securities. The Prospectus Supplement also may add, update or change information contained in this Prospectus. Before investing, investors should read both this Prospectus and any applicable Prospectus Supplement together with additional information described under the heading “*Documents Incorporated by Reference*”.

You should rely only on the information contained in or incorporated by reference in this Prospectus or any applicable Prospectus Supplement. The Corporation has not authorized anyone to provide you with different or additional information. The Corporation is not making an offer of these Securities in any jurisdiction where the offer is not permitted by law. You should not assume that the information contained in or incorporated by reference in this Prospectus or any applicable Prospectus Supplement is accurate as of any date other than the date of the applicable document.

SPECIAL NOTICE REGARDING FORWARD-LOOKING STATEMENTS

This Prospectus contains certain statements relating to future events or the Corporation's future performance which constitute forward-looking statements. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Corporation, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Forward-looking statements are statements that are not historical facts, and include, but are not limited to, estimates and their underlying assumptions; statements regarding plans, objectives and expectations with respect to the efficacy of our technologies; the timing and results of clinical studies related to our technologies; future operations, products and services; the impact of regulatory initiatives on our operations; the size of and opportunities related to the markets for our technologies; general industry and macroeconomic growth rates; expectations related to possible joint and/or strategic ventures and statements regarding future performance. Forward-looking statements generally, but not always, are identified by the words "expects," "anticipates," "believes," "intends," "estimates," "projects", "potential", "possible" and similar expressions, or that events or conditions "will," "may," "should" occur.

The forward-looking statements in this Prospectus are subject to various risks and uncertainties, most of which are difficult to predict and generally beyond our control, including without limitation:

- risks related to all of our products, including REOLYSIN®, being in the research and development stage and requiring further development and testing before they can be marketed commercially;

- risks inherent in pharmaceutical research and development;

- risks related to timing and possible delays in our clinical trials;

- risks related to some of our clinical trials being conducted in, and subject to the laws of foreign countries;

- risks related to our pharmaceutical products being subject to intense regulatory approval processes in the United States and other foreign jurisdictions;

- risks related to being subject to government manufacturing and testing regulations;
- risks related to the extremely competitive biotechnology industry and our competition with larger companies with greater resources;
- risks related to our reliance on patents and proprietary rights to protect our technology;
- risks related to potential products liability claims;
- risks related to our limited manufacturing experience and reliance on third parties to commercially manufacture our products, if and when developed;
- risks related to our new products not being accepted by the medical community or consumers;
- risks related to our technologies becoming obsolete;
- risks related to our dependence on third party relationships for research and clinical trials;
- risks related to our lack of operating revenues and history of losses;
- uncertainty regarding our ability to obtain third-party reimbursement for the costs of our product;
- risks related to other third-party arrangements;
- risks related to our ability to obtain additional financing to fund future research and development of our products and to meet ongoing capital requirements;
- risks related to potential increases in the cost of director and officer liability insurance;
- risks related to our dependence on key employees and collaborators;
- risks related to expenses in foreign currencies and our exposure to foreign currency exchange rate fluctuations;

risks related to our status as a foreign private issuer;

risks related to fluctuations in interest rates; and

risks related to our common shares.

This list is not exhaustive of the factors that may affect any of the Company's forward-looking statements. Some of the important risks and uncertainties that could affect forward-looking statements are described further under the heading "*Risk Factors*" in our AIF (as defined below). If one or more of these risks or uncertainties materializes, or if underlying assumptions prove incorrect, our actual results may vary materially from those expected, estimated or projected. Forward-looking statements in this document are not a prediction of future events or circumstances, and those future events or circumstances may not occur. Given these uncertainties, users of the information included herein, including investors and prospective investors are cautioned not to place undue reliance on such forward-looking statements. Investors should consult our quarterly and annual filings with the Canadian and U.S. securities commissions for additional information on risks and uncertainties relating to forward-looking statements. We do not assume responsibility for the accuracy and completeness of these statements.

Forward-looking statements are based on our beliefs, opinions and expectations at the time they are made, and we do not assume any obligation to update our forward-looking statements if those beliefs, opinions, or expectations, or other circumstances, should change, except as required by applicable law.

Prospective investors should carefully consider the information contained under the heading "*Risk Factors*" in our AIF and all other information included in or incorporated by reference in this Prospectus before making investment decisions with regard to our Securities.

ENFORCEABILITY OF CIVIL LIABILITIES

We are a corporation incorporated under the *Business Corporations Act* (Alberta) (the “**ABCA**”). The majority of our officers and directors and some of the experts named in this Prospectus, are residents of Canada or otherwise reside outside the United States, and all, or a substantial portion of their assets and a substantial portion of our assets, are located outside the United States. We have appointed an agent for service of process in the United States, but it may be difficult for holders of Securities who reside in the United States to effect service within the United States upon those directors, officers and experts who are not residents of the United States. It may also be difficult for holders of Securities who reside in the United States to realize in the United States upon judgments of courts of the United States predicated upon our civil liability and the civil liability of our directors, officers and experts under the United States federal securities laws. We have been advised by our Canadian counsel, McCarthy Tétrault LLP, that a judgment of a United States court predicated solely upon civil liability under United States federal securities laws, would probably be enforceable in Canada if, the United States court in which the judgment was obtained, has a basis for jurisdiction in the matter that would be recognized by a Canadian court for the same purposes. We have also been advised by McCarthy Tétrault LLP, however, that there is substantial doubt whether an action could be brought in Canada in the first instance on the basis of liability predicated solely upon United States federal securities laws.

We filed with the SEC, concurrently with our registration statement on Form F-10, an appointment of agent for service of process on Form F-X. Under the Form F-X, we appointed CT Corporation System as our agent for service of process in the United States in connection with any investigation or administrative proceeding conducted by the SEC or similar authorities in United States, and any civil suit or action brought against or involving us in a United States court arising out of or related to or concerning the offering of the Securities under this Prospectus.

DOCUMENTS INCORPORATED BY REFERENCE

Information has been incorporated by reference in this Prospectus from documents filed with securities commissions or similar authorities in Canada and filed with, or furnished to, the SEC. Copies of the documents incorporated herein by reference may be obtained on request without charge from our Corporate Secretary at 210, 1167 Kensington Crescent N.W., Calgary, Alberta, T2N 1X7 telephone (403) 670-7377, and are available electronically at www.sedar.com. Disclosure documents filed with, or furnished to, the SEC are available through the SEC’s Electronic Document Gathering and Retrieval System (EDGAR) at www.sec.gov.

We have filed the following documents with the securities commissions or similar regulatory authorities in certain of the provinces of Canada and such documents are specifically incorporated by reference in, and form an integral part of, this Prospectus, provided that such documents are not incorporated by reference to the extent that their contents are modified or superseded by a statement contained in this Prospectus or in any subsequently filed document that is also incorporated by reference in this Prospectus:

our Annual Information Form, which is comprised of our Annual Report on Form 20-F dated March 19, 2014, for the year ended December 31, 2013 (the “**AIF**”);

our management information circular dated May 9, 2014, relating to the annual general meeting of shareholders held on June 18, 2014;

our audited consolidated financial statements, together with the notes thereto, as at December 31, 2013 and 2012, which comprise the consolidated statements of financial position as at December 31, 2013 and 2012, and the consolidated statements of loss and comprehensive loss, changes in equity, and cash flows for the years ended December 31, 2013 and 2012, together with the auditor’s report thereon;

our management’s discussion and analysis of financial condition and results of operations dated March 12, 2014, for the year ended December 31, 2013;

our unaudited interim condensed consolidated financial statements, together with the notes thereto, as at and for the period ended March 31, 2014; and

our management’s discussion and analysis of financial condition and results of operations dated May 7, 2014, as at and for the period ended March 31, 2014.

Any documents of the type required by National Instrument 44-101 - Short Form Prospectus Distributions of the Canadian Securities Administrators to be incorporated by reference in a short form prospectus, including any annual information form, comparative annual consolidated financial statements and the auditors' report thereon, comparative interim consolidated financial statements, management's discussion and analysis of financial condition and results of operations, material change report (except a confidential material change report), business acquisition report and information circular, if filed by us with the securities commissions or similar authorities in the provinces of Canada after the date of this Prospectus shall be deemed to be incorporated by reference in this Prospectus.

Any similar document filed by the Corporation with, or furnished by the Corporation to, the SEC pursuant to pursuant to section 13(a), 13(c), 14 or 15(d) of the United States Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), after the date of this Prospectus shall be deemed to be incorporated by reference in this Prospectus and filed as exhibits to the registration statement of which this Prospectus forms a part (in the case of any Report on Form 6-K, if and to the extent provided in such report).

Any statement contained in this Prospectus or in a document incorporated or deemed to be incorporated by reference herein will be deemed to be modified or superseded for purposes of this Prospectus to the extent that a statement contained in this Prospectus or in any other subsequently filed document which also is, or is deemed to be, incorporated by reference into this Prospectus modifies or supersedes that statement. The modifying or superseding statement need not state that it has modified or superseded a prior statement or include any other information set forth in the document that it modifies or supersedes. The making of a modifying or superseding statement shall not be deemed an admission for any purposes that the modified or superseded statement when made, constituted a misrepresentation, an untrue statement of a material fact or an omission to state a material fact that is required to be stated or that is necessary to make a statement not misleading in light of the circumstances in which it was made. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute part of this Prospectus.

Upon a new annual information form and related audited annual financial statements and management's discussion and analysis being filed by us with, and where required, accepted by, the securities commission or similar regulatory authority in each of the provinces of British Columbia, Alberta, Manitoba and Ontario during the term of this Prospectus, the previous annual information form, the previous audited annual financial statements and related management's discussion and analysis, all unaudited interim financial statements and related management's discussion and analysis, material change reports and business acquisition reports filed prior to the commencement of our financial year in which the new annual information form and related audited annual financial statements and management's discussion and analysis are filed shall be deemed no longer to be incorporated into this Prospectus for purposes of future offers and sales of Securities under this Prospectus. Upon new interim financial statements and related management's discussion and analysis being filed by us with the securities commission or similar regulatory authority in each of the provinces of British Columbia, Alberta, Manitoba and Ontario during the term of this Prospectus, all interim financial statements and related management's discussion and analysis filed prior to the new interim consolidated financial statements and related management's discussion and analysis shall be deemed no longer to be incorporated into this Prospectus for purposes of future offers and sales of Securities under this Prospectus. Upon a new information circular relating to an annual general meeting of holders of Common Shares being filed by us with the securities commission or similar regulatory authority in each of the provinces of British Columbia, Alberta,

Manitoba and Ontario during the term of this Prospectus, the information circular for the preceding annual general meeting of holders of Common Shares shall be deemed no longer to be incorporated into this Prospectus for purposes of future offers and sales of Securities under this Prospectus.

One or more Prospectus Supplements containing the specific variable terms for an issue of the Securities and other information in relation to such Securities will be delivered to purchasers of such Securities together with this Prospectus and will be deemed to be incorporated by reference into this Prospectus as of the date of the Prospectus Supplement solely for the purposes of the offering of the Securities covered by any such Prospectus Supplement.

THE CORPORATION

Oncolytics Biotech Inc. was incorporated pursuant to the ABCA on April 2, 1998 as 779738 Alberta Ltd. On April 8, 1998, we amended our articles of incorporation (the “**Articles**”) and changed our name to Oncolytics Biotech Inc. On July 29, 1999, we further amended our Articles by removing the private company restrictions included therein and subdivided our 2,222,222 Common Shares issued and outstanding into 6,750,000 Common Shares. On February 9, 2007, we further amended our Articles to permit shareholder meetings to be held at any place in Alberta or at any other location as determined by our board of directors (the “**Board**”).

Our head office and principal place of business is located at 210, 1167 Kensington Crescent N.W., Calgary, Alberta, T2N 1X7. Our registered office is located at 3300, 421 - 7th Avenue S.W., Calgary, Alberta, T2P 4K9.

We have two direct wholly-owned subsidiaries, namely:

- (a) Oncolytics Biotech (Barbados) Inc., which is incorporated pursuant to the laws of Barbados; and
- (b) Valens Pharma Ltd., which is incorporated pursuant to the laws of the Province of Alberta.

We also have two indirect wholly-owned subsidiaries, namely:

- (c) Oncolytics Biotech (U.S.), Inc., which is incorporated pursuant to the laws of Delaware; and
- (d) Oncolytics Biotech (U.K.) Ltd., which is incorporated pursuant to the laws of England and Wales.

Both Oncolytics Biotech (U.S.), Inc. and Oncolytics Biotech (U.K.) Ltd. are wholly-owned direct subsidiaries of Oncolytics Biotech (Barbados) Inc.

The following schematic illustrates our corporate structure:

OUR BUSINESS

We focus on the discovery and development of oncolytic viruses for the treatment of cancers that have not been successfully treated with conventional therapeutics. Recent scientific advances in oncology, virology, and molecular biology have created opportunities for new approaches to the treatment of cancer. The product we are presently developing may represent a novel treatment for Ras-mediated cancers. The product may prove useful as an alternative to existing cytotoxic or cytostatic therapies, or as an adjuvant therapy to conventional chemotherapy, radiation therapy, or surgical resections. It could also potentially be used to treat certain cellular proliferative disorders for which no current therapy exists.

Our technologies are based primarily on discoveries made in the Department of Microbiology and Infectious Diseases at the University of Calgary in the 1990s. Oncolytics was formed in 1998 to explore the natural oncolytic capability of the reovirus, a virus that preferentially replicates in cells with an activated Ras pathway.

The lead product being developed by us may represent a novel treatment for certain tumour types and some cellular proliferative disorders. This lead product is a virus that is able to replicate specifically in, and hence kill, certain tumour cells both in tissue culture as well as in a number of animal models without damaging normal cells.

Our potential product for human use, REOLYSIN®, is developed from the reovirus. This virus has been demonstrated to replicate specifically in tumour cells bearing an activated Ras pathway. Activating mutations of Ras occur in approximately 30% of all human tumours directly, but considering its central role in signal transduction, activation of the Ras pathway has been shown to play a role in approximately two-thirds of all tumours.

The functionality of the product is based upon the finding that tumours bearing an activated Ras pathway are deficient in their ability to activate the anti-viral response mediated by the host cellular protein, PKR. Since PKR is responsible for preventing reovirus replication, tumour cells lacking the activity of PKR are susceptible to reovirus infections. As normal cells do not possess Ras activations, these cells are able to thwart reovirus infections by the activity of PKR. In a tumour cell with an activated Ras pathway, reovirus is able to freely replicate and hence kill the host tumour cell. The result of this replication is progeny viruses that are then free to infect surrounding cancer cells. This cycle of infection, replication and cell death is believed to be repeated until there are no longer any tumour cells carrying an activated Ras pathway available.

The following schematic illustrates the molecular basis of how we believe the reovirus may kill certain cancer cells:

For both non-cancer cells and cancer cells with an activated Ras pathway, virus binding, entry, and production of viral genes all proceed normally. In the case of normal cells however, the viral genes cause the activation of the anti-viral response that is mediated by the host cell's PKR, thus blocking the replication of the reovirus. In cells with an activated Ras pathway, the activation of PKR is prevented or reversed by an element of the Ras signal transduction pathway, thereby allowing the replication of the reovirus in these cancer cells. The end result of this replication is the death of the cancer cell. The action of the Ras pathway in allowing reovirus replication to ensue can be mimicked in non-cancerous cells by treating these cells with the chemical 2-aminopurine (2-AP) which prevents the activation of PKR.

CONSOLIDATED CAPITALIZATION

Since March 31, 2014, the Corporation has issued an aggregate of 2,335,696 Common Shares for aggregate net proceeds of approximately U.S. \$3,169,982 as described under the heading “*Prior Sales*”. Except as otherwise described under this heading and under “*Prior Sales*”, there has been no material change in the share and loan capital of the Corporation on a consolidated basis since March 31, 2014, the date of the Corporation’s most recently filed unaudited interim consolidated financial statements.

USE OF PROCEEDS

Unless otherwise indicated in an applicable Prospectus Supplement relating to an offering of Securities, our present intention is to use the net proceeds we receive from the sale of Securities to fund our core activities. Our key focus is on the progression of our clinical trial program which includes the trials currently underway or which may commence during the period that this Prospectus is valid. The determination of the size of such trials, their geographic locations, and the disease indications being tested are continually assessed and may change as further information is received.

Funding for our manufacturing program also remains an important activity, as sufficient capacity to produce and provide GMP (good manufacturing practice) compliant product is required if we are successful in our clinical program and our product is approved for commercial sale.

Continually developing our intellectual property portfolio to expand and protect our core assets, our potential products, and the other necessary overhead costs for administrative, marketing and general activities would generally conclude the allocation of net proceeds.

More specific allocations would be included in an applicable Prospectus Supplement relating to a specific offering of Securities.

All expenses relating to the offering of Securities and any compensation paid to underwriters, dealers or agents, as the case may be, will be paid out of the Corporation’s general fund, unless otherwise stated in the applicable Prospectus Supplement.

RISK FACTORS

An investment in the Securities involves a high degree of risk. Prospective investors should note that there is no market through which the Subscription Receipts, Warrants or Units may be sold and purchasers may not be able to resell the Subscription Receipts, Warrants or Units purchased under this Prospectus. This may affect the pricing of these securities in the secondary market, the transparency and availability of trading prices, the liquidity of the securities, and the extent of issuer regulation.

Prospective investors should consider carefully the risks incorporated by reference in this Prospectus (including in subsequently filed documents incorporated by reference) and those described in any Prospectus Supplement before purchasing the Securities offered hereby. Discussions of certain risks affecting the Corporation in connection with its business are provided under the heading “*Risk Factors*” in our AIF filed with the various securities regulatory authorities, which is incorporated by reference in this Prospectus.

DESCRIPTION OF SHARE CAPITAL

Authorized Capital

Our authorized capital consists of an unlimited number of Common Shares. The following is a summary of the provisions attached to our Common Shares.

Common Shares

The holders of our Common Shares are entitled to one vote per share at meetings of shareholders, to receive such dividends as declared by our Board and to receive our remaining property and assets upon dissolution or wind up. Our Common Shares are not subject to any future call or assessment and there are no pre-emptive, conversion or redemption rights attached to such shares.

As at July 31, 2014, we have 88,146,414 Common Shares issued and outstanding. After giving effect to the exercise of all our options, we would have 94,134,258 Common Shares issued and outstanding.

PRIOR SALES

Except as disclosed under this heading, no other Common Shares or securities exchangeable or convertible into Common Shares have been issued during the twelve month period preceding the date of this Prospectus.

During the twelve month period preceding the date of this Prospectus, the Corporation issued an aggregate of 3,387,596 Common Shares, the particulars of which are set forth in the following table:

Date of Issue	Number of Common Shares Issued	Price per Common Share
December 4, 2013	35,000	Cdn.\$1.65
December 5, 2013	10,000	Cdn.\$1.65
February 27, 2014	292,793	US\$1.5540
February 27, 2014	612,223	US\$1.6640
March 11, 2014	101,884	US\$1.6733
April 3, 2014	101,944	US\$1.7267
April 7, 2014	101,944	US\$1.7267
April 14, 2014	101,734	US\$1.5399
April 17, 2014	101,760	US\$1.5633
April 22, 2014	101,734	US\$1.5400
April 25, 2014	101,723	US\$1.5300
May 1, 2014	101,633	US\$1.4500

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June 2, 2014	101,415	US\$1.2567
June 3, 2014	101,408	US\$1.2500
June 5, 2014	101,415	US\$1.2567
June 9, 2014	101,415	US\$1.2567
June 11, 2014	101,415	US\$1.2567
June 13, 2014	101,415	US\$1.2567
June 17, 2014	101,415	US\$1.2567
June 19, 2014	101,415	US\$1.2567
June 23, 2014	101,464	US\$1.3000
June 30, 2014	101,430	US\$1.2700
July 2, 2014	101,423	US\$1.2633
July 3, 2014	101,423	US\$1.2633
July 22, 2014	101,588	US\$1.4100
July 24, 2014	101,565	US\$1.3900
July 28, 2014	101,486	US\$1.3200
July 30, 2014	101,532	US\$1.3600

During the twelve month period preceding the date of this Prospectus, the Corporation granted options exercisable for an aggregate of 1,716,000 Common Shares, the particulars of which are set forth in the following table:

Date of Grant	Number of Options Granted	Exercise Price (Cdn.\$)
December 11, 2013	1,416,000	1.74
February 3, 2014	200,000	1.69
June 18, 2014	100,000	1.46

TRADING PRICE AND VOLUME

Our outstanding Common Shares are listed and posted for trading on the Toronto Stock Exchange under the trading symbol “**ONC**” and on NASDAQ under the trading symbol “**ONCY**”.

The following table sets forth the market price ranges and the aggregate volume of trading of the Common Shares on the Toronto Stock Exchange and NASDAQ for the periods indicated:

Period	Toronto Stock Exchange				NASDAQ Capital Market			
	High (Cdn.\$)	Low (Cdn.\$)	Close (Cdn.\$)	Volume (Shares)	High (US\$)	Low (US\$)	Close (US\$)	Volume (Shares)
<u>2013</u>								
July	3.11	2.70	2.99	1,049,251	3.03	2.59	2.90	3,087,206
August	3.04	2.75	2.80	912,029	2.95	2.59	2.65	3,057,244
September	3.62	2.45	2.50	3,864,673	3.50	2.38	2.44	14,156,295
October	3.49	2.31	2.78	2,665,789	3.39	2.25	2.67	11,257,005
November	2.83	1.70	1.95	5,936,921	2.72	1.64	1.85	16,759,137
December	1.99	1.54	1.66	2,096,007	1.88	1.45	1.55	8,457,220
<u>2014</u>								
January	2.10	1.65	1.75	2,673,401	1.92	1.53	1.57	16,358,045
February	1.98	1.61	1.90	918,938	1.79	1.45	1.72	5,967,943
March	2.31	1.78	2.00	907,737	2.07	1.61	1.81	12,113,726
April	2.20	1.54	1.68	893,221	2.00	1.40	1.46	6,638,510
May	1.65	1.30	1.44	1,315,417	1.50	1.20	1.32	4,907,935
June	1.52	1.34	1.37	1,380,819	1.39	1.24	1.28	3,548,126
July 1 to 31	1.79	1.38	1.46	1,111,594	1.69	1.28	1.34	6,649,708

DESCRIPTION OF SUBSCRIPTION RECEIPTS

The following description of the terms of Subscription Receipts sets forth certain general terms and provisions of Subscription Receipts in respect of which a Prospectus Supplement may be filed. The particular terms and provisions of Subscription Receipts offered by any Prospectus Supplement, and the extent to which the general terms and provisions described below may apply thereto, will be described in the Prospectus Supplement filed in respect of such Subscription Receipts.

Subscription Receipts may be offered separately or in combination with one or more other Securities. The Subscription Receipts will be issued under a subscription receipt agreement (the “**Subscription Agreement**”). A copy of the Subscription Agreement will be filed by us with the applicable securities commission or similar regulatory authorities after it has been entered into by us and will be available electronically at www.sedar.com and, if applicable, we will file with the SEC as exhibits to the registration statement of which this Prospectus is a part, or will incorporate by reference from a Report of Foreign Private Issuer on Form 6-K that we file with the SEC, any Subscription Agreement describing the terms and conditions of such Subscription Receipts that we are offering before the issuance of such Subscription Receipts.

Pursuant to the Subscription Agreement, original purchasers of Subscription Receipts will have a contractual right of rescission against Oncolytics, following the issuance of the underlying Common Share or other securities to such purchasers upon the surrender or deemed surrender of the Subscription Receipts, to receive the amount paid for the Subscription Receipts in the event that this Prospectus or a Prospectus Supplement and any amendment thereto, contains a misrepresentation or is not delivered to such purchaser, provided such remedy for rescission is exercised within 180 days from the closing date of the offering of Subscription Receipts.

The description of general terms and provisions of Subscription Receipts described in any Prospectus Supplement will include, where applicable:

- the number of Subscription Receipts offered;
- the price at which the Subscription Receipts will be offered;
- if other than Canadian dollars, the currency or currency unit in which the Subscription Receipts are denominated;
- the procedures for the exchange of the Subscription Receipts into Common Shares or other securities;
- the number of Common Shares or other securities that may be obtained upon exercise of each Subscription Receipt;
- the designation and terms of any other Securities with which the Subscription Receipts will be offered, if any, and the number of Subscription Receipts that will be offered with each Security;
- the terms applicable to the gross proceeds from the sale of the Subscription Receipts plus any interest earned thereon;
- the material tax consequences of owning such Subscription Receipts; and
- any other material terms, conditions and rights (or limitations on such rights) of the Subscription Receipts.

We reserve the right to set forth in a Prospectus Supplement specific terms of the Subscription Receipts that are not within the options and parameters set forth in this Prospectus. In addition, to the extent that any particular terms of the Subscription Receipts described in a Prospectus Supplement differ from any of the terms described in this Prospectus, the description of such terms set forth in this Prospectus shall be deemed to have been superseded by the description of such differing terms set forth in such Prospectus Supplement.

DESCRIPTION OF WARRANTS

The following description of the terms of Warrants sets forth certain general terms and provisions of Warrants in respect of which a Prospectus Supplement may be filed. The particular terms and provisions of Warrants offered by any Prospectus Supplement, and the extent to which the general terms and provisions described below may apply

thereto, will be described in the Prospectus Supplement filed in respect of such Warrants. Warrants may be offered separately or in combination with one or more other Securities. If applicable, we will file with the SEC as exhibits to the registration statement of which this Prospectus is a part, or will incorporate by reference from a current report on Form 6-K that we file with the SEC, any warrant indenture or form of warrant describing the terms and conditions of such Warrants that we are offering before the issuance of such Warrants.

The description of general terms and provisions of Warrants described in any Prospectus Supplement will include, where applicable:

- the designation and aggregate number of Warrants offered;
- the price at which the Warrants will be offered;
- if other than Canadian dollars, the currency or currency unit in which the Warrants are denominated;
- the designation and terms of the Common Shares that may be acquired upon exercise of the Warrants;
- the date on which the right to exercise the Warrants will commence and the date on which the right will expire;

· the number of Common Shares that may be purchased upon exercise of each Warrant and the price at which and currency or currencies in which that amount of securities may be purchased upon exercise of each Warrant;

· the designation and terms of any Securities with which the Warrants will be offered, if any, and the number of the Warrants that will be offered with each Security;

· the date or dates, if any, on or after which the Warrants and the related Securities will be transferable separately;

· the minimum or maximum amount, if any, of Warrants that may be exercised at any one time;

· whether the Warrants will be subject to redemption or call, and, if so, the terms of such redemption or call provisions; and

· any other material terms, conditions and rights (or limitations on such rights) of the Warrants.

We reserve the right to set forth in a Prospectus Supplement specific terms of the Warrants that are not within the options and parameters set forth in this Prospectus. In addition, to the extent that any particular terms of the Warrants described in a Prospectus Supplement differ from any of the terms described in this Prospectus, the description of such terms set forth in this Prospectus shall be deemed to have been superseded by the description of such differing terms set forth in such Prospectus Supplement.

DESCRIPTION OF UNITS

We may issue Units comprised of one or more of the other Securities described in this Prospectus in any combination. Each Unit will be issued so that the holder of the Unit is also the holder of each Security included in the Unit. Thus, the holder of a Unit will have the rights and obligations of a holder of each included Security. The unit agreement, if any, under which a Unit is issued may provide that the Securities comprising the Unit may not be held or transferred separately, at any time or at any time before a specified date. If applicable, we will file with the SEC as exhibits to the registration statement of which this Prospectus is a part, or will incorporate by reference from a current report on Form 6-K that we file with the SEC, any unit agreement describing the terms and conditions of such Units that we are offering before the issuance of such Units.

The particular terms and provisions of Units offered by any Prospectus Supplement, and the extent to which the general terms and provisions described below may apply thereto, will be described in the Prospectus Supplement filed in respect of such Units.

The particular terms of each issue of Units will be described in the related Prospectus Supplement. This description will include, where applicable:

- the designation and aggregate number of Units offered;

- the price at which the Units will be offered;

- if other than Canadian dollars, the currency or currency unit in which the Units are denominated;

- the terms of the Units and of the Securities comprising the Units, including whether and under what circumstances those securities may be held or transferred separately;

- the number of Securities that may be purchased upon exercise of each Unit and the price at which and currency or currency unit in which that amount of Securities may be purchased upon exercise of each Unit;

- any provisions for the issuance, payment, settlement, transfer or exchange of the Units or of the Securities comprising the Units; and

- any other material terms, conditions and rights (or limitations on such rights) of the Units.

We reserve the right to set forth in a Prospectus Supplement specific terms of the Units that are not within the options and parameters set forth in this Prospectus. In addition, to the extent that any particular terms of the Units described in a Prospectus Supplement differ from any of the terms described in this Prospectus, the description of such terms set forth in this Prospectus shall be deemed to have been superseded by the description of such differing terms set forth in such Prospectus Supplement with respect to such Units.

PLAN OF DISTRIBUTION

We may sell Securities to or through underwriters, dealers, placement agents or other intermediaries and also may sell Securities directly to purchasers or through agents, subject to obtaining any applicable exemptions from registration requirements.

The distribution of Securities may be effected from time to time in one or more transactions at a fixed price or prices, which may be changed, at market prices prevailing at the time of sale, or at prices related to such prevailing market prices to be negotiated with purchasers, including sales in transactions that are deemed to be “at-the-market distributions” as defined in National Instrument 44-102 - *Shelf Distributions*, including sales made directly on the TSX, NYSE MKT or other existing trading markets for the Securities, and as set forth in an accompanying Prospectus Supplement.

In connection with the sale of Securities, underwriters may receive compensation from us or from purchasers of Securities for whom they may act as agents in the form of discounts, concessions or commissions. Underwriters, dealers, placement agents or other intermediaries that participate in the distribution of Securities may be deemed to be underwriters and any discounts or commissions received by them from us and any profit on the resale of Securities by them may be deemed to be underwriting discounts and commissions under applicable securities legislation.

If so indicated in the applicable Prospectus Supplement, we may authorize dealers or other persons acting as our agents to solicit offers by certain institutions to purchase the Securities directly from us pursuant to contracts providing for payment and delivery on a future date. These contracts will be subject only to the conditions set forth in the applicable Prospectus Supplement or supplements, which will also set forth the commission payable for solicitation of these contracts.

The Prospectus Supplement relating to any offering of Securities will also set forth the terms of the offering of the Securities, including, to the extent applicable, the initial offering price, the proceeds to us, the underwriting discounts or commissions, and any other discounts or concessions to be allowed or re-allowed to dealers. Underwriters with respect to any offering of Securities sold to or through underwriters will be named in the Prospectus Supplement relating to such offering.

Holder of Warrants resident in the United States who acquire Common Shares pursuant to the exercise of Warrants in accordance with their terms and under this Prospectus and any applicable Prospectus Supplement may have a right of action against the Corporation for any misrepresentation in this Prospectus or any applicable Prospectus Supplement. However, the existence and enforceability of such a right of action is not without doubt. By contrast, holders of Warrants resident in Canada who may acquire Common Shares pursuant to the exercise of Warrants in accordance

with their terms and who will be deemed to acquire such Common Shares under applicable Canadian prospectus exemptions, will not have any such right of action.

Under agreements which may be entered into by us, underwriters, dealers, placement agents and other intermediaries who participate in the distribution of Securities may be entitled to indemnification by us against certain liabilities, including liabilities under applicable securities legislation. The underwriters, dealers, placement agents and other intermediaries with whom we enter into agreements may be customers of, engage in transactions with or perform services for us in the ordinary course of business.

Any offering of Subscription Receipts, Warrants or Units will be a new issue of securities with no established trading market. Unless otherwise specified in the applicable Prospectus Supplement, the Subscription Receipts, Warrants or Units will not be listed on any securities exchange. Unless otherwise specified in the applicable Prospectus Supplement, there is no market through which the Subscription Receipts, Warrants or Units may be sold and purchasers may not be able to resell Subscription Receipts, Warrants or Units purchased under this Prospectus or any Prospectus Supplement. This may affect the pricing of the Subscription Receipts, Warrants or Units in the secondary market, the transparency and availability of trading prices, the liquidity of the securities, and the extent of issuer regulation. Certain dealers may make a market in the Subscription Receipts, Warrants or Units, as applicable, but will not be obligated to do so and may discontinue any market making at any time without notice. No assurance can be given that any dealer will make a market in the Subscription Receipts, Warrants or Units or as to the liquidity of the trading market, if any, for the Subscription Receipts, Warrants or Units.

Subject to applicable securities legislation, and other than in relation to an “at-the-market distribution”, in connection with any offering of Securities under this Prospectus, the underwriters, if any, may over-allot or effect transactions which stabilize or maintain the market price of the Securities offered at a level above that which might otherwise prevail in the open market. These transactions, if commenced, may be discontinued at any time.

CERTAIN INCOME TAX CONSIDERATIONS

The applicable Prospectus Supplement may describe certain Canadian federal income tax consequences which may be applicable to a purchaser of Securities offered thereunder, and may also include a discussion of certain United States federal income tax consequences to the extent applicable.

LEGAL MATTERS

Unless otherwise specified in the Prospectus Supplement, certain legal matters relating to the offering of the Securities will be passed upon for us by McCarthy Tétrault LLP, with respect to matters of Canadian law, and Dorsey & Whitney LLP, with respect to matters of U.S. law. In addition, certain legal matters in connection with any offering of Securities will be passed upon for any underwriters, dealers or agents by counsel to be designated at the time of the offering by such underwriters, dealers or agents with respect to matters of Canadian and United States law.

The partners and associates of McCarthy Tétrault LLP, as a group, beneficially own, directly or indirectly, less than 1% of the outstanding securities of any class issued by the Corporation.

AUDITOR

Our auditors are Ernst & Young LLP, Chartered Accountants, Calgary, Alberta, Canada. Our consolidated financial statements as at December 31, 2013 and 2012 incorporated by reference into this Prospectus have been audited by Ernst & Young LLP, independent registered chartered accountants, as indicated in their report dated March 12, 2014 and are incorporated herein in reliance upon the authority of said firm as experts in accounting and auditing in giving said report. Ernst & Young LLP has been our auditors since our inception in 1998.

Ernst & Young LLP has advised that they are independent with respect to the Corporation within the meaning of the Rules of the Professional Conduct of the Institute of Chartered Accountants of Alberta.

REGISTRAR AND TRANSFER AGENT

Our registrar and transfer agent is Computershare Trust Company of Canada at its principal office in Calgary, Alberta.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form F-10 relating to the Securities. This Prospectus, which constitutes a part of the registration statement, does not contain all of the information contained in the registration statement, certain items of which are contained in the exhibits to the registration statement as permitted by the rules and regulations of the SEC. Statements included or incorporated by reference in this Prospectus about the contents of any contract, agreement or other documents referred to are not necessarily complete, and in each instance you should refer to the exhibits for a more complete description of the matter involved. Each such statement is qualified in its entirety by such reference.

We file annual and quarterly financial information and material change reports and other material with the SEC and with the securities commissions or similar regulatory authorities in Canada. Under MJDS adopted by the United States and Canada, documents and other information that we file with the SEC may be prepared in accordance with the disclosure requirements of Canada, which are different from those of the United States. As a foreign private issuer, the Corporation is exempt from the rules under the Exchange Act prescribing the furnishing and content of proxy statements, and the Corporation's officers, directors and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act. In addition, the Corporation is not required to publish financial statements as promptly as United States companies.

You may read and copy any document that we have filed with the SEC at the SEC's public reference rooms in Washington, D.C. You may also obtain copies of those documents from the public reference room of the SEC at 100F Street, N.E., Washington, D.C. 20549 by paying a fee. You should call the SEC at 1-800-SEC-0330 or access its website at www.sec.gov for further information about the public reference rooms. You may read and download some of the documents we have filed with the SEC on EDGAR at www.sec.gov.

You may read and download any public document that we have filed with the securities commissions or similar regulatory authorities in Canada at www.sedar.com.

DOCUMENTS FILED AS PART OF THE REGISTRATION STATEMENT

The following documents have been filed with the SEC as part of the registration statement of which this Prospectus is a part insofar as required by the SEC's Form F-10:

- the documents listed under "Documents Incorporated by Reference" in this Prospectus;
- the consent of our auditors Ernst & Young LLP;
- the consent of our Canadian counsel McCarthy Tétrault LLP;
- powers of attorney from our directors and officers; and
- Form F-X - Appointment of Agent for Service of Proceeds and Undertaking.