

ONCOLYTICS BIOTECH INC  
Form SUPPL  
June 10, 2010

Filed pursuant to General Instruction II.6 of Form F-10  
File No. 333-167250

PROSPECTUS SUPPLEMENT  
(To Base Shelf Prospectus dated June 10, 2010)

June 10, 2010

1,955,000 Common Shares

This prospectus supplement relates to the qualification for distribution of: (i) up to 1,700,000 common shares (the “Common Shares”) of Oncolytics Biotech Inc. (the “Corporation”), issuable from time to time, on exercise of 1,700,000 common share purchase warrants (the “Warrants”) issued by the Corporation on November 23, 2009 as part of the Unit Offering (as defined below); and (ii) up to 255,000 Common Shares, issuable from time to time, on exercise of 255,000 Warrants issued by the Corporation on December 2, 2009 in connection with the over-allotment option granted to a syndicate of underwriters (the “Underwriters”) in connection with the Unit Offering; and (iii) such indeterminate number of additional Common Shares that may be issuable by reason of the anti-dilution provisions contained in the Warrant Indenture (as defined herein) governing the Warrants. See “Terms of Warrants” and “Plan of Distribution”.

On November 18, 2009, we filed a prospectus supplement (the “2009 Supplement”) to a short form base shelf prospectus dated June 16, 2008 with the securities commissions in the provinces of British Columbia, Alberta, Manitoba and Ontario and a prospectus supplement to our registration statement on Form F-10 (File No. 333-151513), principally filed on June 6, 2008, as amended June 17, 2008, with the United States Securities and Exchange Commission (the “SEC”) relating to the offering (the “Unit Offering”) by us to the public in Canada and the United States of units of the Corporation (the “Units”), each Unit consisting of one Common Share and 0.4 of one Common Share purchase warrant. Each whole Warrant will entitle the holder to purchase one Common Share at an exercise price of U.S. \$3.50, subject to adjustment pursuant to the terms of the Warrant Indenture (as defined herein), at any time until 4:30 p.m. (Calgary time) on the date that is five years from the date of the closing of the Unit Offering. See “Plan of Distribution”. The Unit Offering closed on November 23, 2009 and the over-allotment option closed on December 2, 2009. The exercise price of the Warrants was determined by negotiation between the Corporation and the Underwriters.

Our outstanding Common Shares are listed for trading on the Toronto Stock Exchange (“TSX”) under the trading symbol “ONC” and on the NASDAQ Capital Market (the “NASDAQ”) under the trading symbol “ONCY”. On June 9, 2010, the closing price of the Common Shares on the TSX was \$2.96 and on NASDAQ was U.S.\$2.8899 per Common Share. The TSX has approved the listing of the Common Shares. Pursuant to its procedure, NASDAQ has confirmed that it will not be objecting to the additional listing of the Common Shares.

Investing in our securities involves risks that are described in the “Risk Factors” section beginning on page S-22 of this prospectus supplement and page 4 of the accompanying short form base shelf prospectus.

We are permitted, as a foreign issuer in the United States, under a multi-jurisdictional disclosure system adopted by the United States and Canada, to prepare this prospectus supplement and the



- ii -

accompanying short form base shelf 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 included or incorporated herein by reference in accordance with Canadian generally accepted accounting principles, and they are subject to Canadian auditing and auditor independence standards. Thus, they may not be comparable to the financial statements of United States companies.

You should be aware that the purchase of Common Shares may have tax consequences both in the United States and Canada. This prospectus supplement and the accompanying short form base shelf prospectus may not describe these tax consequences fully. You should read the tax discussion in this prospectus supplement and the accompanying short form base shelf prospectus. See “Certain Canadian Federal Income Tax Considerations” and “Certain United States Federal Income Tax Considerations” in this prospectus supplement and the accompanying short form base shelf prospectus.

Your ability to enforce civil liabilities under United States federal securities laws may be adversely affected 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 supplement and the accompanying short form base shelf prospectus are residents of Canada, and a substantial portion of our assets and the assets of such persons are located outside the United States.

NEITHER THE SEC NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS SUPPLEMENT OR THE ACCOMPANYING SHORT FORM BASE SHELF PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

No underwriter has been involved in the preparation of, or has performed a review of, the contents of this prospectus supplement or the accompanying 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 3300, 421 – 7th Avenue S.W., Calgary, Alberta, T2P 4K9.

- S-3 -

## TABLE OF CONTENTS

	Page
IMPORTANT NOTICE ABOUT THE INFORMATION IN THIS PROSPECTUS SUPPLEMENT	S-3
DEFINITIONS AND OTHER MATTERS	S-3
SPECIAL NOTICE REGARDING FORWARD LOOKING STATEMENTS	S-4
DOCUMENTS INCORPORATED BY REFERENCE	S-4
DOCUMENTS FILED AS PART OF THE REGISTRATION STATEMENT	S-6
ONCOLYTICS BIOTECH INC. OUR BUSINESS	S-6
CAPITALIZATION	S-7
MARKET FOR SECURITIES	S-8
USE OF PROCEEDS	S-8
PRIOR SALES	S-8
TERMS OF WARRANTS	S-9
PLAN OF DISTRIBUTION	S-10
CERTAIN CANADIAN FEDERAL INCOME TAX CONSIDERATIONS	S-11
CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS	S-15
RISK FACTORS	S-23
LEGAL MATTERS AND INTEREST OF EXPERTS	S-23

## IMPORTANT NOTICE ABOUT THE INFORMATION

## IN THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of the Common Shares and certain other matters and also adds to and updates information contained in the accompanying short form base shelf prospectus. The second part, the accompanying short form base shelf prospectus, gives more general information about securities we may offer from time to time, some of which may not apply to the Common Shares being offered under this prospectus supplement. If the description of the Common Shares and Warrants varies between this prospectus supplement and the accompanying prospectus, you should rely on the information in this prospectus supplement. In this prospectus supplement, all capitalized terms used and not otherwise defined herein have the meanings provided in the accompanying prospectus.

You should rely only on the information contained in or incorporated by reference in this prospectus supplement and the accompanying short form base shelf prospectus. To the extent that there is a conflict between the information contained in this prospectus supplement, on the one hand, and the accompanying short form base shelf prospectus, on the other hand, you should rely on the information in this prospectus supplement. We have not authorized anyone to provide you with different or additional information. We are not making an offer of the Common Shares in any jurisdiction where the offer is not permitted by law. If anyone provides you with any different or inconsistent information, you should not rely on it. You should not assume that the information contained in or incorporated by reference in this prospectus supplement or the accompanying short form base shelf prospectus is accurate as of any date other than the respective dates of the documents in which such information appears. Our business, financial condition, results of operations and prospects may have changed since those dates.

#### DEFINITIONS AND OTHER MATTERS

In this prospectus supplement and in the accompanying short form base shelf prospectus, unless otherwise indicated, references to “we”, “us”, “our”, “Oncolytics” or the “Corporation” are to Oncolytics Biotech Inc. and/or its subsidiary corporations, as applicable. All references to “dollars”, “Cdn.\$” or “\$” are to Canadian dollars and all references to “U.S.\$” are to United States dollars.

---

- S-4 -

This prospectus supplement is part of a registration statement on Form F-10 relating to the Units that we filed with the SEC. This prospectus supplement does not contain all of the information contained in the registration statement, certain parts of which are omitted in accordance with the rules and regulations of the SEC. You should refer to the registration statement and the exhibits to the registration statement for further information with respect to us and our securities.

We prepare our financial statements in accordance with Canadian generally accepted accounting principles (“Canadian GAAP”), which differ from United States generally accepted accounting principles (“U.S. GAAP”). Therefore, our consolidated financial statements incorporated by reference in this prospectus supplement and in the accompanying short form base shelf prospectus and in the documents incorporated by reference in this prospectus supplement and in the accompanying short form base shelf prospectus may not be comparable to consolidated financial statements prepared in accordance with U.S. GAAP. You should refer to Note 23 of our consolidated financial statements for the year ended December 31, 2009 for a discussion of the principal differences between our financial results determined under Canadian GAAP and under U.S. GAAP. For our unaudited consolidated financial statements as at and for the three months ended March 31, 2010, you should refer to our reconciliation of our consolidated financial statements as at and for the three months ended March 31, 2010 to U.S. GAAP filed with the SEC on May 20, 2010 and incorporated into this prospectus supplement by reference. See “Documents Incorporated by Reference”.

This prospectus supplement is deemed to be incorporated by reference into the accompanying short form base shelf prospectus solely for the purposes of the offering of the Common Shares. Other documents are also incorporated or deemed to be incorporated by reference into this prospectus supplement and into the accompanying short form base shelf prospectus. See “Documents Incorporated by Reference” in this prospectus supplement.

#### SPECIAL NOTICE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements that we make contain forward-looking statements reflecting our current beliefs, plans, estimates and expectations. Readers are cautioned that these forward-looking statements involve risks and uncertainties, including, without limitation, clinical trial study delays, product development delays, our ability to attract and retain business partners, future levels of government funding, competition from other biotechnology companies and our ability to obtain the capital required for research, product development, operations and marketing. These factors should be carefully considered and readers should not place undue reliance on our forward-looking statements. Actual events may differ materially from our current expectations due to risks and uncertainties.

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 result expected by us will occur. Except as required by applicable securities laws, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus supplement or to conform these statements to actual results or to changes in our expectations.

#### DOCUMENTS INCORPORATED BY REFERENCE

This prospectus supplement is deemed to be incorporated by reference into the accompanying short form base shelf prospectus solely for the purposes of the offering of the Common Shares.

Other information has also been incorporated by reference in the accompanying base shelf prospectus from documents filed with securities commissions or similar authorities in certain of the provinces of Canada. 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](http://www.sedar.com).

---

- S-5 -

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 the accompanying base shelf prospectus and this prospectus supplement:

- our annual information form, which is comprised of our Annual Report on Form 20-F dated March 15, 2010, for the year ended December 31, 2009 (the “AIF”);
- our management information circular dated March 26, 2010 relating to the annual and special meeting of shareholders held on May 11, 2010;
- our audited consolidated financial statements, together with the notes thereto, as at December 31, 2009 and 2008 and the auditors’ report thereon addressed to our shareholders;
- our management’s discussion and analysis of financial condition and results of operations dated March 8, 2010 for the year ended December 31, 2009 (“MD&A”);
- our unaudited interim consolidated financial statements, together with the notes thereto, as at and for the three months ended March 31, 2010;
- our management’s discussion and analysis of financial condition and results of operations dated May 11, 2010, for the three months ended March 31, 2010; and
- the reconciliation of our unaudited interim consolidated financial statements as at and for the three months ended March 31, 2010 to U.S. GAAP, filed on May 20, 2010.

Any documents of the type required by Section 11.1 of Form 44-101F1 - Short Form Prospectus promulgated under National Instrument 44-101 - Short Form Prospectus Distributions of the Canadian Securities Administrators to be incorporated by reference in a short form prospectus, including, without limitation, any annual information form, comparative annual financial statements and the auditors’ report thereon, comparative interim 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 British Columbia, Alberta, Manitoba and Ontario after the date of this prospectus supplement and prior to the termination of the distribution of the Common Shares under this prospectus supplement shall be deemed to be incorporated by reference in the accompanying base shelf prospectus for the purposes of the offering of the Common Shares issuable from time to time on the exercise of the Warrants.

Any similar document filed by the Corporation with, or furnished by the Corporation to, the SEC 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 supplement shall be deemed to be incorporated by reference in this prospectus supplement and filed as exhibits to the registration statement of which this prospectus supplement forms a part (in the case of any Report on Form 6-K, if and to the extent expressly provided in such report).

Any statement contained in the accompanying base shelf prospectus, in this prospectus supplement or in a document incorporated or deemed to be incorporated by reference in the accompanying base shelf prospectus will be deemed to be modified or superseded for purposes of this prospectus supplement to the extent that a statement contained in this prospectus supplement or in any other subsequently filed document which also is, or is deemed to be, incorporated by reference into the accompanying base shelf 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 supplement or the accompanying base shelf prospectus.

---

- S-6 -

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 supplement, the previous annual information form, the previous audited annual consolidated financial statements and related management's discussion and analysis, all unaudited interim consolidated 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 consolidated financial statements and management's discussion and analysis are filed shall be deemed no longer to be incorporated into the accompanying base shelf prospectus for purposes of future offers and sales of Common Shares under this prospectus supplement. Upon new interim consolidated 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 supplement, all interim consolidated 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 the accompanying base shelf prospectus for purposes of future offers and sales of Common Shares under this prospectus supplement. Upon a new information circular relating to an annual 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 supplement, the information circular for the preceding annual meeting of holders of Common Shares shall be deemed no longer to be incorporated into the accompanying base shelf prospectus for purposes of future offers and sales of Common Shares under this prospectus supplement.

#### DOCUMENTS FILED AS PART OF THE REGISTRATION STATEMENT

In addition to the documents specified in this prospectus supplement under "Documents Incorporated by Reference" and in the accompanying base shelf prospectus under "Documents Filed as Part of the Registration Statement", the following documents have been or will be filed with the SEC as part of the registration statement on Form F-10 (File No. 333-151513) of which this prospectus supplement forms a part: the form of Warrant Indenture (as defined herein).

#### ONCOLYTICS BIOTECH INC.

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 for 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 3300, 421 – 7th Avenue S.W., Calgary, Alberta T2P 4K9.

We have three direct wholly-owned subsidiaries: Oncolytics Biotech (Barbados) Inc. ("Oncolytics Barbados"), which is incorporated pursuant to the laws of Barbados; Valens Pharma Ltd., which is incorporated pursuant to the laws of the Province of Alberta and 145302 Alberta Ltd., which is incorporated pursuant to the laws of the Province of Alberta; and one indirect wholly-owned subsidiary, Oncolytics Biotech (U.S.), Inc., which is incorporated pursuant to the laws of Delaware.

#### 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 which can be used as an alternative to existing cytotoxic or cytostatic therapies or as an adjuvant therapy to conventional chemotherapy, radiation

---

- S-7 -

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 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. Our 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 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.

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.

#### CAPITALIZATION

As at June 9, 2010, we have 61,569,969 Common Shares issued and outstanding. After giving effect to the exercise of all our outstanding Common Share purchase warrants and options, we would have 67,199,662 Common Shares issued and outstanding as at June 9, 2010.

- S-8 -

## MARKET FOR SECURITIES

Our outstanding Common Shares are listed and posted for trading on the TSX 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 TSX and NASDAQ for the periods indicated:

Period	Toronto Stock Exchange				NASDAQ Capital Market			
	High (\$)	Low (\$)	Close (\$)	Volume (Shares)	High (U.S.\$)	Low (U.S.\$)	Close (U.S.\$)	Volume (Shares)
2009								
May	2.10	1.80	1.94	1,056,300	1.81	1.48	1.74	755,208
June	2.30	1.76	1.89	1,269,800	2.13	1.56	1.64	951,274
July	2.25	1.61	1.96	1,291,600	2.12	1.40	1.86	1,387,652
August	2.65	1.85	2.43	1,795,600	2.42	1.74	2.25	1,580,485
September	3.65	2.18	3.13	3,494,306	3.38	2.02	2.93	3,406,873
October	4.10	3.13	3.49	4,328,000	3.80	2.93	3.23	6,442,929
November	3.98	2.85	2.99	5,104,200	3.74	2.66	2.84	4,463,823
December	3.11	2.65	2.75	1,448,500	2.95	2.57	2.61	1,392,690
2010								
January	3.12	2.15	2.53	1,952,900	2.95	2.05	2.36	2,004,302
February	3.48	2.40	2.96	2,178,100	3.30	2.25	2.79	4,229,253
March	3.70	2.92	3.20	2,240,200	3.63	2.78	3.13	2,731,331
April	3.31	2.68	2.88	1,297,295	3.30	2.65	2.83	2,022,818
May	3.16	2.38	3.15	1,485,008	3.08	2.44	2.93	1,932,701
June (1-9)	3.40	2.87	2.96	644,911	3.18	2.71	2.88	99,582

## USE OF PROCEEDS

From time to time, when the Warrants are exercised, we may receive proceeds equal to the aggregate exercise price of such Warrants. Assuming that all of the Warrants are exercised prior to their expiry time and that no adjustment based on the anti-dilution provisions contained in the Warrant certificate has taken place, the gross proceeds to us from the exercise of all of the Warrants sold in the Unit Offering (including those Warrants issuable pursuant to the exercise of the over-allotment option) will be approximately U.S.\$6,842,500.

The net proceeds from the exercise of the Warrants are currently intended to be used for our research and development program, our manufacturing activities in support of the program and general corporate purposes.

The principal purposes in the research and development area will be the advancement of our clinical trial program and the continued development of our manufacturing process. Our clinical trial program has been designed and directed to test the safety and activity of REOLYSIN® either as a mono-therapy or in combination with other approved chemotherapies.

We believe that our intended use of the net proceeds from the exercise of the Warrants is consistent with our stated business objectives and strategic goals of developing oncolytic viruses as potential cancer therapeutics and will further these objectives and will assist us in financing our recently approved Phase 3 clinical trial examining REOLYSIN in

combination with paclitaxel and carboplatin in patients with platinum-refractory head and neck cancers, the other clinical activities that form a part of our clinical program, the manufacturing activities in support of our program and general corporate purposes.

PRIOR SALES

Other than as set forth below, no Common Shares or securities exchangeable or convertible into Common Shares have been issued during the twelve month period preceding the date of this prospectus supplement.

---

- S-9 -

On May 13, 2009, we issued 3,450,000 units, each unit consisting of one Common Share and one Common Share purchase warrant, at a price of \$2.00 per unit. Each whole Common Share purchase warrant entitles the holder to acquire one additional Common Share upon payment of \$2.40 on or before May 13, 2012, subject to an acceleration of the expiry date in certain circumstances. In addition, we issued 345,000 broker Common Share purchase warrants with an exercise price of \$2.40 expiring on May 13, 2012, subject to acceleration of the expiry date in certain circumstances.

From April 1, 2009 to October 30, 2009, we issued 256,600 Common Shares on the exercise of 256,600 options at exercise prices between \$0.85 and \$2.70 per Common Share.

From May 6, 2009 to October 23, 2009, we issued 3,235,000 Common Shares on the exercise of 3,235,000 warrants at an exercise price of \$1.80 per warrant.

From September 23, 2009 to November 2, 2009, we issued 3,795,000 Common Shares on the exercise of 3,795,000 warrants at an exercise price of \$2.40 per warrant.

On October 20, 2009, we issued 200,000 Common Shares in exchange for all of the convertible preferred shares of British Canadian Biosciences Corp.

On October 26, 2009, we received and cancelled 5,000 Common Shares in consideration for clinical trial data that we had obtained as part of our acquisition of a private company in April 2009.

On November 23, 2009, we issued 4,887,500 units, each unit consisting of one Common Share and 0.40 of one Common Share purchase warrant, at a price of U.S.\$3.00 per unit. Each whole Common Share purchase warrant entitles the holder to acquire one additional Common Share upon payment of U.S.\$3.50 on or before November 23, 2014, subject to acceleration of the expiry date in certain circumstances.

On December 8, 2009, we granted 332,500 stock options with an exercise price of \$3.06.

On May 11, 2010, we granted 15,000 stock options with an exercise price of \$2.85.

On June 1, 2010, we issued 20,000 Common Shares at a price of \$2.70 per share pursuant to the exercise of stock options.

#### TERMS OF WARRANTS

The Warrants were issued in registered form under, and are governed by an indenture (the “Warrant Indenture”) dated November 18, 2009 between us and Computershare Trust Company of Canada, as agent for the holders of the Warrants. The following is a summary of the material attributes and characteristics of the Warrants. This summary does not, however, include a description of all of the terms of the Warrants, and is subject to the detailed provisions of the Warrant Indenture.

Under the Unit Offering and including those Warrants issuable pursuant to the exercise of the over-allotment option, 1,955,000 Warrants were issued. Each Warrant will entitle the holder to purchase one Common Share upon payment of U.S.\$3.50, subject to adjustment as summarized below, at any time until 4:30 p.m. (Calgary time) on November 23, 2014. If on any accelerated exercise date (“Accelerated Exercise Date”) the 10 day volume weighted average trading price of our Common Shares on the TSX exceeds U.S.\$6.50 per share, then, at our sole discretion and upon us sending the holders of the Warrants written notice of such Accelerated Exercise Date (the “Notice”) and issuing a news release

announcing such Accelerated Exercise Date, the Warrants shall only be exercisable for a period of 30 days following the later of the date on which such Notice is sent to holders of Warrants and the date on which such announcement is made by news release. The Notice will be deemed to be sent by us on the date the Notice is deposited in first class mail to the registered address of the holder of the Warrants as reflected on the Warrant register maintained under the Warrant Indenture.

---



- S-10 -

There is no market through which the Warrants may be sold and purchasers may not be able to resell the Warrants purchased under the prospectus supplement. This may affect the pricing of the Warrants in the secondary market, the transparency and availability of trading prices, the liquidity of such Warrants, and the extent of issuer regulation. See “Risk Factors”.

The Warrant Indenture provides that the share ratio and exercise price of the Warrants will be subject to adjustment in the event of a subdivision or consolidation of our Common Shares. The Warrant Indenture also provides that if there is: (i) any reclassification or change of our Common Shares into other shares; (ii) any consolidation, amalgamation, arrangement or other business combination of Oncolytics resulting in any reclassification or change of our Common Shares into other shares; or (iii) any sale, lease, exchange or transfer of our assets in their entirety or substantially in their entirety to another entity, then each holder of a Warrant which is thereafter exercised shall receive, in lieu of Common Shares, the kind and number or amount of other securities or property which such holder would have been entitled to receive as a result of such event if such holder had exercised the Warrants prior to the Event.

We also covenant in the Warrant Indenture that, during the period in which the Warrants are exercisable, we will give public notice of our intention to fix a record date for the issuance of rights, options or warrants (other than the Warrants comprising part of the Units) to all or substantially all of the holders of our outstanding Common Shares at least 10 days prior to the record date of such event.

To the extent that a holder of a Warrant would otherwise be entitled to purchase a fraction of a Common Share, the Corporation, in lieu of issuing a fractional Common Share, shall pay to the holder thereof within five business days of exercise an amount in Canadian dollars equal to the difference between the “Current Market Price” of the Common Shares on the exercise date multiplied by the fractional interest, provided that Oncolytics shall make only one payment for each beneficial holder exercising such Warrants and shall not be required to make any payment that is less than \$10.00. Holders of Warrants do not have any voting or pre-emptive rights or any other rights as shareholders of Oncolytics.

In the event the registration statement under the United States Securities Act of 1933, as amended (the “U.S. Securities Act”) for the issuance of the Common Shares underlying the exercise of the Warrants is not effective at the time of exercise of such Warrants, then the holders of such Warrants resident in the United States or holding for the account or benefit of a person resident in the United States or a U.S. person (as such terms are defined under Regulation S under the U.S. Securities Act) shall be able to exercise such Warrants on a cashless basis. Holders of the Warrants resident outside the United States and not holding for the account or benefit of a person resident in the United States or a U.S. person may exercise the Warrants pursuant to Regulation S under the U.S. Securities Act. All holders of Warrants that exercise Warrants when a registration statement under the U.S. Securities Act is not effective will agree that the Unit Shares received on such exercise will only be resold pursuant to a registration statement under the U.S. Securities Act registering such resale or pursuant to an exemption from such registration requirements, including but not limited to, the exclusion provided by Rule 904 of Regulation S under the U.S. Securities Act.

Reference is made to the Warrant Indenture for the full text of the attributes of the Warrants.

#### PLAN OF DISTRIBUTION

This prospectus supplement relates to the qualification for distribution of: (i) up to 1,700,000 Common Shares, issuable from time to time, on exercise of 1,700,000 Warrants issued by the Corporation on November 23, 2009 as part of the Unit Offering; and (ii) up to 255,000 Common Shares, issuable from time to time, on exercise of 255,000 Warrants issued by the Corporation on December 2, 2009 in connection with the over-allotment option granted to the Underwriters; and (iii) such indeterminate number of additional Common Shares that may be issuable by reason of the

anti-dilution provisions contained in the Warrant Indenture governing the Warrants. See “Terms of Warrants”. Each Unit consisting of one Common Share and 0.4 of one Warrant. Each Warrant will entitle the holder to purchase one Common Share at an exercise price of U.S. \$3.50, subject to adjustment, at any time until 4:30 p.m. (Calgary time) on November 23, 2014.

---

- S-11 -

This prospectus supplement registers the offering of the securities to which it relates under the U.S. Securities Act, in accordance with the multi-jurisdictional disclosure system adopted by the SEC and the securities commission or similar regulatory authority in each of the provinces of Canada. This prospectus supplement does not qualify the distribution of the Common Shares in any province or territory of Canada.

Holders of Warrants resident in the United States who acquire Common Shares pursuant to the exercise of Warrants in accordance with their terms and under the accompanying short form base shelf prospectus and this prospectus supplement may have a right of action against us for any misrepresentation in the accompanying base shelf prospectus and this 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 respective terms and who will be deemed to acquire such Common Shares under applicable Canadian prospectus exemptions, will not have any such right of action with respect to such acquisition of Common Shares.

The Common Shares to which this prospectus supplement relates will be sold directly by us to holders of Warrants, as the case may be, on the exercise of such Warrants. No underwriters, dealers or agents will be involved in these sales. No underwriter has been involved in the preparation of, or has performed any review of, this prospectus supplement or the accompanying prospectus.

On November 18, 2009, we filed the 2009 Supplement with the securities commissions in the provinces of British Columbia, Alberta, Manitoba and Ontario and with the SEC relating to the Unit Offering. In connection with the Unit Offering, we entered into an underwriting agreement dated November 18, 2009 with the Underwriters, pursuant to which the Corporation agreed to sell and the Underwriters agreed to purchase from the Corporation 4,250,000 Units (not including an additional 637,500 Common Shares at a price of \$2.95 per Common Share and up to 255,000 Warrants at a price of \$0.05 per 0.4 of one Warrant issuable pursuant to the exercise of the over-allotment option granted to the Underwriters in connection with the Unit Offering), at a price of \$3.00 per Unit. The Unit Offering closed on November 23, 2009. The exercise price of the Warrants was determined by negotiation between us and the Underwriters.

We filed the accompanying base shelf prospectus with the securities commissions in the provinces of British Columbia, Alberta, Manitoba and Ontario and on June 10, 2010, a registration statement on Form F-10 (File No. 333-167250) with the SEC relating to the offering by the Corporation from time to time during the 25 months that the short form base shelf prospectus, including amendments thereto, remained valid of up to Cdn. \$150,000,000 of Common Shares, subscription receipts, warrants and units. The shelf registration statement became effective with the SEC pursuant to Rule 467(a) of the U.S. Securities Act on June 10, 2010.

It is a condition of closing of the Unit Offering that the shelf registration statement remain effective with the SEC and that we file with the SEC a prospectus supplement registering the offering of the Common Shares issuable from time to time on the exercise of the Warrants. No U.S. Person, person within the United States or person holding Warrants for the account or benefit of a U.S. Person or person within the United States may exercise the Warrants during any period of time when a registration statement covering such Common Shares is not effective or an exemption from such registration is not otherwise available. If a registration statement under the U.S. Securities Act is not effective, the Warrants may be exercised on a net cashless basis. See "Terms of Warrants".

#### CERTAIN CANADIAN FEDERAL INCOME TAX CONSIDERATIONS

In the opinion of McCarthy Tétrault LLP, counsel to the Corporation (“Counsel”) the following, as of the date hereof, is a fair and adequate summary of the principal Canadian federal income tax considerations generally applicable to the acquisition, holding and disposition of Common Shares issuable from time to time upon the exercise of Warrants, by a holder who acquires Warrants pursuant to the Unit Offering and who, for purposes of the Income Tax Act (Canada) (the “Tax Act”) and at all relevant times deals at arm’s length and is not affiliated with the Corporation or the Underwriter and will hold the Common Shares as capital property. The Common Shares will generally constitute capital property to a holder thereof unless the holder holds the Common Shares in the course of carrying on a business or acquires the Common Shares in a transaction or transactions considered to be an adventure in the nature of trade. Certain holders resident in Canada for purposes of the Tax Act who might not otherwise be considered to hold their Common Shares as capital property, in certain circumstances, may be entitled to make an

---

- S-12 -

irrevocable election under subsection 39(4) of the Tax Act to have the Common Shares and every other “Canadian security” (as defined in the Tax Act) owned by such holder in the taxation year of the election and in all subsequent taxation years deemed to be capital property. Holders contemplating such election should consult their own tax advisors for advice as to whether an election under subsection 39(4) is available and/or advisable in their particular circumstances.

This summary is not applicable to a holder: (i) that is a “financial institution” (as defined in the Tax Act ) for purposes of the mark-to-market rules); (ii) that is a “specified financial institution” (as defined in the Tax Act); (iii) an interest in which is a “tax shelter investment” (as defined in the Tax Act); (iv) to which the “functional currency” reporting rules in section 261 of the Tax Act apply; (v) that is exempt from tax under Part I of the Tax Act; or (vi) who holds or subsequently acquires Common Shares acquired on the exercise of a stock option or other agreement to issue or sell Common Shares received in respect of, in the course of, or by virtue of employment with the Corporation or any corporation or mutual fund trust (as defined in the Tax Act) not dealing at arm’s length with the Corporation. Such holders should consult their own tax advisors.

This summary is based upon the facts set out in the prospectus, the current provisions of the Tax Act and the regulations thereunder (the “Regulations”), all specific proposals to amend the Tax Act and the Regulations publicly announced by or on behalf of the Minister of Finance (Canada) prior to the date hereof (the “Proposed Amendments”) and Counsel’s understanding of the current published administrative practices of the Canada Revenue Agency (the “CRA”) which have been made publicly available prior to the date hereof. Except for the Proposed Amendments, this summary does not take into account or anticipate any changes in law or administrative practice, nor does it take into account provincial or territorial tax laws of Canada or the tax laws of any foreign jurisdiction. No assurance can be given that the Proposed Amendments will be enacted as proposed (or at all) or that legislative, judicial or administrative changes will not alter the statements made herein.

This summary is of a general nature only and is not intended to be, nor should it be construed to be, legal or tax advice to any particular holder. This summary is not exhaustive of all possible Canadian federal income tax considerations applicable to an investment in Common Shares. The income and other tax consequences of acquiring, holding and disposing of Common Shares will vary according to the status of the holder, the province or provinces or territory or territories in which the holder resides or carries on business and, generally, the holder’s own particular circumstances. Accordingly, each prospective holder should obtain independent advice regarding the income tax consequences of investing in the Common Shares with reference to the holder’s own particular circumstances.

#### Currency

For the purposes of the Tax Act, all amounts relating to the acquisition, holding or disposition of Common Shares and Warrants (including dividends received or deemed to have been received, adjusted cost base and proceeds of disposition) must generally be converted into Canadian dollars using the relevant exchange rate quoted by the Bank of Canada at noon on the relevant day or such other rate or rates of exchange acceptable to the Minister of National Revenue (Canada).

#### Holders Resident in Canada

The following part of the summary is applicable to a holder who, at all relevant times, is or is deemed to be resident in Canada for the purpose of the Tax Act and any applicable income tax treaty or convention (a “Canadian Holder”).

#### Exercise of Warrants

No gain or loss will be realized by a Canadian Holder upon the exercise of a Warrant. A Canadian Holder's cost of a Common Share acquired on the exercise of a Warrant will be the aggregate of the adjusted cost base to the Canadian Holder of the Warrant so exercised and the exercise price paid for such Common Share under the terms of the Warrant. The cost of any Common Share acquired on the exercise of a Warrant by a Canadian Holder will be

---

- S-13 -

averaged with the adjusted cost base to the holder of any other Common Shares held by the Canadian Holder as capital property at that time to determine the adjusted cost base of the Common Share so acquired.

#### Taxation of Dividends on Common Shares

Dividends (including deemed dividends) received on the Common Shares by a Canadian Holder who is an individual (other than by certain trusts) will be included in the individual's income and will generally be subject to the gross-up and the dividend tax credit rules normally applicable to taxable dividends received from taxable Canadian corporations. To the extent the Corporation designates the dividends as "eligible dividends" in the prescribed manner, the Canadian Holder will be subject to the enhanced gross-up and dividend tax credit rules. There may be limitations on the ability of the Corporation to designate dividends as "eligible dividends". Taxable dividends received by an individual (and certain trusts) may give rise to alternative minimum tax under the Tax Act, depending on the individual's circumstances.

Dividends (including deemed dividends) received on the Common Shares by a Canadian Holder that is a corporation will be included in computing the corporation's income and will generally be deductible in computing the corporation's taxable income.

A Canadian Holder that is a "private corporation", as defined in the Tax Act, or any other corporation controlled by or for the benefit of an individual (other than a trust) or a related group of individuals (other than trusts), will generally be liable to pay a 33 % refundable tax under Part IV of the Tax Act on dividends received (or deemed to be received) on the Common Shares to the extent such dividends are deductible in computing its taxable income.

#### Disposition of Common Shares

A disposition or deemed disposition of a Common Share (other than to the Corporation) will result in the Canadian Holder thereof realizing a capital gain (or a capital loss) in the taxation year in which the disposition occurs equal to the amount by which the proceeds of disposition exceed (or are less than) the aggregate of the Canadian Holder's adjusted cost base of such shares and reasonable costs of the disposition. The adjusted cost base of any Common Shares acquired pursuant to the Unit Offering will generally be the average of the cost of all such shares (including all other Common Shares held by the Canadian Holder) for the purpose of calculating capital gains or capital losses on subsequent dispositions of such shares. If the Canadian Holder is a corporation, any capital loss arising on a disposition of a share may in certain circumstances be reduced by the amount of any dividends, including deemed dividends, which have been received on the share. Analogous rules may apply to a partnership or trust of which a corporation, partnership or trust is a member or beneficiary.

#### Taxation of Capital Gains and Capital Losses

One half of any such capital gain (a "taxable capital gain") must be included in computing the income of the Canadian Holder in the year of disposition, and one half of any such capital loss (an "allowable capital loss") generally must be applied to reduce taxable capital gains realized by the Canadian Holder in the year of disposition. Allowable capital losses in excess of taxable capital gains for the year of disposition generally may be applied by the Canadian Holder to reduce net taxable capital gains realized in any of the three preceding years or in any subsequent year, subject to various detailed provisions of the Tax Act including provisions that apply to corporate holders after an acquisition of control.

The amount of any capital loss realized on the disposition or deemed disposition of a Common Share by a Canadian Holder that is a corporation may be reduced by the amount of dividends received or deemed to have been received by

it on the Common Share to the extent and in the circumstances prescribed by the Tax Act. Analogous rules may apply where a corporation is, directly or through a trust or partnership, a member of a partnership or a beneficiary of a trust that owns Common Shares. Canadian Holders to whom these rules may be relevant should consult their own tax advisors.

---



- S-14 -

A subscriber that is a “Canadian controlled private corporation” (as defined in the Tax Act) will be liable to pay an additional 6 % refundable tax on its “aggregate investment income” for the year, which is defined to include an amount in respect of taxable capital gains.

#### Alternative Minimum Tax

Individuals, including certain trusts, are subject to an alternative minimum tax. Generally, dividends received or deemed to be received on the Common Shares and capital gains realized on a disposition or deemed disposition of Common Shares or Warrants may increase a Canadian Holder’s liability for alternative minimum tax. Canadian Holders should consult their own advisors with respect to alternative minimum tax.

#### Holders Not Resident in Canada

This part of the summary is generally applicable to a holder who, at all relevant times, is neither resident nor deemed to be resident in Canada for purposes of the Tax Act and any applicable income tax treaty or convention, and who does not use or hold, and is not deemed to use or hold, the Common Shares in connection with carrying on a business in Canada (a “Non-Resident Holder”). Special rules not discussed in this summary may apply to a non-resident insurer carrying on an insurance business in Canada and elsewhere; such insurers should consult their own tax advisors.

#### Taxation of Dividends on Common Shares

Amounts paid or credited or deemed to be paid or credited to a Non-Resident Holder as, on account or in lieu of, or in satisfaction of a dividend on the Common Shares will be subject to a Canadian withholding tax under the Tax Act at a rate of 25%, subject to reduction under the provisions of any applicable income tax treaty or convention. For example, under the Canada-United States Tax Convention (1980) (the “Canada-U.S. Treaty”), the withholding tax rate in respect of a dividend paid to a person who is the beneficial owner of the dividend and is resident in the United States for purposes of, and entitled to full benefits under, the Canada-U.S. Treaty, is generally reduced to 15% (unless the beneficial owner is a company that owns at least 10% of the voting stock of the Corporation, in which case the rate is reduced to 5%).

#### Disposition of Common Shares

A Non-Resident Holder of Common Shares will not generally be subject to income tax under the Tax Act in respect of the disposition or deemed disposition of such shares, provided that the Common Shares are not, and are not deemed to be, “taxable Canadian property” (as defined in the Tax Act) to the Non-Resident Holder at the time of disposition.

Generally, Common Shares will not be taxable Canadian property to a Non-Resident Holder at a particular time provided that: (i) the Common Shares are listed on a designated stock exchange (which currently includes the TSX and the NASDAQ) at that time; (ii) at no time during the sixty (60) month period immediately preceding the disposition of such shares did the Non-Resident Holder, either alone or together with one or more persons with whom the holder does not deal at arm’s length, own or have an interest in or an option in respect of, 25% or more of the issued shares of any class or series of shares in the capital of the Corporation; and (iii) the Common Shares were not deemed under the Tax Act to be taxable Canadian property to the Non-Resident Holder.

On March 4, 2010, the Minister of Finance (Canada) announced Proposed Amendments that included amendments (“TCP Amendments”) to the Tax Act’s definition of “taxable Canadian property” which are intended to narrow the scope of taxable Canadian property in respect of determinations to be made after March 4, 2010. Under the TCP Amendments, in order for Common Shares that are listed on a designated stock exchange (which currently includes

the TSX and the NASDAQ) and are not otherwise deemed to be taxable Canadian property to constitute taxable Canadian property the following conditions must be satisfied - at any time in the sixty (60) month period immediately preceding the disposition of the Common Shares: (a) the Non-Resident Holder, either alone or together with one or more persons with whom the holder does not deal at arm's length, owned or had an interest in or an option in respect of, 25% or more of the issued shares of any class or series of shares in the capital of the

---

- S-15 -

corporation; and (b) more than 50% of the fair market value of the Common Shares was derived directly or indirectly from real or immovable property situated in Canada, Canadian resource properties, timber resource properties (all within the meaning of the Tax Act) and/or options in respect of or interests in any of the foregoing types of properties.

In the event that the Common Shares constitute or are deemed to constitute taxable Canadian property to any Non-Resident Holder, the tax consequences of realizing a capital gain on the disposition of such shares or warrants as described above under the heading “Holders Resident in Canada – Taxation of Capital Gains and Capital Losses” generally will apply, subject to the Non-Resident Holder being entitled to relief under the provisions of an applicable income tax treaty or convention. Non-Resident Holders whose Common Shares may be taxable Canadian property should consult with their own tax advisors for advice having regard to their particular circumstances.

#### CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS

The following is a summary of certain material anticipated U.S. federal income tax consequences to a U.S. Holder (as defined below) arising from and relating to the ownership and disposition of Common Shares received on the exercise of Warrants under 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 consequences that may apply to a U.S. Holder arising from and relating to the ownership and disposition of Common Shares received on the exercise of Warrants. 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 consequences to such U.S. Holder. 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 U.S. Holder. Each U.S. Holder should consult its own tax advisor regarding the U.S. federal, U.S. state and local, and foreign tax consequences arising from and relating to the ownership and disposition of Common Shares received on the exercise of Warrants.

No legal opinion from U.S. legal counsel or ruling from the Internal Revenue Service (the “IRS”) has been requested, or will be obtained, regarding the U.S. federal income tax consequences arising from and relating to the ownership and disposition of Common Shares received on the exercise of Warrants. 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.

**NOTICE PURSUANT TO IRS CIRCULAR 230: NOTHING CONTAINED IN THIS SUMMARY CONCERNING ANY U.S. FEDERAL TAX ISSUE IS INTENDED OR WRITTEN TO BE USED, AND IT CANNOT BE USED, BY A U.S. HOLDER (AS DEFINED BELOW), FOR THE PURPOSE OF AVOIDING U.S. FEDERAL TAX PENALTIES UNDER THE U.S. CODE (AS DEFINED BELOW). THIS SUMMARY WAS WRITTEN TO SUPPORT THE PROMOTION OR MARKETING OF THE TRANSACTIONS OR MATTERS ADDRESSED BY THIS DOCUMENT. EACH U.S. HOLDER SHOULD SEEK U.S. FEDERAL TAX ADVICE, BASED ON SUCH U.S. HOLDER’S PARTICULAR CIRCUMSTANCES, FROM AN INDEPENDENT TAX ADVISOR.**

#### Scope of 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), published rulings of the IRS, published administrative positions of the IRS, 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”), and U.S. court decisions that are applicable and, in each case, as in effect and available, as of the date of this document. 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. This summary does not discuss the

---

- S-16 -

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, the term "U.S. Holder" means a beneficial owner of Common Shares received on the exercise of Warrants under this prospectus supplement that is for U.S. federal income tax purposes: an individual who is a citizen or resident of the U.S.; a corporation (or other entity taxable as a corporation) organized under the laws of the U.S., any state thereof or the District of Columbia; an estate whose income is subject to U.S. federal income taxation regardless of its source; or a trust that (1) is subject to the primary supervision of a court within the U.S. and the control of one or more U.S. persons for all substantial decisions or (2) has a valid election in effect under applicable Treasury regulations to be treated as a U.S. person.

#### Non-U.S. Holders

For purposes of this summary, a "non-U.S. Holder" is a beneficial owner of Common Shares or Warrants that is not a U.S. Holder. This summary does not address the U.S. federal income tax consequences to non-U.S. Holders arising from and relating to the ownership and disposition of Common Shares received on the exercise of Warrants. Accordingly, a non-U.S. Holder should consult its own tax advisor regarding the U.S. federal income, U.S. state and local, and foreign tax consequences (including the potential application of and operation of any income tax treaties) arising from and relating to the ownership and disposition of Common Shares received on the exercise of Warrants.

#### 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 consequences applicable to U.S. Holders that are subject to special provisions under the Code, including the following U.S. Holders: (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, insurance companies, real estate investment trusts, or regulated investment companies; (c) U.S. Holders that are dealers in securities or currencies or U.S. Holders that are traders in securities that elect to apply a mark-to-market accounting method; (d) U.S. Holders that have a "functional currency" other than the U.S. dollar; (e) 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; (f) U.S. Holders that acquired Common Shares in connection with the exercise of employee stock options or otherwise as compensation for services; (g) U.S. Holders that hold Common Shares other than as a capital asset within the meaning of Section 1221 of the Code; (h) U.S. expatriates or former longer-term residents of the U.S. or (i) U.S. Holders that own (directly, indirectly, or by attribution) 10% or more of the total combined voting power of the outstanding shares of Oncolytics. U.S. Holders that are subject to special provisions under the Code, including U.S. Holders described immediately above, should consult their own tax advisor regarding the U.S. federal, U.S. state and local, and foreign tax consequences arising from and relating to the ownership and disposition of Common Shares.

If an entity that is classified as a partnership for U.S. federal income tax purposes holds Common Shares, the U.S. federal income tax consequences to such partnership and the partners of such partnership generally will depend on the activities of the partnership and the status of such partners. Partners of entities that are classified as partnerships for U.S. federal income tax purposes should consult their own tax advisor regarding the U.S. federal income tax consequences arising from and relating to the ownership and disposition of Common Shares.

#### Tax Consequences Not Addressed

This summary does not address the U.S. state and local, U.S. federal estate and gift, U.S. federal alternative minimum tax or foreign tax consequences to U.S. Holders arising from and relating to the ownership and disposition of Common Shares received on the exercise of Warrants. Each U.S. Holder should consult its own tax advisor regarding the U.S. state and local, U.S. federal estate and gift, U.S. federal alternative minimum tax and foreign tax

---

- S-17 -

consequences arising from and relating to the ownership and disposition of Common Shares received on the exercise of Warrants.

#### Passive Foreign Investment Company Rules

If Oncolytics is considered a “passive foreign investment company” (a “PFIC”) under the meaning of Section 1297 of the Code at any time during a U.S. Holder’s holding period, the following sections will generally describe the U.S. federal income tax consequences to the U.S. Holder arising from and relating to the ownership and disposition of Common Shares received on the exercise of Warrants.

#### PFIC Status of Oncolytics

Oncolytics generally will be a PFIC if, for a tax year, (a) 75% or more of the gross income of Company for such tax year is passive income or (b) 50% or more of the assets held by Oncolytics either produce passive income or are held for the production of passive income, based on the fair market value of such assets. “Gross income” generally means all revenues less the cost of goods sold, and “passive income” includes, for example, dividends, interest, certain rents and royalties, certain gains from the sale of stock and securities, and certain gains from commodities transactions.

For purposes of the PFIC income test and asset test described above, if Oncolytics owns, directly or indirectly, 25% or more of the total value of the outstanding shares of another corporation, Oncolytics will be treated as if it (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 PFIC income test and asset test described above, “passive income” does not include any interest, dividends, rents, or royalties that are received or accrued by Oncolytics from a “related person” (as defined in Section 954(d)(3) of the Code), 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 Oncolytics is a PFIC, U.S. Holders will be deemed to own their proportionate share of any subsidiary of Oncolytics which is also a PFIC (a “Subsidiary PFIC”), and will be deemed to receive their proportionate share of (i) a distribution on the shares of a Subsidiary PFIC and (ii) a disposition of shares of a Subsidiary PFIC, both as if such U.S. Holders directly held the shares of such Subsidiary PFIC.

Oncolytics believes that it qualified as a PFIC for the tax year ended December 31, 2009, and based on current business plans and financial projections, Oncolytics anticipates that it may qualify as a PFIC for the subsequent taxable years. The determination of whether Oncolytics (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 Oncolytics (or a Subsidiary PFIC) will be a PFIC for any tax year depends on the assets and income of Oncolytics (and each Subsidiary PFIC) over the course of each such tax year and, as a result, cannot be predicted with certainty as of the date of this document. Accordingly, there can be no assurance that the IRS will not challenge any determination made by Oncolytics (or a Subsidiary PFIC) concerning its PFIC status or that Oncolytics (and each Subsidiary PFIC) was not, or will not be, a PFIC for any tax year. Each U.S. Holder should consult its own tax advisor regarding the PFIC status of Oncolytics and each Subsidiary PFIC.

#### Default PFIC Rules under Section 1291 of the Code

If Oncolytics is a PFIC, the U.S. federal income tax consequences to a U.S. Holder of the ownership and disposition of Common Shares will depend on whether such U.S. Holder makes an election to treat Oncolytics as a “qualified electing fund” or “QEF” under Section 1295 of the Code (a “QEF Election”) or a mark-to-market election under Section 1296 of the Code (a “Mark-to-Market Election”). 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 rules of Section 1291 of the Code with respect to (a) any gain recognized on the sale or other taxable disposition 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

---



- S-18 -

(together with all other distributions received in the current tax year) exceeds 125% of the average distributions received during the three preceding tax years (or during a U.S. Holder's holding period for the Common Shares, if shorter).

Under Section 1291 of the Code, any gain recognized on the sale or other taxable disposition of Common Shares (including an indirect disposition of the stock of a Subsidiary PFIC), and any "excess distribution" received on Common Shares (or an excess distribution by a Subsidiary PFIC that is deemed to be received by a U.S. Holder), must be ratably allocated to each day in a Non-Electing U.S. Holder's holding period for the respective Common Shares. The amount of any such gain or excess distribution allocated to prior years of such Non-Electing U.S. Holder's holding period for the Common Shares generally will be subject to U.S. federal income tax at the highest tax applicable to ordinary income in each such prior year. A Non-Electing U.S. Holder will be required to pay interest on the resulting tax liability for each such prior year, calculated as if such tax liability had been due in each such prior year. Such a Non-Electing U.S. Holder that is not a corporation must treat any such interest paid as "personal interest," which is not deductible. The amount of any such gain or excess distribution allocated to the current year of such Non-Electing U.S. Holder's holding period for the Common Shares will be treated as ordinary income in the current year, and no interest charge will be incurred with respect to the resulting tax liability for the current year.

If Oncolytics is a PFIC for any tax year during which a Non-Electing U.S. Holder holds Common Shares, Oncolytics will continue to be treated as a PFIC with respect to such Non-Electing U.S. Holder, regardless of whether Oncolytics ceases to be a PFIC in one or more subsequent tax years. A Non-Electing U.S. Holder may terminate this deemed PFIC status by electing to recognize gain (which will be taxed under the rules of Section 1291 of the Code discussed above) as if such Common Shares were sold on the last day of the last tax year for which Oncolytics was a PFIC.

Under proposed Treasury Regulations, if a U.S. holder has an option, warrant, or other right to acquire stock of a PFIC (such as the Warrants), such option, warrant or right is considered to be PFIC stock subject to the default rules of Section 1291 of the Code. Under rules described below, the holding period for a Common Share received upon exercise of a Warrant will begin on the date a U.S. Holder acquires the Warrant. This will impact the availability of the QEF Election and Mark-to-Market Election with respect to the Common Share received upon exercise of the Warrant. See discussion below under "QEF Election" and under "Market-to-Market Election".

#### QEF Election

A U.S. Holder that makes a QEF Election for the first tax year in which its holding period of its Common Shares begins, generally, will not be subject to the rules of Section 1291 of the Code discussed above with respect to its Common Shares. However, a U.S. Holder that makes a QEF Election will be subject to U.S. federal income tax on such U.S. Holder's pro rata share of (a) the net capital gain of Oncolytics, which will be long-term capital gain to such U.S. Holder, and (b) and the ordinary earnings of Oncolytics, 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 Oncolytics is a PFIC, regardless of whether such amounts are actually distributed to such U.S. Holder by Oncolytics. However, for any tax year in which Oncolytics is a PFIC and has 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 Oncolytics to the extent that such distribution represents “earnings and profits” of Oncolytics 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.

---

- S-19 -

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 Oncolytics was 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. If a U.S. Holder makes a QEF Election and, in a subsequent tax year, Oncolytics ceases to be a PFIC, the QEF Election will remain in effect (although it will not be applicable) during those tax years in which Oncolytics is not a PFIC. Accordingly, if Oncolytics becomes 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 any subsequent tax year in which Oncolytics qualifies as a PFIC.

As discussed above, under proposed Treasury Regulations, if a U.S. holder has an option, warrant or other right to acquire stock of a PFIC (such as the Warrants), such option, warrant or right is considered to be PFIC stock subject to the default rules of Section 1291 of the Code. However, a holder of an option, warrant or other right to acquire stock of a PFIC may not make a QEF Election that will apply to the option, warrant or other right or to acquire PFIC stock. In addition, under proposed Treasury Regulations, if a U.S. Holder holds an option, warrant or other right to acquire stock of a PFIC, the holding period with respect to shares of stock of the PFIC acquired upon exercise of such option, warrant or other right will include the period that the option, warrant or other right was held.

Consequently, if a U.S. Holder of Common Share received upon exercise of a Warrant makes a QEF Election, such election generally will not be treated as a timely QEF Election with respect to such Common Share and the rules of Section 1291 of the Code discussed above will continue to apply with respect to such U.S. Holder’s Common Shares. However, a U.S. Holder of Common Shares received upon exercise of a Warrant should be eligible to make a timely QEF Election if such U.S. Holder elects in the tax year in which such Common Shares are received to recognize gain (which will be taxed under the rules of Section 1291 of the Code discussed above) as if such Common Shares were sold on the first day of such year for fair market value. Each U.S. Holder should consult its own tax advisor regarding the application of the PFIC rules to the Common Shares received upon exercise of the Warrants.

Oncolytics will make available to U.S. Holders, upon their written request, timely and accurate information as to its status as a PFIC, and will provide to a U.S. Holder all information and documentation that a U.S. Holder making a QEF Election with respect to Oncolytics is required to obtain for U.S. federal income tax purposes. However, U.S. Holders should be aware that Oncolytics can provide no assurances that it will provide any such information relating to any Subsidiary PFIC. Because Oncolytics may own shares in one or more Subsidiary PFICs, and may acquire shares in one or more Subsidiary PFICs in the future, they will continue to be subject to the rules discussed above with respect to the taxation of gains and excess distributions with respect to any Subsidiary PFIC for which the U.S. Holders do not obtain the required information. Each U.S. Holder should consult his, her or its own tax advisor regarding the availability of, and procedure for making, a QEF Election with respect to Oncolytics 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 Securities and Exchange Commission, (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 ensure 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.

---

- S-20 -

A U.S. Holder that makes a Mark-to-Market Election with respect to its Common Shares generally will not be subject to the rules of Section 1291 of the Code discussed above with respect to the Common Shares. However, if a U.S. Holder does not make a Mark-to-Market Election beginning in the first tax year of such U.S. Holder's holding period for the Common Shares or such U.S. Holder has not made a timely QEF Election, the rules of Section 1291 of the Code discussed above will apply to certain dispositions of, and distributions on, the Common Shares.

A U.S. Holder that makes a Mark-to-Market Election will include in ordinary income, for each tax year in which Oncolytics is 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 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 (i) such U.S. Holder's adjusted tax basis in the Common Shares, over (ii) the fair market value of such Common Shares (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 ordinary 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).

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

Under Section 1291(f) of the Code, 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.

Certain additional adverse rules will apply with respect to a U.S. Holder if Oncolytics is a PFIC, regardless of whether such U.S. Holder makes a QEF Election. For example under Section 1298(b)(6) of the Code, 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.

In addition, a U.S. Holder who acquires Common Shares from a decedent will not receive a "step up" in tax basis of such Common Shares to fair market value.

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 specific 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 their own tax advisor regarding the availability of the foreign tax credit with respect to distributions by a PFIC.

---

- S-21 -

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 ownership and disposition of Common Shares.

#### U.S. Federal Income Tax Consequences of the Ownership and Disposition of Common Shares

##### General Taxation of Distributions

Subject to the PFIC rules discussed above, a U.S. Holder that receives a distribution, including a constructive distribution, with respect to a Common Share 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 the current or accumulated “earnings and profits” of Oncolytics, as computed for U.S. federal income tax purposes. To the extent that a distribution exceeds the current and accumulated “earnings and profits” of Oncolytics, 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, Oncolytics may not 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 Oncolytics 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”.

For tax years beginning before January 1, 2011, a dividend paid to a U.S. Holder who is an individual, estate or trust by Oncolytics generally will be taxed at the preferential tax rates applicable to long-term capital gains if Oncolytics is a “qualified foreign corporation” as defined under Section 1(h)(11) of the Code (“QFC”) and certain holding period requirements for the Common Shares are met. Oncolytics generally will be a QFC if Oncolytics is eligible for the benefits of the Canada-U.S. Tax Convention or the Common Shares are readily tradable on an established securities market in the U.S. However, even if Oncolytics satisfies one or more of these requirements, Oncolytics will not be treated as a QFC if Oncolytics is a PFIC for the tax year during which it pays a dividend or for the preceding tax year. (See the section above under the heading “Passive Foreign Investment Company Rules”). Accordingly, Oncolytics does not expect to be a QFC in the current tax year and it may not be a QFC for subsequent tax years.

If Oncolytics is not considered a PFIC, but a dividend paid to a U.S. Holder otherwise fails to qualify for the preferential tax rates discussed above, such a dividend generally will be taxed at ordinary income tax rates (and not at the preferential tax rates applicable to long-term capital gains).

##### 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 the amount of cash plus the fair market value of any property received and such U.S. Holder's tax basis in such Common Shares sold or otherwise disposed of. Subject to the PFIC rules discussed above, gain or loss recognized on such sale or other disposition generally will 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.

Gain or loss recognized by a U.S. Holder on the sale or other taxable disposition of Common Shares generally will be treated as “U.S. source” for purposes of applying the U.S. foreign tax credit rules unless the gain is subject to tax in Canada and is resourced as “foreign source” under the Canada-U.S. Tax Convention and such U.S. Holder elects to treat such gain or loss as “foreign source.”

Preferential rates apply to long-term capital gains of a U.S. Holder that is an individual, estate, or trust. There are currently no preferential tax rates for long-term capital gains of a U.S. Holder that is a corporation. Deductions for capital losses are subject to significant limitations under the Code.

---



- S-22 -

### Receipt of Foreign Currency

The amount of any distribution paid to a U.S. Holder in foreign currency, or on the sale, exchange or other taxable disposition of 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 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 basis in the foreign currency equal to its U.S. dollar value on the date of receipt. Any U.S. Holder who receives payment in foreign currency and engages in a subsequent conversion or other disposition of the foreign currency may have a foreign currency exchange gain or loss that would be treated as ordinary income or loss, and generally will be U.S. source income or loss for foreign tax credit purposes. Each U.S. Holder should consult its own U.S. tax advisor regarding the U.S. federal income tax consequences of receiving, owning, and disposing of foreign currency.

### Foreign Tax Credit

Subject to the PFIC rules discussed above, a U.S. Holder who 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. Generally, a credit will reduce a U.S. Holder's U.S. federal income tax liability on a dollar-for-dollar basis, whereas a deduction will reduce a U.S. Holder's income subject to U.S. federal income tax. 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. 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." In addition, this limitation is calculated separately with respect to specific categories of income. Dividends paid by Oncolytics generally will constitute "foreign source" income and generally will be categorized as "passive category 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.

Subject to certain specific rules, foreign income and withholding taxes paid with respect to any distribution in respect of stock in a PFIC should qualify for the foreign tax credit. The rules relating to distributions by a PFIC are complex, and a U.S. Holder should consult with its own tax advisor with respect to any distribution received from a PFIC.

### Backup Withholding and Information Reporting

Under U.S. federal income tax law and regulations, certain categories of U.S. Holders must file information returns with respect to their investment in, or involvement in, a foreign corporation. Penalties for failure to file certain of these information returns are substantial. U.S. Holders of Common Shares, should consult with their own tax advisors regarding the requirements of filing information returns, and, if applicable mark-to-market and QEF elections.

Payments made within the U.S. of dividends on, and proceeds arising from the sale or other taxable disposition of, Common Shares generally may be subject to information reporting and backup withholding if a U.S. Holder (a) fails to furnish such U.S. Holder's correct U.S. 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, or (d) fails to certify, under penalties 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. However, certain exempt persons, such as corporations, generally are excluded from these information reporting and backup withholding rules. Any amounts withheld under the U.S. backup withholding tax rules 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 in a

---

- S-23 -

timely manner. Each U.S. Holder should consult its own tax advisor regarding application of the information reporting and backup withholding rules to them.

### RISK FACTORS

An investment in the Warrants and/or the Common Shares involves risk. In addition to the other information contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein, prospective investors should consider carefully the risk factors set out herein and contained in and incorporated by reference in the accompanying base shelf prospectus before making an investment in the Common Shares and/or Warrants.

Discussions of certain risks affecting Oncolytics in connection with its business are provided in our annual disclosure documents filed with the various securities regulatory authorities which are incorporated by reference in the accompanying base shelf prospectus.

There can be no assurance as to the liquidity of the Warrants or that a trading market for the Warrants will develop.

There is currently no public market through which the Warrants may be sold and we do not intend to apply for the listing of the Warrants on any securities exchanges. This may affect the pricing of the Warrants in the secondary market, the transparency and availability of trading prices, the liquidity of the Warrants, and the extent of issuer regulation.

### 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 Oncolytics 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 Company Accounting Oversight Board.

Certain legal matters relating to the issuance of Common Shares upon the exercise of Warrants will be passed upon by McCarthy Tétrault LLP with respect to certain Canadian legal matters and by Dorsey & Whitney LLP with respect to certain U.S. legal matters on behalf of the Corporation. As at the date hereof, the partners and associates of McCarthy Tétrault LLP, as a group, and the partners and associates of Dorsey & Whitney LLP, as a group, each beneficially own directly or indirectly, less than 1% of the Common Shares.

In addition, none of the aforementioned persons or firms, nor any director, officer or employee of any of the aforementioned persons or firms is or is expected to be elected, appointed or employed as a director, officer or employee of the Corporation or any associate or affiliate of the Corporation.

Base Shelf Prospectus

June 10, 2010

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.

There are certain risk factors that should be carefully reviewed by prospective purchasers. See “Risk Factors” beginning on page 4 of this prospectus.

We are permitted, as a foreign issuer in the United States, under a multi-jurisdictional disclosure system adopted by the United States and Canada, 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 Canadian generally accepted accounting principles, and they are subject to Canadian auditing and auditor independence standards. Thus, 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”.

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.

NEITHER THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION (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.

---

- ii -

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.

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 “Plan of Distribution”. 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

---

- iii -

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 reallocated to dealers. The managing 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. See “Plan of Distribution”.

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 3300, 421 – 7th Avenue S.W., Calgary, Alberta, T2P 4K9.

## TABLE OF CONTENTS

	Page
<u>DEFINITIONS AND OTHER MATTERS</u>	1
<u>SPECIAL NOTICE REGARDING FORWARD-LOOKING STATEMENTS</u>	2
<u>DOCUMENTS INCORPORATED BY REFERENCE</u>	2
<u>ENFORCEABILITY OF CIVIL LIABILITIES</u>	4
<u>ONCOLYTICS BIOTECH INC.</u>	4
<u>OUR BUSINESS</u>	4
<u>RISK FACTORS</u> [	5
<u>USE OF PROCEEDS</u>	6
<u>CAPITALIZATION</u>	6
<u>PRIOR SALES</u>	6
<u>DESCRIPTION OF SHARE CAPITAL</u>	7
<u>DESCRIPTION OF SUBSCRIPTION RECEIPTS</u>	7
<u>DESCRIPTION OF WARRANTS</u>	8
<u>DESCRIPTION OF UNITS</u>	9
<u>MARKET FOR SECURITIES</u>	9
<u>PLAN OF DISTRIBUTION</u>	10
<u>CERTAIN INCOME TAX CONSIDERATIONS</u>	11
<u>LEGAL MATTERS</u>	11
<u>AUDITOR</u>	11
<u>REGISTRAR AND TRANSFER AGENT</u>	12
<u>WHERE YOU CAN FIND ADDITIONAL INFORMATION</u>	12
<u>DOCUMENTS FILED AS PART OF THE REGISTRATION STATEMENT</u>	12

## DEFINITIONS AND OTHER MATTERS

In this Prospectus and any Prospectus Supplement, unless otherwise indicated, references to “we”, “us”, “our”, “Oncolytics” or the “Corporation” are to Oncolytics Biotech Inc. All references to “dollars”, “Cdn.\$” or “\$” are to Canadian dollars and all references to “U.S.\$” 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 Canadian generally accepted accounting principles (“Canadian GAAP”).

We prepare our financial statements in accordance with Canadian GAAP, which differ from United States generally accepted accounting principles (“U.S. GAAP”). Therefore, our financial statements incorporated by reference in this Prospectus and any Prospectus Supplement and in the documents incorporated by reference in this Prospectus and in any applicable Prospectus Supplement may not be comparable to financial statements prepared in accordance with U.S. GAAP. You should refer to Note 23 of our financial statements for the year ended December 31, 2009 for a discussion of the principal differences between our financial results determined under Canadian GAAP and under U.S. GAAP. For our financial statements as at and for the three months ended March 31, 2010, you should refer to our reconciliation of our financial statements as at and for the three months ended March 31, 2010 to U.S. GAAP furnished to the SEC on the Corporation’s Current Report on Form 6-K dated May 20, 2010 and incorporated into this



Prospectus by reference. See “Documents Incorporated by Reference”.

---

## SPECIAL NOTICE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains certain forward-looking statements within the meaning of Canadian and U.S. securities laws. 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 statements in this prospectus include, but are not limited to, statements with respect to: clinical trial study delays, product development delays, our ability to attract and retain business partners, future levels of government funding, competition from other biotechnology companies and our ability to obtain the capital required for research, product development, operations and marketing. 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 result expected by us will occur. 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, and we will not undertake any obligation to publicly update or revise any forward-looking information, whether as a result of new information, future events, or otherwise, except as required by securities laws.

Some of the assumptions, risks and factors which could cause future outcomes to differ materially from those set forth in the forward-looking information 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. Prospective investors should carefully consider the information contained under the heading “Risk Factors” in our AIF (as defined below) and all other information included in or incorporated by reference in this prospectus before making investment decisions with regard to our securities.

## 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](http://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](http://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 15, 2010, for the year ended December 31, 2009 (the “AIF”);
  - our management information circular dated March 26, 2010 relating to the annual and special meeting of shareholders held on May 11, 2010;
-

- 3 -

- our audited consolidated financial statements, together with the notes thereto, as at December 31, 2009 and 2008 and for the years then ended and the auditors' report thereon addressed to our shareholders;
- our management's discussion and analysis of financial condition and results of operations dated March 8, 2010 for the year ended December 31, 2009 ("MD&A");
- our unaudited interim consolidated financial statements, together with the notes thereto, as at and for the three months ended March 31, 2010;
- our management's discussion and analysis of financial condition and results of operations dated May 11, 2010, for the three months ended March 31, 2010; and
- the reconciliation of our unaudited interim consolidated financial statements as at and for the three months ended March 31, 2010 to U.S. GAAP, filed on May 20, 2010.

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 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

---

- 4 -

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.

#### ENFORCEABILITY OF CIVIL LIABILITIES

We are a corporation existing under the Business Corporations Act (Alberta). 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, 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.

#### ONCOLYTICS BIOTECH INC.

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 for 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 3300, 421 – 7th Avenue S.W., Calgary, Alberta, T2P 4K9.

We have three direct wholly-owned subsidiaries: Oncolytics Biotech (Barbados) Inc. (“Oncolytics Barbados”), which is incorporated pursuant to the laws of Barbados; Valens Pharma Ltd., which is incorporated pursuant to the laws of the Province of Alberta; 145302 Alberta Ltd., which is incorporated pursuant to the laws of the Province of Alberta; and one indirect wholly-owned subsidiary, Oncolytics Biotech (U.S.), Inc., which is incorporated pursuant to the laws of

Delaware.

## 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 which can be used as an alternative to existing cytotoxic or cytostatic therapies or as an adjuvant therapy to conventional chemotherapy, radiation

---

- 5 -

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 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. Our 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 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.

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.



RISK FACTORS

An investment in the Securities involves a high degree of risk. Prospective investors should consider carefully the risks incorporated by reference in this prospectus (including in subsequently filed documents)

---

- 6 -

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.

#### USE OF PROCEEDS

Unless otherwise indicated in an applicable Prospectus Supplement relating to an offering of Securities, we will use the net proceeds we receive from the sale of Securities for ongoing research and development activities, working capital and general corporate purposes, which may include our clinical trial program and our manufacturing activities in support of such program. Specific information about the net proceeds will be described in the applicable Prospectus Supplement.

#### CAPITALIZATION

As at June 9, 2010, we have 61,569,969 Common Shares issued and outstanding. After giving effect to the exercise of all our Common Share purchase warrants and options, we would have 67,199,662 Common Shares issued and outstanding as at June 9, 2010.

#### PRIOR SALES

Except as disclosed below, 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:

On May 13, 2009, we issued 3,450,000 units, each unit consisting of one Common Share and one Common Share purchase warrant, at a price of \$2.00 per unit. Each whole Common Share purchase warrant entitles the holder to acquire one additional Common Share upon payment of \$2.40 on or before May 13, 2012, subject to an acceleration of the expiry date in certain circumstances. In addition, we issued 345,000 broker Common Share purchase warrants with an exercise price of \$2.40 expiring on May 13, 2012, subject to acceleration of the expiry date in certain circumstances.

From April 1, 2009 to October 30, 2009, we issued 256,600 Common Shares on the exercise of 256,600 options at exercise prices between \$0.85 and \$2.70 per Common Share.

From May 6, 2009 to October 23, 2009, we issued 3,235,000 Common Shares on the exercise of 3,235,000 warrants at an exercise price of \$1.80 per warrant.

From September 23, 2009 to November 2, 2009, we issued 3,795,000 Common Shares on the exercise of 3,795,000 warrants at an exercise price of \$2.40 per warrant.

On October 20, 2009, we issued 200,000 Common Shares in exchange for all of the convertible preferred shares of British Canadian Biosciences Corp.

Edgar Filing: ONCOLYTICS BIOTECH INC - Form SUPPL

On October 26, 2009, we received and cancelled 5,000 Common Shares in consideration for clinical trial data that we had obtained as part of our acquisition of a private company in April 2009.

On November 23, 2009, we issued 4,887,500 units, each unit consisting of one Common Share and 0.40 of one Common Share purchase warrant, at a price of U.S.\$3.00 per unit. Each whole Common Share purchase warrant entitles the holder to acquire one additional Common Share upon payment of U.S.\$3.50 on or before November 23, 2014, subject to acceleration of the expiry date in certain circumstances.

On December 8, 2009, we granted 332,500 stock options with an exercise price of \$3.06.

On May 11, 2010, we granted 15,000 stock options with an exercise price of \$2.85.

On June 1, 2010, we issued 20,000 Common Shares at a price of \$2.70 per share pursuant to the exercise of stock options.

---

## 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 us 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.

## 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.

In the event that Subscription Receipts are issued under the Prospectus, the Prospectus will qualify the issuance of the Common Shares on exchange of the Subscription Receipts or the Corporation will provide a contractual right of rescission to original purchasers of the 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. A copy of the subscription receipt 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](http://www.sedar.com).

Pursuant to the subscription receipt 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 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;

Edgar Filing: ONCOLYTICS BIOTECH INC - Form SUPPL

- 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 the Subscription Receipts; and
-

- 8 -

- 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 with respect to such Subscription Receipts.

#### 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.

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 with respect to such Warrants.

The Corporation will not offer Warrants pursuant to this Prospectus for sale separately to any member of the public in Canada unless the offering is in connection with and forms part of the consideration for an acquisition or merger transaction or unless the Prospectus Supplement containing the specific terms of the Warrants to be

---

- 9 -

offered separately is first approved for filing by the securities commissions or similar regulatory authorities in each of the provinces and territories of Canada where the Warrants will be offered for sale.

#### 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.

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.

#### MARKET FOR SECURITIES

Our outstanding Common Shares are listed and posted for trading on the Toronto Stock Exchange under the trading symbol "ONC" and on the NASDAQ Capital Market 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 Capital Market for the periods indicated:





- 10 -

Period	Toronto Stock Exchange				NASDAQ Capital Market			
	High (\$)	Low (\$)	Close (\$)	Volume (Shares)	High (U.S.\$)	Low (U.S.\$)	Close (U.S.\$)	Volume (Shares)
<b>2009</b>								
May	2.10	1.80	1.94	1,056,300	1.81	1.48	1.74	755,208
June	2.30	1.76	1.89	1,269,800	2.13	1.56	1.64	951,274
July	2.25	1.61	1.96	1,291,600	2.12	1.40	1.86	1,387,652
August	2.65	1.85	2.43	1,795,600	2.42	1.74	2.25	1,580,485
September	3.65	2.18	3.13	3,494,306	3.38	2.02	2.93	3,406,873
October	4.10	3.13	3.49	4,328,000	3.80	2.93	3.23	6,442,929
November	3.98	2.85	2.99	5,104,200	3.74	2.66	2.84	4,463,823
December	3.11	2.65	2.75	1,448,500	2.95	2.57	2.61	1,392,690
<b>2010</b>								
January	3.12	2.15	2.53	1,952,900	2.95	2.05	2.36	2,004,302
February	3.48	2.40	2.96	2,178,100	3.30	2.25	2.79	4,229,253
March	3.70	2.92	3.20	2,240,200	3.63	2.78	3.13	2,731,331
April	3.31	2.68	2.88	1,297,295	3.30	2.65	2.83	2,022,818
May	3.16	2.68	3.15	1,485,008	3.08	2.44	2.938	1,932,701
June (1-9)	3.40	2.87	2.96	644,911	3.18	2.71	2.8899	903,582

#### 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 exemption 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 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 reallocated 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.

Holders 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.

---

- 11 -

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, 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 and Dorsey & Whitney LLP. 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 our securities.

#### AUDITOR

Our auditors are Ernst & Young LLP, Chartered Accountants, Calgary, Alberta, Canada.

Our consolidated financial statements as at December 31, 2009 and 2008 incorporated by reference into this Prospectus have been audited by Ernst & Young LLP, independent registered chartered accountants, as indicated in their report dated March 8, 2010 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 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.

---

- 12 -

#### 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.

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 a multi-jurisdictional disclosure system 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 U.S. 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. and Chicago, Illinois. You may also obtain copies of those documents from the public reference room of the SEC at 100 F 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](http://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's Electronic Data Gathering and Retrieval system at [www.sec.gov](http://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](http://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.

