First Quarter Report

March 31, 2010

2010 FIRST QUARTER REPORT

For the quarter ended March 31, 2010

The last three months have been eventful ones for Oncolytics as we expanded our evolving clinical program and reported new clinical and preclinical data.

Expanding Clinical Program

Most significantly during the quarter, we received approval from the U.K. Medicines and Healthcare products Regulatory Agency (MHRA) to conduct our Phase III head and neck cancer trial in the U.K. This will be part of the same trial that we previously reached an agreement on with the U.S. Food and Drug Administration (FDA) under the Special Protocol Assessment (SPA) process. This internationalizes our Phase III study and, if the trial is successful, will provide us with the basis for a regulatory submission in the important European market.

During the quarter we also announced that The Cancer Therapy & Research Center at the University of Texas Health Science Center (CTRC) had started patient enrolment in a U.S. Phase II clinical trial using intravenous administration of REOLYSIN® in combination with carboplatin and paclitaxel in patients with squamous cell carcinoma of the lungs (SCC lung cancer). Lung cancer is a leading cause of cancer death in both men and women and squamous cell carcinomas account for 25-30% of lung cancer cases. This study is important as it expands our lung cancer program, which includes a Phase 2 study in non-small cell lung cancer (NSCLC) patients with *Kras* or EGFR-activated tumors, and because we are observing clinical benefit in a majority of the SCC head and neck cancer patients we have treated to date.

Subsequent to quarter end, we announced completion of Phase I patient enrollment in a Phase I/II clinical trial to investigate the use of REOLYSIN for patients with recurrent malignant gliomas (REO 007). The Phase I portion of the trial treated 15 patients in five cohorts with doses escalating from $1x10^8$ $TCID_{50}$ to $1x10^{10}$ $TCID_{50}$. The treatment was shown to be safe and well tolerated and no maximum tolerated dose (MTD) was reached. We intend to publish additional data from this study as it becomes available.

Growing Body of Clinical and Preclinical Data

Both during the quarter and subsequent to quarter end, the Company announced an array of early clinical and preclinical data. The information gathered improved our understanding of REOLYSIN's mechanism of action, provided evidence of synergies with currently approved therapeutics in an expanded range of potential indications and will help support future decisions with respect to advancing additional indications into clinical testing. Since January 1, 2010 the Company has announced:

- A poster presentation, entitled "Reovirus replication in ovarian and peritoneal tumors after intravenous administration," covering correlative results from a Phase 1/2 study with reovirus, sponsored by the National Cancer Institute under its Clinical Trials Agreement with Oncolytics, in patients with ovarian, primary peritoneal and fallopian tube carcinoma, was presented at the 101st AACR Annual Meeting in Washington, DC;
- A paper entitled "Antiangiogenic cancer therapy combined with oncolytic virotherapy leads to regression of established tumors in mice," co-senior authored by Dr. Richard Vile of the Department of Immunology, Mayo Clinic, Rochester, Minnesota, USA, and Dr. Kevin Harrington of the Institute of Cancer Research, London, UK, was published in the online version of the Journal of Clinical Investigation;
- A poster presentation at the AACR Annual Meeting entitled "Molecular pathways associated with REOLYSIN and gemcitabine synergy in ras-mutated human HCT116 cells," covering work done to better understand the mechanisms associated with the cytotoxic synergies in this combined approach in colorectal cancer cell lines;
- A poster presentation at the AACR Annual Meeting entitled "The addition of REOLYSIN, an oncolytic reovirus, to irinotecan shows synergistic anticancer activity in colorectal cancer cell

lines," covering research done *in vitro* into a novel therapeutic approach for treating patients with colorectal cancer tumors that harbor a mutation in the *Kras* oncogene that have failed first line therapy; and

- A poster presentation at the AACR Annual Meeting entitled "Reovirus successfully purges multiple myeloma ex vivo and does not affect human CD34+ cell engraftment in a murine transplantation model," covering the utility of reovirus in treating hematological malignancies.

Looking Forward

Our focus in the second quarter will be on initiating patient enrollment in our Phase III head and neck study. We intend to advance our other, increasingly later stage, clinical initiatives forward with the goal of reporting data from a number of other Phase II studies as it becomes available in 2010 and 2011.

We would like to thank all stakeholders for their continued support and patience as we advance into late stage clinical testing and we look forward to updating you on our progress in subsequent quarters.

Dr. Brad Thompson
President and CEO
May 11, 2010

May 11, 2010

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This discussion and analysis should be read in conjunction with the unaudited consolidated interim financial statements of Oncolytics Biotech Inc. as at and for the three months ended March 31, 2010 and 2009, and should also be read in conjunction with the audited consolidated financial statements and Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") contained in our annual report for the year ended December 31, 2009. The financial statements have been prepared in accordance with Canadian generally accepted accounting principles ("GAAP").

FORWARD-LOOKING STATEMENTS

The following discussion contains forward-looking statements, within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended and under applicable Canadian provincial securities legislation. Forward-looking statements, including our belief as to the potential of REOLYSIN®, a therapeutic reovirus, as a cancer therapeutic and our expectations as to the success of our research and development and manufacturing programs in 2009 and beyond, future financial position, business strategy and plans for future operations, and statements that are not historical facts, involve known and unknown risks and uncertainties, which could cause our actual results to differ materially from those in the forward-looking statements.

Such risks and uncertainties include, among others, the need for and availability of funds and resources to pursue research and development projects, the efficacy of REOLYSIN® as a cancer treatment, the success and timely completion of clinical studies and trials, our ability to successfully commercialize REOLYSIN®, uncertainties related to the research, development and manufacturing of pharmaceuticals, uncertainties related to competition, changes in technology, the regulatory process and general changes to the economic environment.

With respect to the forward-looking statements made within this MD&A, we have made numerous assumptions regarding among other things: our ability to obtain financing to fund our development program, our ability to receive regulatory approval to commence enrollment in our clinical trial program, the final results of our co-therapy clinical trials, our ability to maintain our supply of REOLYSIN® and future expense levels being within our current expectations.

Investors should consult our quarterly and annual filings with the Canadian and U.S. securities commissions for additional information on risks and uncertainties relating to the forward-looking statements. Forward-looking statements are based on assumptions, projections, estimates and expectations of management at the time such forward-looking statements are made, and such assumptions, projections, estimates and/or expectations could change or prove to be incorrect or inaccurate. Investors are cautioned against placing undue reliance on forward-looking statements. We do not undertake to update these forward-looking statements except as required by applicable law.

OVERVIEW

Oncolytics Biotech Inc. is a Development Stage Company

Since our inception in April of 1998, Oncolytics Biotech Inc. has been a development stage company and we have focused our research and development efforts on the development of REOLYSIN®, our potential cancer therapeutic. We have not been profitable since our inception and expect to continue to incur substantial losses as we continue research and development efforts. We do not expect to generate significant revenues until, if and when, our cancer product becomes commercially viable.

General Risk Factors

Prospects for biotechnology companies in the research and development stage should generally be regarded as speculative. It is not possible to predict, based upon studies in animals, or early studies in humans, whether a new therapeutic will ultimately prove to be safe and effective in humans, or whether necessary and sufficient data can be developed through the clinical trial process to support a successful product application and approval.

If a product is approved for sale, product manufacturing at a commercial scale and significant sales to end users at a commercially reasonable price may not be successful. There can be no assurance that we will generate adequate funds to continue development, or will ever achieve significant revenues or profitable operations. Many factors (e.g. competition, patent protection, appropriate regulatory approvals) can influence the revenue and product profitability potential.

In developing a pharmaceutical product, we rely upon our employees, contractors, consultants and collaborators and other third party relationships, including the ability to obtain appropriate product liability insurance. There can be no assurance that these reliances and relationships will continue as required.

In addition to developmental and operational considerations, market prices for securities of biotechnology companies generally are volatile, and may or may not move in a manner consistent with the progress being made by Oncolytics.

REOLYSIN® Development Update for the First Quarter of 2010

We continue to develop our lead product REOLYSIN® as a potential cancer therapy. Our goal each year is to advance REOLYSIN® through the various steps and stages of development required for pharmaceutical products. In order to achieve this goal, we actively manage the development of our clinical trial program, our pre-clinical and collaborative programs, our manufacturing process and supply, and our intellectual property.

Clinical Trial Program

We began 2010 with eight clinical trials, either enrolling patients or approved to commence enrollment. We currently sponsor four of these trials which includes our Phase III head and neck clinical trial associated with our Special Protocol Assessment agreement with the U.S. Food and Drug Administration ("FDA"). The other four clinical trials are sponsored by the U.S. National Cancer Institute ("NCI"), the Cancer Therapy & Research Center at The University of Texas Health Center in San Antonio ("CTRC") and the University of Leeds ("Leeds").

During the first quarter of 2010, we received approval from the U.K. Medicines and Healthcare products Regulatory Agency ("MHRA") to conduct our Phase III head and neck trial in the U.K. thereby expanding our pivotal trial into other jurisdictions. As well, our clinical trial research collaboration with the CTRC expanded to include a Phase II clinical trial using intravenous administration of REOLYSIN® in combination with carboplatin and paclitaxel in patients with squamous cell carcinoma of the lungs.

We exited the first quarter of 2010 with nine clinical trials of which four are sponsored by us and the remainder are sponsored by the NCI, CTRC, and Leeds.

Clinical Trial – Phase III Head and Neck Pivotal Trial

During the first quarter of 2010, we continued to prepare for the commencement of enrollment in our Phase III clinical trial. We expanded the number of jurisdictions to include the U.K. as we received a letter of approval from the MHRA allowing us to conduct our Phase III trial in the U.K. This is the same trial that we previously reached an agreement on with the FDA under the SPA process.

This trial is a randomized, two-arm, double-blind, multicentre, two-stage, adaptive Phase III trial that will assess the intravenous administration of REOLYSIN® with the chemotherapy combination of paclitaxel and carboplatin versus the chemotherapy alone in patients with metastatic or recurrent squamous cell carcinoma of the head and neck, or squamous cell cancer of the nasopharynx, who have progressed on or after prior platinum-based chemotherapy. All patients will receive treatment every three weeks (21 day cycles) with paclitaxel and carboplatin and will also receive, on a blinded basis, either intravenous placebo or intravenous REOLYSIN®. All dosing takes place in the first five days of each cycle with all patients receiving standard intravenous doses of paclitaxel and carboplatin on day one only, and on days one through five, either intravenous placebo or intravenous REOLYSIN® at a dose of $3x10^{10}$ $TCID_{50}$. Patients may continue to receive the trial combination therapy for up to eight, 21-day cycles and, thereafter, blinded placebo or blinded REOLYSIN® until the patient has progressive disease or meets other criteria for removal from the trial.

The primary endpoint for the trial is overall survival (OS); secondary endpoints include progression free survival (PFS), objective response rate (complete response (CR) + partial response (PR)) and duration of response, and safety and tolerability of REOLYSIN® when administered in combination with paclitaxel and carboplatin. The first stage of the trial is designed to enroll 80 patients. The second stage is adaptive, and is designed to enroll between 100 and 400 patients with the most probable statistical enrolment being 195 patients in this stage. This adaptive trial design allows frequent data evaluation to determine if the probability of reaching a statistically significant endpoint has been achieved.

The decision to pursue a Phase III trial in head and neck cancers was predicated on positive results seen in our Phase I and Phase II combination REOLYSIN® and paclitaxel/carboplatin clinical trials, as well as significant preclinical work demonstrating synergy in combination with taxane or platinum-based drugs. Updated results from the U.K. Phase I/II trial reported in November 2009 demonstrated an overall response rate (PR and CR) of 42% and a total clinical benefit rate (PR + CR + stable disease) of 74%.

Clinical Trials – Clinical Collaboration

On March 30, 2010, we announced that the CTRC commenced patient enrolment in a U.S. Phase II clinical trial using intravenous administration of REOLYSIN® in combination with carboplatin and paclitaxel in patients with squamous cell carcinoma of the lungs ("SCC lung cancer"). The Principal Investigator is Dr. Alain C. Mita of the CTRC.

This trial is a single arm, open-label, Phase II study of REOLYSIN® given intravenously with paclitaxel and carboplatin every three weeks. Up to 55 patients are expected to be treated in this trial. Eligible patients include those with metastatic stage IIIB, or stage IV, or recurrent squamous cell carcinoma of the lung who are chemotherapy naïve for their metastatic or recurrent cancer.

The primary objective is to assess the antitumor effect of the treatment regimen in the study population in terms of objective response rates. The secondary objectives are to assess progression-free survival and overall survival for the treatment regimen in the study population; to determine the proportion of patients receiving the above treatment who are alive and free of disease progression at six months; and to assess the safety and tolerability of the treatment regimen in the study population.

This trial is part of our broad clinical research collaboration with the CTRC that will involve up to five, open-label, Phase 2 studies exploring the use of REOLYSIN® in combination with chemotherapy for various cancer indications.

Manufacturing and Process Development

During the first quarter of 2010, we completed the bulk production of our first 100-litre cGMP production run for the year. As well, we finished the fill and packaging of the 100-litre cGMP production run that was completed at the end of 2009. Our process development activity for the first quarter of 2010 continued to focus on process validation and formulation studies.

Intellectual Property

At the end of the first quarter of 2010, we had been issued over 200 patents including 33 U.S. and 11 Canadian patents as well as issuances in other jurisdictions. We also have over 180 patent applications filed in the U.S., Canada and other jurisdictions.

Financial Impact

We estimated at the beginning of 2010 that our cash requirements to fund our operations would be approximately $24,000,000. Our cash usage for the first quarter of 2010 was $4,938,083 from operating activities and $3,647 for the purchases of capital assets. This is in line with our expectations. Our net loss for the first quarter of 2010 was $4,141,211.

Cash Resources

We exited the first quarter of 2010 with cash and short-term investments totaling $28,823,251 (see *"Liquidity and Capital Resources")*.

Expected REOLYSIN® Development for the Remainder of 2010

Our planned development activity for REOLYSIN® in 2010 is made up of clinical, manufacturing, intellectual property and collaboration programs. Our 2010 clinical program continues to include the commencement of patient enrollment in our Phase III head and neck clinical trial along with the completion of Stage 1 of this trial (approximately 80 patients). As well, we continue to expect to complete our non-small cell lung cancer trial and support those clinical trials that are sponsored by CTRC, Leeds and the NCI.

Our 2010 manufacturing program continues to include two 100-litre production runs along with the related fill, labeling, packaging and shipping of REOLYSIN® to the various clinical sites as required, and performing smaller process development studies examining formulation, validation and additional scale up.

RESULTS OF OPERATIONS

Net loss for the three month period ending March 31, 2010 was $4,141,211 compared to $3,957,646 for the three month period ending March 31, 2009.

Research and Development Expenses ("R&D")

	2010	**2009**
	$	**$**
Clinical trial expenses	**876,935**	1,413,994
Manufacturing and related process development expenses	**1,235,627**	311,015
Intellectual property expenses	**216,836**	344,231
Research collaborations	**(979)**	181,004
Other R&D expenses	**510,894**	562,411
Research and development expenses	**2,839,313**	2,812,655

Clinical Trial Program

	2010 $	2009 $
Direct patient expenses	**663,407**	1,413,994
Phase III start up expenses	**213,528**	—
Clinical trial expenses	**876,935**	1,413,994

During the first quarter of 2010, our clinical trial expenses decreased to $876,935 compared to $1,413,994 for the first quarter of 2009. In the first quarter of 2010, we incurred direct patient expenses related to the four trials that we are sponsoring compared to 10 clinical trials in the first quarter of 2009. We also incurred start up costs in the first quarter of 2010 related to our Phase III head and neck cancer clinical trial that were not incurred during the first quarter of 2009.

We still expect our clinical trial expenses to increase in 2010 compared to 2009. We expect to commence enrollment in our Phase III head and neck cancer clinical trial along with completion of stage one of this trial (approximately 80 patients) in 2010. As well, we expect to complete our non-small cell lung cancer trial and support those clinical trials that are sponsored by CTRC, Leeds and the NCI.

Manufacturing & Related Process Development ("M&P")

	2010 $	2009 $
Product manufacturing expenses	**1,130,865**	178,992
Process development expenses	**104,762**	132,023
Manufacturing and related process development expenses	**1,235,627**	311,015

In the first quarter of 2010, our M&P expenses were $1,235,627 compared to $311,015 for the first quarter of 2009. During the first quarter of 2010, our production activity included the completion of the bulk harvest of one 100-litre cGMP production run along with vial and labeling costs associated with the 100-litre production run completed at the end of 2009. During the first quarter of 2009, we incurred lot release testing along with vial, labeling and packaging costs as we shipped our product to the various clinical trial sites for use in our clinical trial program.

Our process development expenses for the first quarter of 2010 were $104,762 compared to $132,023 for the first quarter of 2009. In the first quarter of 2010, our process development activity continued to focus on optimization and validation studies compared to 100-litre scale-up studies in the first quarter of 2009.

We continue to expect that our M&P expenses for 2010 will increase compared to 2009. We expect to complete a second 100-litre cGMP production run including related fill and finish activities in 2010. We also expect to continue to perform a number of small scale process development studies focusing on formulation, process validation, stability and scale up.

Intellectual Property Expenses

	2010 $	2009 $
Intellectual property expenses	**216,836**	344,231

Our intellectual property expenses for the first quarter of 2010 were $216,836 compared to $344,231 for the first quarter of 2009. The change in intellectual property expenditures reflects the timing of filing costs associated with our patent base. At the end of the first quarter of 2010, we had been issued over 200 patents including 33 U.S. and 11 Canadian patents, as well as issuances in other jurisdictions. We also have over 180 patent applications filed in the U.S., Canada and other jurisdictions.

Research Collaborations

	2010 $	2009 $
Research collaborations	**(979)**	181,004

Our research collaboration activity continues to focus on the interaction of the immune system and the reovirus and the use of the reovirus as a co-therapy with existing chemotherapeutics and radiation. During the first quarter of 2010, we did not incur any new research collaboration costs as we continue to selectively consider the need for additional collaborations. During the first quarter of 2009, we incurred costs associated with collaboration studies that were ongoing at the end of 2008.

We still expect that our pre-clinical trial expenses and research collaborations in 2010 will remain consistent with 2009.

Other Research and Development Expenses

	2010 $	2009 $
R&D consulting fees	**35,851**	33,916
R&D salaries and benefits	**463,590**	472,645
Other R&D expenses	**11,453**	55,850
Other research and development expenses	**510,894**	562,411

During the first quarter of 2010, the activity associated with our other research and development expenses remained consistent compared to the first quarter of 2009.

We still expect that our Other R&D expenses will remain consistent with 2009.

Operating Expenses

	2010 $	2009 $
Public company related expenses	**642,181**	644,327
Office expenses	**307,243**	342,437
Operating expenses	**949,424**	986,764

During the first quarter of 2010, our public company related expenses were $642,181 compared to $644,327 for the first quarter of 2009. As well, our office expenses during the first quarter of 2010 were $307,243 compared to $342,437 for the first quarter of 2009. These activities have remained consistent during the first quarter of 2010 compared to the first quarter of 2009.

Commitments

As at March 31, 2010, we are committed to payments totaling $768,000 during the remainder of 2010 for activities related to clinical trial activity, manufacturing and collaborations. All of these committed payments are considered to be part of our normal course of business.

SUMMARY OF QUARTERLY RESULTS

The following unaudited quarterly information is presented in thousands of dollars except for per share amounts:

	2010	2009					2008		
	March	**Dec.**	**Sept.**	**June**	**March**		**Dec.**	**Sept.**	**June**
Revenue	—	—	—	—	—		—	—	—
Net loss [3]	4,141	5,245	2,694	4,335	3,958		4,760	4,141	5,255
Basic and diluted loss per common share[3]	$0.07	$0.09	$0.05	$0.09	$0.09		$0.11	$0.09	$0.13
Total assets[1], [4]	30,159	35,593	10,240	12,755	9,802		13,987	13,542	19,011
Total cash[2], [4]	28,823	34,129	9,655	11,983	9,292		13,277	12,680	17,930
Total long-term debt	—	—	—	—	—		—	—	—
Cash dividends declared[5]	Nil	Nil	Nil	Nil	Nil		Nil	Nil	Nil

(1) Subsequent to the acquisition of Oncolytics Biotech Inc. by SYNSORB in April 1999, we applied push down accounting.
(2) Included in total cash are cash and cash equivalents plus short-term investments.
(3) Included in net loss and loss per common share between March 2010 and April 2008 are quarterly stock based compensation expenses of $1,029, $396,110, $7,982, $8,544, $11,637, $9,084, $17,339, and $18,023, respectively.
(4) We issued 17,524,211 common shares for net cash proceeds of $37,052,900 in 2009 (2008 – 2,650,000 common shares for net cash proceeds of $3,421,309)
(5) We have not declared or paid any dividends since incorporation.

LIQUIDITY AND CAPITAL RESOURCES

Liquidity

	March 31, 2010 $	**December 31, 2009** $
Cash and cash equivalents	**27,143,314**	32,448,939
Short-term investments	**1,679,937**	1,679,937
Working capital	**26,345,194**	31,366458

The decrease in our cash and cash equivalent and short term investment positions reflects the cash usage from our operating activities of $4,938,083 which includes a reduction in net change in non-cash working capital of $1,176,681 for the period ending March 31, 2010.

We desire to maintain adequate cash and short-term investment reserves to support our planned activities which include our clinical trial program, product manufacturing, administrative costs, and our intellectual property expansion and protection. To date, we have funded our operations through the issue of additional capital via public and private offerings and acquisition of a private company. We continue to estimate the cost of our operations in 2010 will be $24 million.

We manage our research and development plan with the objective of ensuring optimal use of our existing resources. Additional activities continue to be subject to adequate resources and we believe we will have sufficient cash resources to fund our presently planned operations into 2011. Factors that will affect our anticipated cash usage in 2010 and for which additional funding might be required include, but are not limited to, any expansion in our clinical trial program, the timing of patient enrollment in our approved clinical trials, the actual costs incurred to support each clinical trial, the number of treatments each patient will receive, the timing of R&D activity with our clinical trial research collaborations, the number and timing of manufacturing runs required to supply our clinical trial program and the cost of each run, and the level of collaborative activity undertaken.

We have no assurances that we will be able to raise funds through the sale of our common shares, consequently, we continue to evaluate all types of financing arrangements. We also want to be in a position to evaluate potential financings and be able to accept appropriate financings when available. As a

result, we filed a base shelf prospectus on June 16, 2008 which qualified for distribution up to $150,000,000 of common shares, subscription receipts, warrants, debt securities and/or units. Establishing our base shelf provides us with additional flexibility when seeking capital as, under certain circumstances, it shortens the time period to close a financing and is expected to increase the number of potential investors that may be prepared to invest in our company. We were able to take advantage of our base shelf in 2009 with our two public offerings along with the exercise of the related warrants raising approximately $35 million. Our existing base shelf expires in July 2010 and we plan to renew it prior to its scheduled expiration.

Investing Activities

Under our Investment Policy, we are permitted to invest in short-term instruments with a rating no less than R-1 (DBRS) with terms less than two years. We have $1,679,937 (December 31, 2009 – $1,679,937) invested under this policy and we are currently earning interest at an effective rate of 0.17% (2009 – 0.50%)

OTHER MD&A REQUIREMENTS

We have 61,549,969 common shares outstanding at May 11, 2010. If all of our warrants (1,955,000) and options (3,929,693) were exercised we would have 67,434,662 common shares outstanding.

Additional information relating to Oncolytics Biotech Inc. is available on SEDAR at www.sedar.com.

Controls and Procedures

There were no changes in our internal controls over financial reporting during the quarter ended March 31, 2010 that materially affected or are reasonably likely to materially affect, internal controls over financial reporting.

Interim Consolidated Financial Statements

Oncolytics Biotech Inc.

(Unaudited)

March 31, 2010

Oncolytics Biotech Inc.

INTERIM CONSOLIDATED BALANCE SHEETS
(unaudited)

As at,

	March 31, 2010 $	**December 31, 2009** $
ASSETS		
Current		
Cash and cash equivalents *[note 7]*	**27,143,314**	32,448,939
Short-term investments *[note 7]*	**1,679,937**	1,679,937
Accounts receivable	**33,013**	64,787
Prepaid expenses	**421,552**	507,408
	29,277,816	34,701,071
Property and equipment	**197,082**	208,320
Long term investment *[note 10]*	**684,000**	684,000
	30,158,898	35,593,391
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current		
Accounts payable and accrued liabilities	**2,932,622**	4,226,933
Shareholders' equity		
Share capital *[note 9]*		
Authorized: unlimited number of common shares		
Issued: 61,549,969 (December 31, 2009 – 61,549,969)	**131,908,274**	131,908,274
Warrants *[note 9]*	**2,073,441**	4,511,441
Contributed surplus *[note 3]*	**16,173,772**	13,734,743
Deficit *[note 4]*	**(122,929,211)**	(118,788,000)
	27,226,276	31,366,458
	30,158,898	35,593,391

See accompanying notes

Oncolytics Biotech Inc.

INTERIM CONSOLIDATED STATEMENTS OF LOSS AND COMPREHENSIVE LOSS
(unaudited)

	Three Month Period Ending March 31, 2010 $	Three Month Period Ending March 31, 2009 $	Cumulative from inception on April 2, 1998 to March 31, 2010 $
Revenue			
Rights revenue	—	—	310,000
Expenses			
Research and development	**2,839,313**	2,812,655	88,977,604
Operating	**949,424**	986,764	29,568,956
Stock-based compensation	**1,029**	11,637	5,194,146
Foreign exchange loss	**346,379**	56,035	1,115,522
Amortization – intellectual property	—	90,375	3,615,000
Amortization – property and equipment	**14,885**	17,304	576,966
	4,151,030	3,974,770	129,048,194
Loss before the following	**4,151,030**	3,974,770	128,738,194
Interest income	**(9,819)**	(17,124)	(6,573,265)
Gain on sale of BCY LifeSciences Inc.	—	—	(299,403)
Loss on sale of Transition Therapeutics Inc.	—	—	2,156,685
Loss before income taxes	**4,141,211**	3,957,646	124,022,211
Income taxes	—	—	(1,093,000)
Net loss and comprehensive loss for the period	**4,141,211**	3,957,646	122,929,211
Basic and diluted loss per share	**(0.07)**	(0.09)	
Weighted average number of shares (basic and diluted)	**61,549,969**	43,849,637	

See accompanying notes

Oncolytics Biotech Inc.

INTERIM CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

	Three Month Period Ending March 31, 2010 $	Three Month Period Ending March 31, 2009 $	Cumulative from inception on April 2, 1998 to March 31, 2010 $
OPERATING ACTIVITIES			
Net loss for the period	**(4,141,211)**	(3,957,646)	(122,929,211)
Add / (deduct) non-cash items			
Amortization – intellectual property	**—**	90,375	3,615,000
Amortization – property and equipment	**14,885**	17,304	576,966
Stock-based compensation	**1,029**	11,637	5,194,146
Other non-cash items *[note 5]*	**363,895**	—	1,858,232
Net change in non-cash working capital *[note 5]*	**(1,176,681)**	(164,019)	2,478,057
Cash used in operating activities	**(4,938,083)**	(4,002,349)	(109,206,810)
INVESTING ACTIVITIES			
Purchase of property and equipment	**(3,647)**	(3,349)	(826,715)
Purchase of short-term investments	**—**	(8,966)	(51,096,801)
Redemption of short-term investments	**—**	3,930,000	48,998,380
Investment in BCY LifeSciences Inc.	**—**	—	464,602
Investment in Transition Therapeutics Inc.	**—**	—	2,532,343
Cash provided by (used in) investing activities	**(3,647)**	3,917,685	71,809
FINANCING ACTIVITIES			
Proceeds from exercise of warrants and stock options *[note 9]*	**—**	21,250	30,511,278
Proceeds from private placements	**—**	—	38,137,385
Proceeds from acquisition of private company	**—**	—	1,800,120
Proceeds from public offerings	**—**	—	66,320,777
Cash provided by financing activities	**—**	21,250	136,769,560
Net increase (decrease) in cash and cash equivalents during the period	**(4,941,730)**	(63,414)	27,634,559
Impact of foreign exchange on cash and cash equivalents	**(363,895)**	—	(491,245)
Cash and cash equivalents, beginning of the period	**32,448,939**	7,429,895	—
Cash and cash equivalents, end of the period	**27,143,314**	7,366,481	27,143,314

See accompanying notes

Oncolytics Biotech Inc.

NOTES TO INTERIM CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)

March 31, 2010

1. INCORPORATION AND NATURE OF OPERATIONS

Oncolytics Biotech Inc. (the "Company" or "we") was incorporated on April 2, 1998 under the Business Corporations Act (Alberta) as 779738 Alberta Ltd. On April 8, 1998, the Company changed its name to Oncolytics Biotech Inc.

The Company is a development stage biopharmaceutical company that focuses on the discovery and development of pharmaceutical products for the treatment of cancers that have not been successfully treated with conventional therapeutics. The product being developed by the Company may represent a novel treatment for Ras mediated cancers which can be used as an alternative to existing cytotoxic or cytostatic therapies, as an adjuvant therapy to conventional chemotherapy, radiation therapy, or surgical resections, or to treat certain cellular proliferative disorders for which no current therapy exists.

2. ACCOUNTING POLICIES

These interim consolidated financial statements have been prepared in accordance with Canadian generally accepted accounting principles ("GAAP"). The notes presented in these interim consolidated financial statements include only significant events and transactions occurring since our last fiscal year end and are not fully inclusive of all matters required to be disclosed in our annual audited consolidated financial statements. Accordingly, these interim consolidated financial statements should be read in conjunction with our most recent annual audited financial statements. The information as at and for the year ended December 31, 2009 has been derived from our annual audited consolidated financial statements.

The accounting policies used in the preparation of these interim consolidated financial statements conform to those used in the Company's most recent annual financial statements.

Future Accounting Changes

International Financial Reporting Standards ("IFRS")

The Canadian Institute of Chartered Accountants' Standards Board announced that Canadian publicly accountable enterprises are required to adopt IFRS, as issued by the International Accounting Standards Board (IASB), effective January 1, 2011.

We have commenced the process to transition from current Canadian GAAP ("GAAP") to IFRS. Our transition plan, which in certain cases will be in process concurrently as IFRS is applied, includes the following three phases:

- Scoping and diagnostic phase — This phase involves performing a high-level diagnostic assessment to identify key areas that may be impacted by the transition to IFRS. As a result of the diagnostic assessment, the potentially affected areas are ranked as high, medium or low priority. This phase was finalized in 2008.

- Impact analysis, evaluation and design phase — In this phase, each area identified from the scoping and diagnostic phase will be addressed in order of descending priority. This phase

involves specification of changes required to existing accounting policies, information systems and business processes, together with an analysis of policy alternatives allowed under IFRS.

- Implementation and review phase — This phase includes execution of changes to information systems and business processes, completing formal authorization processes to approve recommended accounting policy changes and training. At the end of the implementation and review phase we will be able to compile financial statements compliant with IFRS.

In 2009, we performed our impact analysis with respect to IFRS 1 "*First Time Adoption of International Financial Reporting Standards*", analyzed other known GAAP to IFRS differences and commenced the preparation of our IFRS accounting policies.

IFRS 1 "*First Time Adoption of International Financial Reporting Standards*"

Upon review of IFRS 1, and as at March 31, 2010, we expect to utilize the exemption relating to investments in subsidiaries, jointly controlled entities and associates. We may also wish to utilize the exemption relating to cumulative translation differences if it is applicable upon adoption. We do not expect there to be a significant impact on our financial statements as a result of using these exemptions. As well, based on the transactions we have incurred to date and our specific facts, we believe it will not be necessary to utilize the other exemptions made available by IFRS 1. As we move towards actual implementation and reporting under IFRS, we will continue to monitor our transactions and make use of any exemptions that are determined to benefit Oncolytics.

Other GAAP to IFRS Differences

Functional Currency

There are differences in the determination of an entity's functional currency between GAAP and IFRS. We are reviewing the facts of each of the entities within our corporate structure and we expect that our functional currencies should not change.

Foreign Currency Translation

The foreign currency translation of our subsidiaries may differ under IFRS compared to GAAP. This is dependent on our conclusion relating to the functional currency of each of our subsidiaries. We expect the impact of this difference to be insignificant.

Income Taxes

The IFRS standard, IAS 12 "*Income Taxes"* continues to be under review and it is expected to change before 2011. We expect that, regardless of the results of the review, there will be differences between IFRS and GAAP, but will depend on the final standard. The potential impact is not expected to impact our balance sheet or income statement, but will impact our valuation allowance within our income tax disclosure.

Treatment of Warrants with an Exercise Price Denominated in a Foreign Currency

There is a difference between GAAP and IFRS on the treatment of warrants with an exercise price denominated in a currency other than the entity's functional currency. Currently, IFRS would require accounting for these warrants as a liability measured at fair value with changes in fair value recorded in the consolidated statement of loss. GAAP requires these warrants to be accounted for as an equity instrument. We currently estimate that the impact on our interim consolidated financial statements would be to increase our liabilities and decrease our equity by approximately $1.5 million. Settlement of this liability only impacts our equity accounts and has no impact on our cash balance.

Financial Statement Presentation

There are differences between GAAP and IFRS relating to the presentation of financial statements. We are currently reviewing the impact of these differences. Currently, we expect that we will no longer be required to present cumulative from inception balances on our statements of loss and cash flows and our share capital note will be condensed to only include the years presented.

3. CONTRIBUTED SURPLUS

	Amount $
Balance, December 31, 2008	13,349,801
Stock-based compensation	424,273
Exercise of stock options	(39,331)
Balance, December 31, 2009	13,734,743
Stock-based compensation	1,029
Expired warrants	2,438,000
Balance, March 31, 2010	**16,173,772**

4. DEFICIT

As at,	**March 31, 2010 $**	**March 31, 2009 $**
Deficit, beginning of the period	118,788,000	102,556,751
Net loss for the three month period	4,141,211	3,957,646
Deficit, end of the period	**122,929,211**	106,514,397

5. ADDITIONAL CASH FLOW DISCLOSURE

Net Change in Non-Cash Working Capital

	Three Month Period Ended March 31, 2010 $	Three Month Period Ended March 31, 2009 $	Cumulative from inception on April 2, 1998 to March 31, 2010 $
Changes in:			
Accounts receivable	**31,774**	17,911	(33,013)
Prepaid expenses	**85,856**	78,643	(421,552)
Accounts payable and accrued liabilities	**(1,294,311)**	(260,573)	2,932,622
Net change in non-cash working capital	**(1,176,681)**	(164,019)	2,478,057

Other Non-Cash Items	Three Month Period Ended March 31, 2010 $	Three Month Period Ended March 31, 2009 $	Cumulative from inception on April 2, 1998 to March 31, 2010 $
Gain on disposal of clinical data	**—**	—	(16,550)
Unrealized foreign exchange loss	**363,895**	—	916,431
Donation of medical equipment	**—**	—	66,069
Loss on sale of Transition Therapeutics Inc.	**—**	—	2,156,685
Gain on sale of BCY LifeSciences Inc.	**—**	—	(299,403)
Cancellation of contingent payment obligation settled in common shares	**—**	—	150,000
Future income tax recovery	**—**	—	(1,115,000)
	363,895	—	1,858,232

6. CAPITAL DISCLOSURES

Our objective when managing capital is to maintain adequate cash resources to support planned activities which include the clinical trial program, product manufacturing, administrative costs and intellectual property expansion and protection. We include shareholders' equity, cash and cash equivalents and short-term investments in the definition of capital.

	March 31, 2010 **$**	**December 31, 2009** **$**
Cash and cash equivalents	**27,143,314**	32,448,939
Short-term investments	**1,679,937**	1,679,937
Shareholders' equity	**27,226,276**	31,366,458

We do not have any debt other than trade accounts payable and we have potential contingent obligations relating to the completion of our research and development of REOLYSIN®.

In managing our capital, we estimate our future cash requirements by preparing a budget and a multi-year plan annually for review and approval by our Board of Directors (the "Board"). The budget establishes the approved activities for the upcoming year and estimates the costs associated with these activities. The multi-year plan estimates future activity along with the potential cash requirements and is based on our assessment of our current clinical trial progress along with the expected results from the coming year's activity. Budget to actual variances are prepared and reviewed by management and are presented quarterly to the Board.

Historically, funding for our plan is primarily managed through the issuance of additional common shares and common share purchase warrants that upon exercise are converted to common shares. Management regularly monitors the capital markets attempting to balance the timing of issuing additional equity with our progress through our clinical trial program, general market conditions, and the availability of capital. There are no assurances that funds will be made available to us when required.

On June 16, 2008, we filed a short form base shelf prospectus (the "Base Shelf") that qualifies for distribution up to $150,000,000 of common shares, subscription receipts, warrants, debt securities and/or units (the "Securities"). Under our Base Shelf, 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.

Establishing the Base Shelf provides us with additional flexibility when managing our cash resources as, under certain circumstances, it shortens the time period required to close a financing and is expected to increase the number of potential investors that may be prepared to invest in our company. Funds received from a Prospectus Supplement will be used in line with our Board approved budget and multi-year plan. The Base Shelf expires on July 16, 2010 and we have registered 10,987,500 units under this shelf.

We are not subject to externally imposed capital requirements and there have been no changes in how we define or manage our capital in 2010.

7. CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS

Cash Equivalents
Cash equivalents consist of interest bearing deposits with our bank totaling $13,128,582 (December 31, 2009 - $15,518,939). The current annual interest rate earned on these deposits is 0.30% (December 31, 2009 – 0.30%).

Short-Term Investments
Short-term investments which consist of guaranteed investment certificates are liquid investments that are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value. The objectives for holding short-term investments are to invest our excess cash resources in investment vehicles that provide a better rate of return compared to our interest bearing bank account with limited risk to the principal invested. We intend to match the maturities of these short-term investments with the cash requirements of the Company's activities and treat these as held-to-maturity short-term investments.

	Face Value $	**Original Cost** $	**Accrued Interest** $	**Carrying Value** $	**Fair Value** $	**Effective Interest Rate** %
March 31, 2010 Short-term investments	**1,679,937**	**1,679,937**	**Nil**	**1,679,937**	**1,679,937**	**0.17%**
December 31, 2009 Short-term investments	1,679,937	1,679,937	**Nil**	1,679,937	1,679,937	0.17%

8. FINANCIAL INSTRUMENTS

Our financial instruments consist of cash and cash equivalents, short-term investments, accounts receivable, and accounts payable. As at March 31, 2010, there are no significant differences between the carrying values of these amounts and their estimated market values. Our long term investment is an equity investment in a private company with no active market for these securities and is measured at cost.

Credit risk
Credit risk is the risk of financial loss if a counter-party to a financial instrument fails to meet its contractual obligations. We are exposed to credit risk on our cash and cash equivalents and short-term investments in the event of non-performance by counterparties, but we do not anticipate such non-performance. Our maximum exposure to credit risk at the end of the period is the carrying value of our cash and cash equivalents and short-term investments.

We mitigate our exposure to credit risk by maintaining our primary operating and investment bank accounts with Schedule I banks in Canada. For our foreign domiciled bank accounts, we use referrals or recommendations from our Canadian banks to open foreign bank accounts and these accounts are used solely for the purpose of settling accounts payable or payroll.

We also mitigate our exposure to credit risk by restricting our portfolio to investment grade securities with short-term maturities and by monitoring the credit risk and credit standing of counterparties. Currently, 100% of our short-term investments are in guaranteed investment certificates.

Interest rate risk

Interest rate risk is the risk that future cash flows of a financial instrument will fluctuate because of changes in market interest rates. We are exposed to interest rate risk through our cash and cash equivalents and our portfolio of short-term investments. We mitigate this risk through our investment policy that only allows investment of excess cash resources in investment grade vehicles while matching maturities with our operational requirements.

Fluctuations in market rates of interest do not have a significant impact on our results of operations due to the short term to maturity of the investments held.

Currency risk

Currency risk is the risk that future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. We are exposed to currency risk from the purchase of goods and services primarily in the U.S. and the U.K. and to the extent cash is held in foreign currencies. The impact of a $0.01 increase in the value of the U.S. dollar against the Canadian dollar would have decreased our net loss for the three month period ending March 31, 2010 by approximately $68,544. The impact of a $0.10 increase in the value of the British pound against the Canadian dollar would have increased our net loss for the three month period ending March 31, 2010 by approximately $46,348.

We mitigate our foreign exchange risk through the purchase of foreign currencies in sufficient amounts to settle our foreign accounts payable.

Balances in foreign currencies at March 31, 2010 are as follows:

	U.S. dollars $	**British pounds** £
Cash and cash equivalents	11,211,448	119,497
Accounts payable	(1,559,781)	(121,216)
	9,651,667	(1,719)

Liquidity risk

Liquidity risk is the risk that we will encounter difficulty in meeting obligations associated with financial liabilities. We manage liquidity risk through the management of our capital structure as outlined in Note 6. Accounts payable are all due within the current operating period.

9. SHARE CAPITAL

Authorized:
Unlimited number of no par value common shares

Issued:	**Shares**		**Warrants**	
	Number	**Amount** $	**Number**	**Amount** $
Balance, December 31, 2009	61,549,969	131,908,274	4,255,000	4,511,441
Expired warrants	—	—	(2,300,000)	(2,438,000)
Balance, March 31, 2010	**61,549,969**	**131,908,274**	**1,955,000**	**2,073,441**

The following table summarizes our outstanding warrants as at March 31, 2010:

Exercise Price	**Outstanding, Beginning of the Period**	**Granted During the Period**	**Exercised During the Period**	**Expired During the Period**	**Outstanding, End of Period**	**Weighted Average Remaining Contractual Life (years)**
US$3.50	1,955,000	—	—	—	1,955,000	4.58
$3.50	2,300,000	—	—	(2,300,000)	—	—
	4,255,000	—	—	(2,300,000)	1,955,000	4.58

10. LONG TERM INVESTMENT

In February 2010, we completed the conversion of our preferred share holding in British Canadian Biosciences Corp. ("BCBC") into common shares. BCBC is a privately held corporation and its common shares are not listed for trading in an active market.

Shareholder Information

For public company filings please go to www.sedar.com or contact us at:

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George Gill, MD
Senior Vice President, Clinical and Regulatory Affairs

Directors

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CFO, Oncolytics Biotech Inc.
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