Financial Statements and Management's Discussion and Analysis

December 31, 2018

Oncolytics Biotech Inc.
TSX: ONC
Nasdaq: ONCY

MANAGEMENT DISCUSSION & ANALYSIS

2018

ONCOLYTICS BIOTECH INC.

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

BASIS OF PRESENTATION

Our Management Discussion and Analysis of Financial Condition and Results of Operations (“MD&A”) should be read in conjunction with our 2018 audited consolidated financial statements and notes thereto, which have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). This MD&A along with our consolidated financial statements for the year ended December 31, 2018, were authorized for issue in accordance with a resolution of the Board of Directors (the "Board") on March 7, 2019.

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 pelareorep, an intravenously delivered immuno-oncolytic virus, as a cancer therapeutic and our expectations as to the success of our research and development and manufacturing programs in 2019 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 pelareorep as a cancer treatment, the success and timely completion of clinical studies and trials, our ability to successfully commercialize pelareorep, uncertainties related to the research, development and manufacturing of pelareorep, 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 clinical development plan, our ability to receive regulatory approval to commence enrollment in the clinical studies which are part of our clinical development plan, our ability to maintain our supply of pelareorep and future expense levels being within our current expectations.

Investors should consult our quarterly and annual filings with the Canadian and US 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.

Pelareorep Development Update For 2018

Oncolytics Biotech Inc. is a Development Stage Company

Since our inception in April of 1998, Oncolytics Biotech Inc. has been a development stage company. We have focused our research and development efforts on the development of pelareorep, an intravenously delivered immuno-oncolytic virus (IOV) with the potential to treat a variety of cancers. 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, and unless, pelareorep becomes commercially viable.

Our goal each year is to advance pelareorep through the various steps and stages of development required for potential pharmaceutical products. In order to achieve this goal, we believe that we have to actively manage the development of our clinical trial program, our pre-clinical and collaborative programs, our manufacturing process and pelareorep supply, and our intellectual property.

Clinical Trial Program

Our clinical development plan, based on drug combinations that can potentially boost each response of the mechanism of action, has two main objectives. The primary objective is to obtain regulatory approval for pelareorep as quickly as possible and is based on the compelling metastatic breast cancer survival data that was presented at the 2017 American Association for Cancer Research (AACR) Annual Meeting, in Washington, D.C. The second objective is to expand pelareorep into commercially valuable new treatment areas that include immunotherapies like checkpoint blockade.

2018 Developments:

Registration Program

Metastatic Breast Cancer: Special Protocol Assessment

In 2017, we reported a statistically significant increase of 7 months (10.4 months to 17.4 months) in median overall survival from an open-label, randomized phase 2 metastatic breast cancer (mBC) study of intravenously-administered pelareorep given in combination with the chemotherapy agent paclitaxel.

In May 2018, using the survival data as the basis for our application, we reached an agreement with the United States Food and Drug Administration (FDA) under a Special Protocol Assessment (SPA) for the protocol design, clinical endpoints and statistical analysis approach for our phase 3 clinical study evaluating pelareorep for the treatment of mBC. This agreement with the FDA, outlining the specific clinical pathway forward in mBC, is a confirmation from the FDA that our design and protocols will support an application for approval and advances pelareorep to be a phase 3 asset.

Collaboration with SOLTI: AWARE-1 study

In September 2018, as part of the preparations for initiation of our phase 3 registration study, we announced a collaboration with SOLTI, an academic research group dedicated to clinical and translational research in breast cancer. This clinical collaboration, AWARE-1, is a window of opportunity study in the neoadjuvant setting for breast cancer using pelareorep in combination with F. Hoffmann-La Roche's anti-PD-L1 checkpoint inhibitor, atezolizumab (Tecentriq®), which we utilized as a part of the Master Clinical Supply Agreement (see below). The study plans to enroll 36 patients. Data generated from this study is intended to confirm that the virus is acting as a novel immunotherapy in breast cancer and to provide comprehensive biomarker data for breast cancer. The primary objective of this study is to supplement the existing randomized phase 2 results by providing key biomarker data points to enhance our chance of success in the phase 3 registration study. The results of this study may also provide an opportunity to add an arm to the phase 3 study that includes a checkpoint inhibitor in addition to the chemotherapy-virus combination.

Master Clinical Supply Agreement with F. Hoffmann-La Roche Ltd (Roche)

In September 2018, we entered into a five-year Master Clinical Supply Agreement with Roche, where Roche will supply its Tecentriq®, for use in our clinical development program. By incorporating this anti-PD-L1 cancer immunotherapy into our clinical program, data from these studies will broaden our experience with this drug class as we look to demonstrate the impact of pelareorep with checkpoint inhibitors. The AWARE-1 study is the first of our clinical studies to incorporate Tecentriq® under this supply agreement.

Checkpoint inhibitor combinations

In support of the adaptive immunity component of pelareorep's mechanism of action, we further expanded our immunotherapy combinations in 2018.

Pancreatic cancer study combining pelareorep and Keytruda®

In 2017, we announced the results from our first checkpoint inhibitor study combining pelareorep with Merck's Keytruda® in second line pancreatic cancer patients (REO 024). This phase 1b investigator sponsored study supported by Merck, Northwestern University and Oncolytics, demonstrated that that not only is combination safe, but also that there was early evidence of clinical activity.

In January 2018, the following presentation was made:

Title	Presenter	Location	Description/Conclusion
A study of pelareorep in combination with pembrolizumab and chemotherapy in patients (pts) with relapsed metastatic adenocarcinoma of the pancreas (MAP)	Dr. Devalingam Mahalingam, M.D. Ph.D., Associate Professor of Medicine (Hematology and Oncology) at the Feinberg School of Medicine, Northwestern University	2018 Gastrointestinal Cancers Symposium sponsored by ASCO, San Francisco, California	The poster, outlining pelareorep tested in combination with chemotherapy and pembrolizumab (KEYTRUDA®) in eleven patients with relapsed metastatic adenocarcinoma of the pancreas. The poster outlined six efficacy evaluable patients, including one that had partial response lasting 17.4 months and two with stable disease of 126 days and 277 days. The poster also demonstrated manageable safety profiles and antitumor activity in previously treated patients with relapsed metastatic pancreatic adenocarcinoma. Furthermore, on-treatment biopsies showed selective reovirus infection and caspase activation in cancer cells and infiltration by CD8 T-cells, demonstrating the virus's ability to induce cell death and a pro-inflammatory phenotype in treated tumors.

In 2018, we announced the first patient had been treated in our investigator sponsored study (IST) supported by Merck Inc. (Merck), Northwestern University along with Oncolytics. This study, an extension of our phase 1 study (REO 024), will investigate pelareorep in combination with Merck's anti-PD1 checkpoint inhibitor Keytruda®, to treat second line pancreatic cancer patients. The study, run by the principal investigator of REO 024, Dr. Devalingam Mahalingam, will plan to enroll approximately 40 patients with advanced pancreatic cancer and will be conducted at the Robert H. Lurie Comprehensive Cancer Center of Northwestern University.

Multiple myeloma study combining pelareorep and Keytruda®

In May 2018, we announced an extension of the current REO 019 study evaluating pelareorep in combination with Velcade® and dexamethasone to treat multiple myeloma. This collaboration with the Keck School of Medicine of University of Southern California (USC) will use pelareorep in combination with Keytruda®, Velcade® and dexamethasone, to treat multiple myeloma and will be conducted at the USC Norris Comprehensive Cancer Center. The Keytruda® is being provided by Merck. This study will enroll 22 patients with relapsed-refractory multiple myeloma and will primarily evaluate overall response rate, as well as safety and tolerability.

Multiple myeloma study combining pelareorep and Opdivo®

In 2018 we announced that the first patient had been treated in our IST with Emory University and the University of Utah investigating the combination of pelareorep and Bristol-Myers Squibb's anti-PD1 checkpoint inhibitor Opdivo® in 40 - 50 relapsed or refractory myeloma patients. This study will evaluate safety and measure the development of a pro-inflammatory phenotype in the tumor microenvironment. Once the safety of the initial combination is demonstrated, Celgene Corporation's immunodulatory drug Pomalyst® may be added to the treatment regimen.

Pre-clinical/Research collaborations

In 2018, the following presentations and journal publication were made to demonstrate clinical evidence that pelareorep can boost PD-L1 expression and has the potential to be a backbone for immune checkpoint inhibition, and can effectively target tumors even in the presence of neutralizing antibodies:

Title	Presenter	Location	Description/Conclusion
Potentiating effect of reovirus in anti-PD1 therapy in colorectal cancer	Sanjay Goel, MD, Associate Professor of Medicine, Montefiore Medical Center	American Association for Cancer Research (AACR) Annual Meeting 2018, Chicago, Illinois	Data presented in the poster demonstrated: – pelareorep administration increased PD-L1 expression on MSS CRC cells; – possible evidence of a vaccine effect: immunologically competent mice were re-challenged with the original tumor and the tumor was unable to propagate; – combination therapy made statistically significant improvements in survival compared to controls in both BALB/c (median 42 vs. 16 days, p=0.003) and C57BL/6 (median 24 vs. 17 days, p=0.02) mice; and – pelareorep treated xenografted tumor tissue showed a higher infiltration of T lymphocytes as confirmed by CD8-positive and intensified granzyme staining.

Title	Presenter	Location	Description/Conclusion
Pelareorep promotes the expression of a chemokine signature that predicts response to immunotherapy	Grey Wilkinson, PhD, Translational Scientist, Oncolytics Biotech	American Association for Cancer Research (AACR) Annual Meeting 2018, Chicago, Illinois	Data presented in the poster demonstrated: – the expression of a chemokine signature that predicts response to immunotherapy; – global changes in gene expression are unique and different for each cell line following pelareorep infection and changes in gene expression occur before significant cell lysis; – pelareorep differentially promotes the expression of innate and adaptive immunity related genes in HCC, CRC, NSCLC cell lines; and – pelareorep promotes the expression of gene signatures that predict response to immuno-therapies in HCC cells.
B and T lymphocyte attenuator (BTLA) and PD-L1 significantly upregulated in reovirus treated TRAMP-C2 tumours	Dr. Guy Simpson, Department of Clinical and Experimental Medicine, University of Surrey	11th International Oncolytics Virus Conference (IOVC), Oxford, UK	Data presented in the poster demonstrated: – treatment of subcutaneous TRAMP-C2 prostate tumors with a combination of pelareorep and anti-PD-1 (Keytruda®) or anti-CD73 antibody significantly enhanced survival of mice compared to pelareorep or antibody therapy alone; – immune profiling of pelareorep treated and untreated tumors confirmed the ability of pelareorep to increase tumour immune cell infiltration; – pelareorep infection of tumours is needed before a therapeutic effect of anti-immune inhibitory/suppressive antibodies is seen; – pelareorep-initiated antitumor immunity protects against subsequent tumour challenge; and – after the study of negative regulators, only B and T lymphocyte attenuator (BTLA) and PD-L1 were significantly upregulated in the pelareorep treated TRAMP-C2 tumors compared to untreated tumour.
Pelareorep to promote the expression of a IFN-gamma-related gene signature that predicts response to checkpoint blockade therapy	Grey Wilkinson, PhD, Translational Scientist, Oncolytics Biotech	American Society of Clinical Oncology (ASCO) 2018 Annual Meeting, Chicago, Illinois	Highlights in the poster include: – Pelareorep promotes expression of gene signatures that are predictive of response to checkpoint inhibitors in select cell lines - HCC - hepatocellular carcinoma - HR+BC - hormone receptor positive breast cancer – Pronounced tumor inflammatory effects of pelareorep in HR+ BC cells may explain the prominent increase in overall survival in a previous phase 2 randomized clinical study in HR+ mBC patients treated with pelareorep and may render this large breast cancer population susceptible to conventional immunotherapy regimes – Results warrant further investigation of pelareorep in combination with checkpoint inhibitors
Dose finding and safety study of Reovirus (Reo) with irinotecan/fluorouracil/ leucovorin/bevacizumab (FOLFIRI/B) in patients with KRAS mutant metastatic colorectal cancer (mCRC): Final Results	Dr. Sanjay Goel, M.D., Department of Medical Oncology, Montefiore Medical Centre.	European Society for Medical Oncology (ESMO) 2018 Congress, Munich, Germany	Highlights in the poster include: – Of the six patients receiving the recommended phase 2 dose (RPTD), three had a partial response (50%) and the median progression free survival (PFS) and overall survival (OS) were 65.6 weeks and 107.5 weeks, respectively, exceeding expectations when compared to historical data – Reovirus administration is marked by activation of cytotoxic T-cells and rapid maturation of dendritic cells – Reovirus is safe and well tolerated in combination with FOLFIRI and Bevacizumab

Title	Presenter	Location	Description/Conclusion
Reovirus infection of prostate cancer induces upregulation of the negative regulators PD-L1 and BTLA	Dr. Hardev Pandha, Professor of Medical Oncology, the University of Surrey.	Society for Immunotherapy of Cancer (SITC) 2018 Annual Meeting, Washington, D.C.	The poster clearly demonstrated that oncolytic virotherapy is able to transform and 'heat up' an immunologically 'cold' prostatic tumour microenvironment, and thereby sensitise it to immune checkpoint blockade. The proinflammatory effects of viral oncolysis may stem from its attraction and activation of NK cells which through the production of chemokines and FLT3LG in the tumour, control the levels of stimulatory DCs and thus priming of effector T cells, increasing the responsiveness of prostate tumours to anti-PD1 immunotherapy. This combination strategy is feasible for patient treatment.
Oncolytic Virus Replication Using Pelareorep and Carfilzomib in Relapsed Myeloma Patients Increases PD-L1 Expression with Clinical Responses	Craig C. Hofmeister, Acting Associate Professor, Department of Hematology and Medical Oncology Emory University School of Medicine.	60th American Society of Hematology (ASH) Annual Meeting & Exposition, San Diego, California	Highlights in the poster include: – Responses include: ◦ Three very good partial responses (at least 90% reduction in monoclonal protein) ◦ Three partial remissions (at least 50% reduction in monoclonal protein) ◦ Three minimal responses (between 25% and 50% response to a drug or regimen in a clinical trial ◦ Three stable disease – In patients receiving pelareorep with a clinical response, there was simultaneous CD8, PD-L1, and NK cell response, as well as activated caspase-3 expression – In patients treated with pelareorep, PD-L1 expression increased significantly more in patients with clinical response
Antibody- Neutralized Reovirus is Effective in Oncolytic Virotherapy	Dr. Elizabeth Ilett and Dr. Rob Berkeley, University of Leeds; Professor Alan Melcher, The Institute of Cancer Research, London.	Cancer Immunology Research	In the study, researchers treated pelareorep with neutralizing antibodies derived from patients undergoing virus therapy and added the antibody-coated virions to melanoma cells, which resulted in no killing of melanoma cells. However, addition of monocytes to the culture led to reactivation of the neutralized virus particles, allowing them to effectively target and destroy the melanoma cells. Three different viruses that are currently being evaluated in clinical trials were tested in the study, with neutralized forms of two of the three viruses being reactivated by monocytes, a finding with immediate clinical significance.

Post 2018 Developments:

In February 2019, we announced publication of an abstract demonstrating a biomarker for predicting clinical response in patients treated with pelareorep. The results suggest that those patients with a statistically significant change in their T cell population demonstrate a clinical benefit from pelareorep treatment. High T cell clonality correlates with progression free survival at baseline (HR=0.05, p=0.01). Moreover, high clonality correlates with overall survival at both baseline (HR=0.124, p=0.01) and after one cycle of treatment (HR=0.08, p=0.01). This research highlights the potential utility of measuring T cell clonality as a predictive and prognostic biomarker of pelareorep therapy. Detailed results will be presented at the American Academy of Cancer Research (AACR) 2019 Annual Meeting on April 1, 2019.

Manufacturing and Process Development

Throughout 2018, we supplied our clinical development program with previously filled product from our existing supply of pelareorep, labeled for the applicable usage and in line with extended stability data. As well, we continued our activities to develop clinical and commercial production capabilities to fill pelareorep into vials, the next step in the process validation master plan. Process validation is required to ensure that the resulting product meets required specifications and quality standards and will form part of the Company's submission to regulators, including the FDA, for product approval.

Intellectual Property

At the end of 2018, we had been issued 398 patents including 49 US and 21 Canadian patents as well as issuances in other jurisdictions. We have an extensive patent portfolio covering the oncolytic reovirus that we use in our clinical trial program including a composition of matter patent that expires in 2028. Our patent portfolio also includes methods for treating proliferative disorders using modified adenovirus, HSV, parapoxvirus and vaccinia virus.

Financing Activity

Share Consolidation
On May 22, 2018, we completed a consolidation of our common shares on the basis of 9.5 pre-consolidation common shares for each one post-consolidation common share (the "Share Consolidation"). Fractional interests were rounded down to the nearest whole number of common shares. Outstanding stock options, restricted share units and performance share units were similarly adjusted by the consolidation ratio. Outstanding warrants were adjusted such that, following the Share Consolidation, 9.5 pre-consolidation warrants entitle the holder to purchase one post-consolidation common share until June 1, 2022.

Listing on the Nasdaq Capital Market
On June 1, 2018, we announced that our common shares were approved for listing and commenced trading on the Nasdaq Capital Market.

Canadian "at-the-market" equity distribution agreement
On February 25, 2016, we entered into an "at-the-market" equity distribution agreement with Canaccord Genuity Inc. acting as sole agent in Canada (our "Canadian ATM"), which expired on March 16, 2018. Under the terms of our Canadian ATM, we were able to, from time to time, sell shares of our common stock having an aggregate offering value of up to $4.6 million through Canaccord Genuity Inc. Sales of common shares pursuant to the Canadian ATM were made in transactions that are deemed to be "at-the-market distributions", through the facilities of the Toronto Stock Exchange or other "marketplace" (as defined in National Instrument 21-101 Marketplace Operation) in Canada. We determined, at our sole discretion, the timing and number of shares to be sold under this ATM facility. During the first quarter of 2018, we sold 519,500 pre-consolidation common shares (approximately 54,684 post-consolidation common shares) for gross proceeds of $553,650 and incurred share issue costs of $33,335. Under our Canadian ATM, we raised total gross proceeds of approximately $4.4 million and incurred share issue costs of $779,153.

Public offering
On June 5, 2018, we closed a public offering whereby we sold 1,532,278 common shares at a purchase price of US$5.83 per share for gross proceeds of US$8,933,181. We incurred share issue costs of $1,418,356.

Common Stock Purchase Agreement
On September 27, 2018, we entered into a Common Stock Purchase Agreement (the "Agreement") with Lincoln Park Capital Fund, LLC ("LPC"). Subject to the terms and conditions of the Agreement and at our sole discretion, we may sell up to US$26,000,000 worth of common shares to LPC over the 30-month term. The purchase price of the common shares will be based on the prevailing market prices immediately preceding the notice of sale without any fixed discount. Subject to the terms of the Agreement, we control the timing and amount of any future investment and LPC is obligated to make such purchases, if and when we elect. The Agreement does not impose any upper price limit restrictions, negative covenants or restrictions on our future financing activities. We can terminate the Agreement at any time at our sole discretion without any monetary cost or penalty.

Upon signing of the Agreement, LPC purchased 248,762 common shares for gross proceeds of US$1.0 million. In consideration for entering into the Agreement, we issued an initial commitment fee of 110,754 common shares to LPC valued at fair value of US$455,000. An additional 110,754 common shares will be issued on a pro rata basis under the terms of the Agreement as an additional commitment fee. 4,260 additional commitment fee common shares valued at fair value of US$17,501 were issued upon signing of the Agreement. Subsequent to the signing of the Agreement, we issued 429,420 common shares for gross proceeds of approximately US$1.1 million and 4,495 commitment shares. The commitment shares have been valued at fair value of US$11,189 and have been recorded as additional share issue costs. The initial commitment fee and additional commitment fee common shares were recorded as share issue costs in addition to cash share issue costs of $208,726.

U.S. "at-the-market" equity distribution agreement
On October 24, 2018, we entered into an "at-the-market" ("ATM") equity offering sales agreement with Canaccord Genuity Inc. The ATM allows us, at our sole discretion, to issue common shares, at prevailing market price, with an aggregate offering value of up to US$30.0 million over the next 19 months through the facilities of the NASDAQ in the United States. During 2018, we sold 18,002 common shares for gross proceeds of US$50,046. We incurred share issue costs of $135,000.

Options
During the year ending December 31, 2018, we received cash proceeds of $123,538 with respect to the exercise of 41,802 post-consolidation options (approximately 397,120 pre-consolidation options) by former employees.

Warrants
During the year ending December 31, 2018, we received cash proceeds of $1,417 with respect to the exercise of 1,500 warrants.

Financial Impact

We estimated that our cash requirements for 2018 to fund our operations for the year would be between $15 - $16 million. Our cash usage for the year was $11,920,238 for operating activities and $107,466 for the acquisition of property and equipment. In 2018, we received cash of approximately US$3.8 million as a result of the regional licensing agreement (the "Licensing Agreement") that was entered into with Adlai Nortye Biopharma Co., Ltd. ("Adlai") in November 2017. Our net loss for the year was $17,037,225.

Cash Resources

We exited 2018 with cash and cash equivalents totaling $13,699,881 (see *"Liquidity and Capital Resources").*

Expected Pelareorep Development For 2019

Our planned 2019 development activity for pelareorep focuses on our clinical development plan along with our manufacturing and intellectual property programs. Our 2019 clinical objective is to incorporate our immuno-oncology combination strategy that includes checkpoint inhibitors, confirming the existence a biomarker and other anti-cancer agents as we finalize our registration strategy and clinical protocol in preparation for a phase 3 clinical study in mBC. We expect to commence clinical trial site selection and initiation activities and first patient enrollment in our AWARE-1 and REO 019 extension study, and continuing enrollment in our REO 024 extension and Opdivo® combination study. Our expectation is that these combination studies will assist us in refining our phase 3 protocol for mBC and may also support further development around the innate and adaptive immunity components of the mechanism of action.

Our 2019 manufacturing program includes preparation for continued production of 100-litre cGMP batches along with the related analytical testing and product filling, as well as labeling, packaging and shipping of pelareorep to our various clinical sites for ongoing and upcoming activities. These actions also contribute to progression through our process validation master plan. Finally, our intellectual property program includes filings for additional patents along with monitoring activities required to protect our patent portfolio.

We currently estimate the cash requirements to fund our operations for 2019 will be approximately $19 - $22 million, but will depend on our ultimate clinical program. (see *"Liquidity and Capital Resources"*).

Our Accounting Policies

In preparing our financial statements we use IFRS as issued by the International Accounting Standards Board. IFRS requires that we make certain estimates, judgments and assumptions that we believe are reasonable based upon the information available in selecting our accounting policies. Our selection of accounting policies, along with our estimates and assumptions affect the reported amounts of our assets and liabilities at the date of the financial statements and the reported amounts of expenses during the periods presented.

Critical Accounting Policies

In preparing our financial statements, we are required to make certain estimates, judgments and assumptions that we believe are reasonable based upon the information available. These estimates and assumptions affect the reported amounts of assets at the date of the financial statements and the reported amounts of expenses during the periods presented. Significant estimates are used for, but not limited to, the treatment of our research and development expenditures, revenue recognition and the calculation of stock based compensation (see Note 4 *" Significant Judgments, Estimates and Assumptions*") of our audited consolidated financial statements.

The significant accounting policies which we believe are the most critical to aid in fully understanding and evaluating our reported financial results include the following:

Research and Development

Research costs are expensed as incurred, net of recoveries. We record accruals for the estimated costs of our research and development activities performed by third parties. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows to our vendors. Payments under the contracts depend on factors such as the achievement of certain events, successful enrollment of patients, and completion of certain clinical trial activities.We generally accrue costs associated with the treatment phase of clinical trials based on the total estimated cost of the treatment phase on a per patient basis and we expense the per patient cost ratably over the estimated patient treatment period based on patient enrollment in the trials. Advance payments for goods or services that will be used or rendered for future research and development activities are capitalized as prepaid expenses and recognized as expense as the related goods are delivered or the related services are performed. We base our estimates on the best information available at the time. However, additional information may become available to us which may allow us to make a more accurate estimate in future periods. In this event, we may be required to record adjustments to research and development expenses in future periods when the actual level of activity becomes more certain. Such increases or decreases in cost are generally considered to be changes in estimates and will be reflected in research and development expenses in the period identified.

Development costs that meet specific criteria related to technical, market and financial feasibility will be capitalized. To date, all development costs have been expensed.

Revenue recognition

Revenue relates to a long-term contract associated with the Licensing Agreement with Adlai. The pricing for the contract was based on the specific negotiations with Adlai and includes non-refundable upfront license fees, development and regulatory milestone payments, royalties and sales-based milestone payments. We account for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable.

Under the Licensing Agreement, we have granted a regional license to our intellectual property. The granting of this license is accounted for as one performance obligation. We have determined that we provide Adlai with a right to access our intellectual property, and therefore recognize revenue related to the upfront license fee over time. Revenue is recognized based on the extent of progress towards completion of the performance obligation using the input method. Under the input method, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. We use this method because Adlai receives and consumes the benefit of our intellectual property as we undertake activities that impact the intellectual property. Management must use judgment in making assumptions and estimates regarding total estimated costs, the complexity of the work to be performed, and the length of time to complete the performance obligation, among other variables.

The contract also provides for development and regulatory milestone payments, royalties and sales-based milestone payments. These amounts are contingent on the occurrence of a future event and therefore give rise to variable consideration. We estimate

variable consideration at the most likely amount to which we expect to be entitled. We include estimated amounts in the transaction price when it becomes highly probable that the amount will not be subject to significant reversal when the uncertainty associated with the variable consideration is resolved. Our estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of our anticipated performance and all information (historical, current and forecasted) that is reasonably available to us. Based on this information and related analysis, any quarterly adjustments to revenue are recognized as necessary in the period they become known.

The upfront license fee is not considered a significant financing component because it is used to meet working capital demands that can be higher in the early stages of a contract and to protect us from the other party failing to adequately complete some or all of its obligations under the contract.

Revenue from sales-based royalties and the achievement of annual sales volumes will be recognized when the subsequent sale occurs, as the license of the intellectual property is the predominant item to which the royalty relates. We consider payments associated with the achievement of annual sales volumes to be, in substance, royalty payments and we will recognize such sales-based payments upon achievement of such sales volumes, provided that collection is reasonably assured.

Contract receivable - Contract receivable includes amounts billed and currently due from customers. When appropriate, we provide for an allowance for doubtful accounts by reserving for specifically identified doubtful accounts. We perform a review of our customer's credit risk and payment histories, including payments made subsequent to year-end.

Contract liability - Our contract liability includes upfront license fees and billings in excess of revenue recognized. Contract liabilities are recognized as revenue as or when we perform under the contract. We classify our contract liability as current or noncurrent based on the timing of when we expect to recognize revenue.

Adoption of New Accounting Standards

IFRS 9 *Financial Instruments*

IFRS 9 *Financial Instruments ("IFRS 9")* replaces IAS 39 *Financial Instruments: Recognition and Measurement* for annual periods beginning on or after January 1, 2018. IFRS 9 includes guidance on the classification and measurement of financial assets and financial liabilities and impairment of financial assets.

We have applied IFRS 9 retrospectively, with the initial application date of January 1, 2018. Under IAS 39, our financial assets were classified as follows: cash and cash equivalents - held for trading and other receivables - loans and receivables. Under IFRS 9, our financial assets, consisting of cash and cash equivalents and other receivables, were classified at amortized cost. There were no changes to the measurement of our financial assets and liabilities or adjustments to comparative information as a result of the adoption of IFRS 9.

Accounting Standards and Interpretations Issued but Not Yet Effective

IFRS 16 *Leases*

In January 2016, the IASB issued IFRS 16 - *Leases* ("IFRS 16"), which replaces IAS 17 - *Leases* ("IAS 17") and related interpretations. IFRS 16 provides a single lessee accounting model, requiring the recognition of assets and liabilities for all leases, unless the lease term is 12-months or less or the underlying asset has a low value. We are currently finalizing the accounting relative to this new standard and will adopt IFRS 16 on January 1, 2019 using the modified retrospective approach. In applying IFRS 16, we expect to elect most of the available practical expedients, including:

- Exemption for short-term leases that have a remaining lease term of less than 12 months as at Jan 1, 2019;
- Excluding initial direct costs for the measurement of the right-of-use asset at the date of initial application; and
- Measuring the right-of-use assets at an amount equal to the lease liability, adjusted by the amount of lease incentive liability relating to that lease recognized in the statement of financial position immediately before the date of initial application.

We expect that the adoption of this standard will have a material impact on our consolidated statement of financial position related to the recognition of right-of-use assets and lease liabilities, but is not expected to have a material impact on the consolidated statements of loss and comprehensive loss or cash flows.

Significant Estimates

Revenue recognition
We entered into a Licensing Agreement which provides, among other payments, for upfront license fees in exchange for a regional license to our intellectual property. Management uses its judgment in applying the input method when determining the extent of progress towards completion of the performance obligation. Revenue recognition requires assumptions and estimates regarding total estimated costs, the complexity of the work to be performed, and the length of time to complete the performance obligation, among other variables.

Share Based Payments
As required by IFRS, share based payments are to be recorded at their fair value at the date of grant. We have chosen to use the Black Scholes Option Pricing Model ("Black Scholes" or the "Model") to calculate the fair value of our stock options and warrants. Though there are other models available to calculate the option values (for example, the binomial model), Black Scholes is currently widely used and accepted by other publicly traded companies. Therefore, we have concluded that Black Scholes is the appropriate option pricing model to use for our stock options at this time.

Black Scholes uses inputs in its calculation of fair value that require us to make certain estimates and assumptions. For 2018, we used the following weighted average assumptions for the calculation of the fair value of the stock options granted during the year:

	2018
Risk-free interest rate	**2.02%**
Expected hold period to exercise	**3.0 years**
Volatility in the price of the Company's shares	**81.15%**
Rate of forfeiture	**3.67%**
Dividend yield	**Nil**
Weighted average fair value of options	**$2.67**

A change in these estimates and assumptions will impact the value calculated by the model. For instance, the volatility in the price of our shares is based on the quoted trading price. We assume that weekly trading prices best reflect our trading price volatility. However, an entity can choose between daily, weekly, or monthly trading prices in the volatility calculation.
The Model also uses an expected hold period to exercise in its calculation of fair value. When we are estimating the expected hold period to exercise we take into consideration past history, the current trading price, the volatility of our common shares and the progress in our clinical program. Our conclusions resulted in an expected hold period for the stock options issued in 2018 to be 3.0 years and we believe this is an appropriate estimate. However, our options have a life of greater than 3 years and given the fluctuations in our stock price the expected hold period could be different.

Consequently, in complying with IFRS and selecting what we believe are the most appropriate assumptions under the circumstances, we have recorded non-cash share based payment expense for the year of $1,415,833. However, given the above discussion, this expense could have been different and still be in accordance with IFRS.

Selected Annual Information

	2018 $	2017 $	2016 $
Revenue	**—**	—	—
Consolidated net loss[1]	**(17,037,225)**	(15,616,851)	(15,139,979)
Basic and diluted loss per share[1], [2]	**(1.06)**	(1.12)	(1.20)
Total assets [2]	**14,865,253**	18,150,449	14,758,284
Cash dividends declared per share[3]	**Nil**	Nil	Nil

Notes:

(1) Included in consolidated net loss and loss per common share for 2018, 2017, and 2016 are share based payment expenses of $1,415,833, $578,703 and $406,078, respectively.

(2) The calculation of basic and diluted loss per common share for all periods has been adjusted retrospectively for the Share Consolidation. We issued 2,472,909 common shares for net cash proceeds of $13.3 million in 2018 (2017 - 20,547,500 pre-consolidation common shares (approximately 2,162,894 post-consolidation common shares) for net cash proceeds of $12.8 million; 2016 - 3,106,600 pre-consolidation common shares (approximately 327,010 post-consolidation common shares) for net cash proceeds of $1.0 million).

(3) We have not declared or paid any dividends since incorporation.

Results of Operations

Net loss for the year was $17,037,225 compared to $15,616,851 and $15,139,979 for the years ending December 31, 2017 and December 31, 2016, respectively.

Research and Development Expenses ("R&D")

	2018 $	2017 $	2016 $
Clinical trial expenses	**2,938,911**	2,475,918	1,806,335
Manufacturing and related process development expenses	**2,073,726**	1,726,432	1,725,835
Intellectual property expenditures	**869,991**	847,650	1,096,097
Research collaboration expenses	**362,622**	252,482	369,469
Other R&D expenses	**3,102,203**	3,925,256	4,366,392
Foreign exchange (gain) loss	**(610,106)**	(65,256)	171,960
Share based payments	**680,541**	230,141	233,919
Research and development expenses	**9,417,888**	9,392,623	9,770,007

Clinical Trial Program

Clinical trial expenses include those costs associated with our clinical trial program which primarily included expenses related to the preparation and development of our breast cancer registration study and immunotherapy combinations. Included in clinical trial expenses are regulatory and consulting activities, contract research organization ("CRO") expenses, data management expenses and other costs associated with our clinical trial program.

	2018 $	2017 $	2016 $
Clinical trial expenses	**2,938,911**	2,475,918	1,806,335

During 2018, our clinical trial expenses were $2,938,911 compared to $2,475,918 and $1,806,335 for the years ended December 31, 2017 and December 31, 2016, respectively. In 2018 and 2017, our clinical trial program focused mainly on the preparation and development of our breast cancer registration study. In 2018, these costs included phase 3 development activities, activities related to obtaining the SPA from the FDA and the window of opportunity study in collaboration with SOLTI. In 2017, these activities included costs to complete our supporting regulatory documents, regulatory filing fees, planning for and attending scientific advisory meetings with the FDA and the European Medicines Agency (EMA), and key opinion leader activities.

In 2018, in addition to activities related to our breast cancer program, our clinical activities also included an extension of our checkpoint inhibitor pancreatic cancer study combining pelareorep with Keytruda® as well as a research collaboration in phase 1 dose escalation study combining pelareorep and carfilzomib with the checkpoint inhibitor, Opdivo®. We also incurred expenses related to updating our supporting regulatory documents and regulatory consulting activities connected to our combination studies. In 2017 and 2016, our other clinical activities included patient enrollment in our checkpoint inhibitor pancreatic cancer study investigating Keytruda® in combination with pelareorep. In addition, with the signing of the Licensing Agreement that included upfront licensing fees in November 2017, we triggered payments of $640,579 as detailed in our Assumption Agreement (see Notes 10 and 12 of our audited consolidated financial statements). Our 2017 costs were partially offset as we continued to close out legacy clinical trial sites truing up our cost estimates with the actual costs incurred. In 2016, our clinical trial expenses also included costs associated with the completion of enrollment in our randomized Phase 2 studies.

We expect our clinical trial expenses to increase in 2019 compared to 2018. During 2019, we expect to finalize the development of our registration program, generate clinical data with checkpoint inhibitors and confirm the existence of a biomarker.

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

M&P expenses include product manufacturing and process development activities. Product manufacturing expenses include third party direct manufacturing costs, quality control testing, fill, label, packaging and storage costs and are net of any recoveries that are received from any R&D collaborators. Process development expenses include costs associated with studies that examine components of our manufacturing and analytical processes looking for improvements and costs associated with the creation of our process validation master plan and related conformity testing.

	2018 $	2017 $	2016 $
Product manufacturing expenses	**1,667,481**	1,054,903	1,162,446
Process development expenses	**406,245**	671,529	563,389
Manufacturing and related process development expenses	**2,073,726**	1,726,432	1,725,835

Our M&P expenses for 2018 were $2,073,726 compared to $1,726,432 and $1,725,835 for the years ending December 31, 2017 and December 31, 2016. In 2018, our product manufacturing activities mainly related to shipping and storage costs of our bulk and vialed product along with startup costs for a product fill and a production run required to support our clinical development plan. We were able to offset these costs by entering into a contract with a new storage depot with lower fees. We also incurred costs related to relabeling activities in line with extended stability data. During 2017 and 2016, our product manufacturing activities mainly related to shipping and storage costs of our bulk and vialed product. In 2016, these costs were partly offset by recoveries from a development collaboration.

Our process development expenses for 2018 were $406,245 compared to $671,529 and $563,389 for the years ending December 31, 2017 and December 31, 2016, respectively. During 2018, our process development activities focused on analytic development and stability studies. During 2017, our process development activities focused on stability, process optimization studies, assay development and biodistribution studies. In 2016, our process development activities focused on our validation master plan, which included included stability, scale up and process optimization studies.

We expect our M&P expenses for 2019 to increase compared to 2018. In 2019, we expect to fill, label and store sufficient product as well as continuing to perform analytical development and other non-clinical projects to support our clinical development program and other collaborative requirements.

Intellectual Property Expenses

Intellectual property expenses include legal and filing fees associated with our patent portfolio.

	2018 $	2017 $	2016 $
Intellectual property expenses	**869,991**	847,650	1,096,097

Our intellectual property expenses for 2018 were $869,991 compared to $847,650 and $1,096,097 for the years ending December 31, 2017 and December 31, 2016, respectively. The decline in 2018 and 2017 compared to 2016 is a result of the

maturation of our patent portfolio, which incurs less fees, as well as the lapsing of patents in certain jurisdictions in 2017. At the end of 2018, we had been issued over 398 patents including 49 US and 21 Canadian patents, as well as issuances in other jurisdictions.

We expect that our intellectual property expenses will remain consistent in 2019 compared to 2018.

Research Collaborations

Research collaborations are intended to expand our intellectual property related to pelareorep and identify potential licensing opportunities arising from our technology base.

	2018 $	2017 $	2016 $
Research collaborations	**362,622**	252,482	369,469

During 2018, our research collaboration expenses were $362,622 compared to $252,482 and $369,469 for the years ending December 31, 2017 and December 31, 2016, respectively. In 2018, 2017 and 2016, our research collaborations included studies investigating the interaction of the immune system with pelareorep, and biomarker studies.

We expect that our research collaborations in 2019 will remain consistent compared to 2018. We expect to complete our ongoing collaborative program carried over from 2018 and will continue to be selective in the types of new collaborations we enter into in 2019.

Other Research and Development Expenses

Other research and development expenses include compensation expenses for employees (excluding share based payments), travel and other miscellaneous R&D expenses.

	2018 $	2017 $	2016 $
R&D salaries and benefits	**2,868,251**	3,662,638	4,138,235
Other R&D expenses	**233,952**	262,618	228,157
Other Research and Development expenses	**3,102,203**	3,925,256	4,366,392

In 2018, our Other Research and Development expenses were $3,102,203 compared to $3,925,256 and $4,366,392 for the years ending December 31, 2017 and December 31, 2016, respectively. Our Other Research and Development activities focused on supporting our clinical development program along with other third party trials and clinical trials sponsored by Oncolytics. R&D salaries and benefits in 2017 included severance payments of $779,666 to certain officers of the Company and in 2016 included a retirement allowance of $1,330,828 paid to the previous Chief Executive Officer. Normalizing for these payments, our 2018 R&D salaries and benefits is consistent compared to 2017 and our 2017 R&D salaries and benefits increased compared to 2016 primarily due to an increase in bonuses paid to officers and employees in 2017. R&D salaries and benefits was also impacted by the change in officers in 2017 and 2016.

The change in Other R&D expenses in 2017 compared to 2018 and 2016 was due to an increase in conference attendance and related travel expenses.

We expect our Other Research and Development expenses to increase in 2019 compared to 2018.

Foreign Exchange (Gain) Loss

	2018 $	2017 $	2016 $
Foreign exchange (gain) loss	**(610,106)**	(65,256)	171,960

For the year ending December 31, 2018, our foreign exchange (gain) loss was $(610,106) compared to $(65,256) and $171,960 for the years ending December 31, 2017 and December 31, 2016, respectively. The foreign exchange gain incurred in 2018 was

primarily due to unrealized translation gain on U.S. dollar denominated cash balances. The foreign exchange (gain) losses incurred in 2017 and 2016 were primarily a result of the fluctuations in the US dollar, Euro and Pound Sterling exchange rates.

Share Based Payments

	2018 $	2017 $	2016 $
Share based payments	**680,541**	230,141	233,919

Non-cash share based payments for the year ending December 31, 2018 were $680,541 compared to $230,141 and $233,919 for the years ending December 31, 2017 and December 31, 2016, respectively. We incurred share based payment expenses associated with the granting of options and share awards to officers, employees and consultants associated with our research and development activities and the vesting of previously granted share awards. In the second quarter of 2018, we also recognized a recovery of share based payment expenses due to the departure of the former Chief Medical Officer and the forfeiture of unvested share awards and options.

Operating Expenses

	2018 $	2017 $	2016 $
Public company related expenses	**3,041,226**	3,027,029	3,189,562
Office expenses	**3,372,898**	2,746,472	2,000,546
Depreciation of property and equipment	**95,375**	90,768	162,233
Share based payments	**735,292**	348,562	172,159
Operating expenses	**7,244,791**	6,212,831	5,524,500

Public company related expenses include costs associated with investor relations and business development consulting activities and financial advisory activities, legal and accounting fees, corporate insurance, director fees and transfer agent and other fees relating to our U.S. and Canadian stock listings. In 2018, we incurred public company related expenses of $3,041,226 compared to $3,027,029 and $3,189,562 for the years ending December 31, 2017 and December 31, 2016, respectively. Our 2018 public company related expenses are consistent compared to 2017 as a result of an increase in expenses related to the Nasdaq listing, an increase in legal fees and costs related to the special meeting of shareholders held in February 2018 and an increase in travel expenses, offset by lower business development consulting fees in 2018 compared to 2017. The change in public company related costs in 2017 compared to 2016 was a result of our change in philosophy regarding investor relations (IR) activities, where we eliminated certain IR services and brought elements in-house and rationalized IR related travel activity which was partly offset by an increase in professional fees in 2017.

Office expenses include compensation costs (excluding share based payments), office rent and other office related costs. In 2018, we incurred office expenses of $3,372,898 compared to $2,746,472 and $2,000,546 for the years ending December 31, 2017 and December 31, 2016, respectively. The change in office expense in 2018 compared to 2017 was mainly due to an investment in our in-house business development group and an increase in office expenses related to the opening and relocation of our U.S. office. The change in office expenses in 2017 compared to 2016 was due to an increase in headcount and a change in salary levels in 2017.

In 2018, our non-cash share based payment expenses were $735,292 compared to $348,562 and $172,159 for the years ending December 31, 2017 and December 31, 2016, respectively. In 2018, 2017 and 2016, we incurred share based payment expenses associated with the granting of options and share awards to officers, employees and independent board members along with the vesting of previously granted share awards.

We expect our operating expenses in 2019 to remain consistent compared to 2018.

Summary of Quarterly Results

	2018				2017			
	Dec.	Sept.	June	March	Dec.	Sept.	June	March
Revenue	—	—	—	—	—	—	—	—
Net loss[1]	4,819	3,336	4,211	4,671	4,746	3,004	4,349	3,518
Basic and diluted loss per common share[1]	$ 0.28	$ 0.20	$ 0.27	$ 0.31	$ 0.32	$ 0.20	$ 0.32	$ 0.28
Total assets[2]	14,865	18,150	20,693	14,127	18,150	14,848	17,579	10,623
Total cash[2]	13,700	16,214	18,741	7,745	11,836	14,034	16,676	10,102
Total long-term debt	—	—	—	—	—	—	—	—
Cash dividends declared[3]	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

(1) The calculation of basic and diluted loss per common share for all periods have been adjusted retroactively for the Share Consolidation. Included in net loss and loss per common share between December 2018 and January 2017 are quarterly share based payment expenses of $483,016, $236,607 $157,092, $539,118, $140,659, $148,447, $155,708, and $133,889, respectively.

(2) We issued 2,472,909 common shares for net cash proceeds of $13.3 million in 2018 (2017 - 20,547,500 pre-consolidation common shares (approximately 2,162,894 post-consolidation common shares) for net cash proceeds of $12.8 million).

(3) We have not declared or paid any dividends since incorporation.

Fourth Quarter

Statement of loss for the three month period ended December 31, 2018 and 2017:

For the three month periods ending December 31,	2018 $	2017 $
Expenses		
Research and development	**2,508,175**	2,479,153
Operating	**2,375,174**	2,158,381
Loss before the following	**(4,883,349)**	(4,637,534)
Interest	**64,188**	33,464
Loss before income taxes	**(4,819,161)**	(4,604,070)
Income taxes	**(85)**	(141,514)
Net loss	**(4,819,246)**	(4,745,584)
Other comprehensive gain - translation adjustment	**148,362**	12,004
Net comprehensive loss	**(4,670,884)**	(4,733,580)
Basic and diluted loss per common share	**(0.28)**	(0.32)
Weighted average number of shares (basic and diluted)	**17,115,040**	14,859,174

Fourth Quarter Review of Operations

For the three month period ended December 31, 2018 our net loss was $4,819,246 compared to $4,745,584 for the three month period ended December 31, 2017.

Research and Development Expenses ("R&D")

	2018 $	2017 $
Clinical trial expenses	**626,977**	459,884
Manufacturing and related process development expenses	**862,451**	483,887
Intellectual property expenses	**55,734**	105,192
Research collaboration expenses	**94,006**	73,966
Other R&D expenses	**1,127,526**	1,198,164
Foreign exchange loss (gain)	**(500,591)**	110,779
Share based payments	**242,072**	47,281
Research and development expenses	**2,508,175**	2,479,153

Clinical Trial Expenses

	2018 $	2017 $
Clinical trial expenses	**626,977**	459,884

During the fourth quarter of 2018, our clinical trial expenses were $626,977 compared to $459,884 for the fourth quarter of 2017. In the fourth quarter of 2018 and 2017, our clinical trial program activities related primarily to the preparation and development of our breast cancer registration study. In the fourth quarter of 2018, these activities mainly related to the window of opportunity study in collaboration with SOLTI. In the fourth quarter of 2017, these activities included costs to complete our supporting regulatory documents, regulatory filing fees and attending an End of Phase 2 meeting with the EMA. In addition, with the signing of the Licensing Agreement with upfront licensing fees in November 2017, we triggered payments to former shareholders of $640,579 as detailed in the Assumption Agreement (see Notes 10 and 12 of our audited consolidated financial statements). Costs associated with these activities were offset as we continued to close out legacy clinical trial sites truing up our cost estimates with the actual costs incurred.

As well, in the fourth quarter of 2018, our clinical activities included an extension of our checkpoint inhibitor pancreatic cancer study combining pelareorep with Keytruda® as well as a research collaboration in phase 1 dose escalation study combining pelareorep and carfilzomib with the checkpoint inhibitor, Opdivo®. In the fourth quarter of 2017, our other clinical trial program activities included patient enrollment in our checkpoint inhibitor pancreatic cancer study investigating Keytruda® in combination with pelareorep.

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

	2018 $	2017 $
Product manufacturing expenses	**837,010**	226,553
Process development expenses	**25,441**	257,334
Manufacturing and related process development expenses	**862,451**	483,887

During the fourth quarter of 2018, our M&P expenses were $862,451 compared to $483,887 for the fourth quarter of 2017. During the fourth quarters of 2018, our product manufacturing costs mainly related to shipping and storage costs of our bulk and vialed product along with startup costs for a production run required to support our clinical development plan. During the fourth quarter of 2017, our product manufacturing costs mainly related to shipping and storage costs of our bulk and vialed product.

Our process development activity for the fourth quarter of 2018 related to analytic development and biodistribution studies compared to stability studies for the fourth quarter of 2017.

Intellectual Property Expenses

	2018 $	2017 $
Intellectual property expenses	**55,734**	105,192

Our intellectual property expenses for the fourth quarter of 2018 were $55,734 compared to $105,192 for the fourth quarter of 2017. The decline in 2018 is a result of the timing of filing fees. At the end of the fourth quarter of 2018, we had been issued over 398 patents including 49 US and 21 Canadian patents, as well as issuances in other jurisdictions.

Research Collaboration Expenses

	2018 $	2017 $
Research collaboration expenses	**94,006**	73,966

Our research collaboration expenses were $94,006 for the fourth quarter of 2018 compared to $73,966 for the fourth quarter of 2017. During the fourth quarters of 2018 and 2017, our research collaborations were primarily focused on studies investigating the interaction of the immune system and pelareorep.

Other Research and Development Expenses

	2018 $	2017 $
R&D salaries and benefits	**1,046,889**	1,120,534
Other R&D expenses	**80,637**	77,630
Other research and development expenses	**1,127,526**	1,198,164

Our other research and development expenses were $1,127,526 in the fourth quarter of 2018 compared to $1,198,164 in the fourth quarter of 2017. Our R&D salaries and benefits decreased in the fourth quarter of 2018 compared to 2017 primarily due to a decrease in bonuses paid to officers and employees and lower headcount. Our Other R&D expenses in the fourth quarter of 2018 were consistent with 2017.

Foreign Exchange (Gain) Loss

	2018 $	2017 $
Foreign exchange (gain) loss	**(500,591)**	110,779

Our foreign exchange gain was $500,591 for the fourth quarter of 2018 compared to a loss of $110,779 for the fourth quarter of 2017. The foreign exchange gain incurred in 2018 was primarily due to unrealized translation gain on U.S. dollar denominated cash balance. The foreign exchange loss incurred in 2017 was primarily due to unrealized translation loss on U.S. dollar denominated accounts payable.

Share Based Payments

	2018 $	2017 $
Share based payments	**242,072**	47,281

During the fourth quarters of 2018 and 2017, we incurred share based payment expenses associated with the granting of options and share awards to employees associated with our research and development activities and the vesting of previously granted share awards.

Operating Expenses

	2018 $	2017 $
Public company related expenses	**951,035**	1,000,718
Office expenses	**1,155,502**	1,043,832
Amortization of property and equipment	**27,693**	20,453
Share based payments	**240,944**	93,378
Operating expenses	**2,375,174**	2,158,381

Our operating expenses for the fourth quarter of 2018 were $2,375,174 compared to $2,158,381 for the fourth quarter of 2017. Public company related expenses include costs associated with investor relations, business development and financial advisory activities, legal and accounting fees, corporate insurance, director fees and transfer agent and other fees relating to our Canadian and U.S. stock listings. During the fourth quarter of 2018, our public company related expenses were $951,035 compared to $1,000,718 for the fourth quarter of 2017. The decrease was due to a decrease in business development activities partly offset by an increase in professional fees, insurance premiums as a result of the Nasdaq listing and travel expenses.

Office expenses include compensation costs (excluding share based payments), office rent and other office related costs. During the fourth quarter of 2018, our office expenses were $1,155,502 compared to $1,043,832 for the fourth quarter of 2017. The change in the fourth quarter of 2018 compared to the fourth quarter of 2017 was due to an an increase in office expense related to the relocation of our U.S. office as we invest in the expansion of our U.S. operations in support of our clinical development program as well as an increase in headcount and salaries.

Our non-cash share based payment expenses in the fourth quarter of 2018 were $240,944 compared to $93,378 for the fourth quarter of 2017. We incurred share based payment expenses associated with the granting of options and share awards to officers, employees and independent board members along with the vesting of previously granted share awards.

Liquidity and Capital Resources

2018 Financing Activities

Public offering
On June 5, 2018, we closed a public offering whereby we sold 1,532,278 post-consolidation common shares at a purchase price of US$5.83 per share for gross proceeds of US$8,933,181. We incurred share issue costs of $1,418,356.
Common Stock Purchase Agreement
During 2018, we issued 797,691 common shares for gross proceeds of approximately US$2.1 million. The commitment common shares valued at fair value of US$74,190 were recorded as share issue costs in addition to cash share issue costs of $208,726.

Canadian "at-the-market" equity distribution agreement
In the first quarter of 2018, we sold 519,500 pre-consolidation common shares (approximately 54,684 post-consolidation common shares) for net proceeds of $520,315.

U.S. "at-the-market" equity distribution agreement
During 2018, we sold 18,002 common shares for gross proceeds of approximately US$50,000. We incurred share issue costs of $135,000.

Options
During the year ending December 31, 2018, we received cash proceeds of $123,538 with respect to the exercise of 41,802 post-consolidation options (approximately 397,120 pre-consolidation options) by former employees.

Warrants
During the year ending December 31, 2018, we received cash proceeds of $1,417 with respect to the exercise of 1,500 warrants.

2017 Financing Activities

Canadian "at-the-market" equity distribution agreement
During 2017, we issued 3,301,500 pre-consolidation common shares (approximately 347,526 post-consolidation common shares) for net proceeds of $2,103,166.

Public offering
On June 1, 2017, pursuant to an underwritten public offering, 16,445,000 units were sold at a purchase price of $0.70 per unit for gross proceeds of $11,511,500. Each unit included one pre-consolidation common share (0.106 post-consolidation common share) and one common share purchase warrant. Following the Share Consolidation, 9.5 common share purchase warrants entitle the holder to purchase one common share in the capital of the Company until June 1, 2022, at an exercise price of approximately $9.025. The post-consolidation common share purchase warrants will be subject to acceleration if the volume weighted average price of the Company's common shares equals or exceeds $23.75 for 15 consecutive trading dates. We incurred share issue costs of $1,145,402.

Options
During 2017, we received cash proceeds of $343,440 with respect to the exercise of 801,000 pre-consolidation options (84,315 post-consolidation options) by former employees.

Liquidity

As at December 31, 2018 and 2017, we had cash and cash equivalents, short-term investments and working capital positions as follows:

	2018 $	2017 $
Cash and cash equivalents	**13,699,881**	11,836,119
Working capital position	**11,637,942**	12,587,340

The increase in our cash and cash equivalent reflects the cash usage from our operating activities of $11.9 million along with the cash provided by our financing activities of $13.3 million for the year ending December 31, 2018.

We desire to maintain adequate cash 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 mainly through the issue of additional capital via public and private offerings and through the exercise of warrants and stock options. In 2018, we were able to raise funds through our public offering, Common Stock Purchase Agreement, Canadian and U.S. ATM (our "Financing Arrangements").

We have no assurances that we will be able to raise additional funds through the sale of our common shares, consequently, we will continue to evaluate all types of financing arrangements. On May 4, 2018, we renewed our short form base shelf prospectus (the "Base Shelf") that qualifies for distribution of up to 150,000,000 of common shares, subscription receipts, warrants, or units (the "Securities") in either Canada, the US or both. Under a 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 subject to change, 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.

Renewing our 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 as a result of using our Base Shelf would be used in line with our Board approved budget and multi-year plan. Our renewed Base Shelf will be effective until May 25, 2020.

Our Base Shelf allowed us to enter into our Common Stock Purchase Agreement in September 2018 and our ATM equity offering sales agreement in October 2018 (see Note 7 of our audited consolidated financial statements). We will use these equity arrangements to assist us in achieving our capital objective. Each arrangement provides us with the opportunity to raise capital at our sole discretion providing us with the ability to better manage our cash resources.

Our Financing Arrangements provides us with access to, subject to the respective terms and conditions, US$56.0 million of which we have raised gross proceeds of approximately $2.7 million at December 31, 2018. We expect to continue to access our Financing Arrangements to help support our current clinical trial, manufacturing, intellectual property and collaboration programs.

We anticipate that the expected cash usage from our operations in 2019 will be approximately $19 - $22 million. We continue to 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 and access to additional cash resources through our Financing Arrangements to fund our presently planned operations into 2019. Factors that will affect our anticipated cash usage in 2019, and for which additional funding might be required include, but are not limited to, expansion of 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, timing and costs of manufacturing runs required to conclude the validation process and supply product to our clinical trial program, and the level of collaborative activity undertaken.

We are not subject to externally imposed capital requirements and there have been no changes in how we define or manage our capital in 2018.

Contractual Obligations

We have the following contractual obligations as at December 31, 2018:

Contractual Obligations	Payments Due by Period				
	Total $	Less than 1 year $	2 -3 years $	4 - 5 years $	More than 5 years $
Capital lease obligations	Nil	—	—	—	—
Operating lease [1]	961,575	423,718	537,857		—
Purchase obligations	8,199,509	8,199,509	—	—	—
Other long term obligations	Nil	—	—	—	—
Total contractual obligations	9,161,084	8,623,227	537,857	—	—

Note:
1. Our operating leases are comprised of our office leases and exclude our portion of operating costs.

We expect to fund our capital expenditure requirements and commitments with existing working capital.

Off-Balance Sheet Arrangements

As at December 31, 2018, we had not entered into any off-balance sheet arrangements.

Transactions with Related Parties

In 2017, with the signing of our Licensing Agreement with upfront license fees (see Note 10 of our audited consolidated financial statements), we triggered a liability of US$178,125 to an officer as detailed in the Assumption Agreement (see Note 12 of our audited consolidated financial statements). As at December 31, 2018, the liability was fully paid (December 31, 2017 - US$178,125 was included in accounts payable and accrued liabilities).

In 2018, 2017 and 2016, we did not enter into any other related party transactions other than compensation paid to Key Management Personnel disclosed in Note 20 of our audited consolidated financial statements.

Financial Instruments and Other Instruments

Our financial instruments consist of cash and cash equivalents, other receivables and accounts payable. As at December 31, 2018, there are no significant differences between the carrying values of these amounts and their estimated market values. These financial instruments expose us to the following risks:

Credit risk

Credit risk is the risk of financial loss if a counterparty to a financial instrument fails to meet its contractual obligations. We are exposed to credit risk on our cash and cash equivalents 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.

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.

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. 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. In the normal course of our operations, we are exposed to currency risk from the purchase of goods and services primarily in the U.S., the U.K. and the European Union. In addition, we are exposed to currency risk to the extent cash is held in foreign currencies from either the purchase of foreign currencies or when we receive foreign currency proceeds from operating and financing activities. As well, we are exposed to currency risk related to our regional licensing agreement. 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 in 2018 by approximately $19,006. The impact of a $0.10 increase in the value of the British pound against the Canadian dollar would have increased our net loss in 2018 by approximately $31,029. The impact of a $0.10 increase in the value of the Euro against the Canadian dollar would have increased our net loss in 2018 by approximately $9,209.

We mitigate our foreign exchange risk by maintaining sufficient foreign currencies, through the purchase of foreign currencies or receiving foreign currencies from financing activities, to settle our foreign accounts payable.

Balances in foreign currencies at December 31, 2018 are as follows:

	US dollars $	British pounds £	Euro €
Cash and cash equivalents	8,889,796	26,936	31,499
Accounts payable	(304,801)	(32,735)	(661)
	8,584,995	(5,799)	30,838

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 the notes to our audited financial statements. Accounts payable are all due within the current operating period.

Risk Factors Affecting Future Performance

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 this reliance and these 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 we have made or are making.

All of our potential products, including pelareorep, are in the research and development stage and will require further development and testing before they can be marketed commercially.

Prospects for companies in the biotechnology industry generally may be regarded as uncertain given the nature of the industry and, accordingly, investments in biotechnology companies should be regarded as speculative. We are currently in the research and development stage on one product, pelareorep, for human application, the riskiest stage for a company in the biotechnology industry. It is not possible to predict, based upon studies in animals and early stage human clinical trials, whether pelareorep will prove to be safe and effective in humans. Pelareorep will require additional research and development, including extensive clinical testing, before we will be able to obtain the approval of the relevant regulatory authorities in applicable countries to market pelareorep commercially. There can be no assurance that the research and development programs conducted by us will result in pelareorep or any other products becoming commercially viable products, and in the event that any product or products result from the research and development program, it is unlikely they will be commercially available for a number of years.

To achieve profitable operations, we, alone or with others, must successfully develop, introduce and market our products. To obtain regulatory approvals for products being developed for human use, and to achieve commercial success, human clinical trials must demonstrate that the product is safe for human use and that the product shows efficacy. Unsatisfactory results obtained from a particular study relating to a program may cause us to abandon our commitment to that program or the product being tested. No assurances can be provided that any current or future animal or human test, if undertaken, will yield favorable results. If we are unable to establish that pelareorep is a safe, effective treatment for cancer, we may be required to abandon further development of the product and develop a new business strategy.

There are inherent risks in pharmaceutical research and development.

Pharmaceutical research and development is highly speculative and involves a high and significant degree of risk. The marketability of any product we develop will be affected by numerous factors beyond our control, including but not limited to:

- the discovery of unexpected toxicities or lack of sufficient efficacy of products which make them unattractive or unsuitable for human use;
- preliminary results as seen in animal and/or limited human testing may not be substantiated in larger, controlled clinical trials;
- manufacturing costs or other production factors may make manufacturing of products ineffective, impractical and non-competitive;
- proprietary rights of third parties or competing products or technologies may preclude commercialization;
- requisite regulatory approvals for the commercial distribution of products may not be obtained; and
- other factors may become apparent during the course of research, up-scaling or manufacturing which may result in the discontinuation of research and other critical projects.

Our products under development have never been manufactured on a commercial scale, and there can be no assurance that such products can be manufactured at a cost or in a quantity to render such products commercially viable. Production and utilization of our products may require the development of new manufacturing technologies and expertise. The impact on our business in the event that new manufacturing technologies and expertise are required to be developed is uncertain. There can be no assurance that we will successfully meet any of these technological challenges or others that may arise in the course of development.

Pharmaceutical products are subject to intense regulatory approval processes.

The regulatory process for pharmaceuticals, which includes preclinical studies and clinical trials of each compound to establish its safety and efficacy, takes many years and requires the expenditure of substantial resources. Moreover, if regulatory approval of a drug is granted, such approval may entail limitations on the indicated uses for which it may be marketed. Failure to comply with applicable regulatory requirements can, among other things, result in suspension of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution. Further, government policy may change, and additional government regulations may be established that could prevent or delay regulatory approvals for our products. In addition, a marketed drug and its manufacturer are subject to continual review. Later discovery of previously unknown problems with the product or manufacturer may result in restrictions on such product or manufacturer, including withdrawal of the product from the market.

The United States Food and Drug Administration ("FDA") and similar regulatory authorities in other countries may deny approval of a new drug application if required regulatory criteria are not satisfied, or may require additional testing. Product approvals may be withdrawn if compliance with regulatory standards is not maintained or if problems occur after the product reaches the market. The FDA and similar regulatory authorities in other countries may require further testing and surveillance programs to monitor the pharmaceutical product that has been commercialized. Non-compliance with applicable requirements can result in fines and other judicially imposed sanctions, including product withdrawals, product seizures, injunction actions and criminal prosecutions.
In addition to our own pharmaceuticals, we may supply active pharmaceutical ingredients and advanced pharmaceutical intermediates for use in our customers' drug products. The final drug products in which the pharmaceutical ingredients and advanced pharmaceutical intermediates are used, however, are subject to regulation for safety and efficacy by the FDA and possibly other regulatory authorities in other jurisdictions. Such products must be approved by such agencies before they can be commercially marketed. The process of obtaining regulatory clearance for marketing is uncertain, costly and time consuming. We cannot predict how long the necessary regulatory approvals will take or whether our customers will ever obtain such approval for their products. To the extent that our customers do not obtain the necessary regulatory approvals for marketing new products, our product sales could be adversely affected.

The FDA and other governmental regulators have increased requirements for drug purity and have increased environmental burdens upon the pharmaceutical industry. Because pharmaceutical drug manufacturing is a highly regulated industry, requiring significant documentation and validation of manufacturing processes and quality control assurance prior to approval of the facility to manufacture a specific drug, there can be considerable transition time between the initiation of a contract to manufacture a product and the actual initiation of manufacture of that product. Any lag time in the initiation of a contract to manufacture product and the actual initiation of manufacture could cause us to lose profits or incur liabilities.

The pharmaceutical regulatory regime in Europe and other countries is generally similar to that of the United States. We could face similar risks in these other jurisdictions as the risks described above.

Our operations and products may be subject to other government manufacturing and testing regulations.

Securing regulatory approval for the marketing of therapeutics by the FDA in the United States and similar regulatory agencies in other countries is a long and expensive process, which can delay or prevent product development and marketing. Approval to market products may be for limited applications or may not be received at all.

The products we anticipate manufacturing will have to comply with the FDA's current Good Manufacturing Practices (**"**cGMP**"**) and other FDA and local government guidelines and regulations, including other international regulatory requirements and guidelines. Additionally, certain of our customers may require the manufacturing facilities contracted by us to adhere to additional manufacturing standards, even if not required by the FDA. Compliance with cGMP regulations requires manufacturers to expend time, money and effort in production and to maintain precise records and quality control to ensure that the product meets applicable specifications and other requirements. The FDA and other regulatory bodies periodically inspect drug-manufacturing facilities to ensure compliance with applicable cGMP requirements. If the manufacturing facilities contracted by us fail to comply with the cGMP requirements, the facilities may become subject to possible FDA or other regulatory action and manufacturing at the facility could consequently be suspended. We may not be able to contract suitable alternative or back-up manufacturing facilities on terms acceptable to us or at all.

The FDA or other regulatory agencies may also require the submission of any lot of a particular product for inspection. If the lot product fails to meet the FDA requirements, then the FDA could take any of the following actions: (i) restrict the release of the product; (ii) suspend manufacturing of the specific lot of the product; (iii) order a recall of the lot of the product; or (iv) order a seizure of the lot of the product.

We are subject to regulation by governments in many jurisdictions. If we do not comply with healthcare, drug, manufacturing and environmental regulations, among others, in such jurisdiction, our existing and future operations may be curtailed, and we could be subject to liability.

In addition to the regulatory approval process, we may be subject to regulations under local, provincial, state, federal and foreign law, including, but not limited to, requirements regarding occupational health, safety, laboratory practices, environmental protection and hazardous substance control, and may be subject to other present and future local, provincial, state, federal and foreign regulations.

Our products may fail or cause harm, subjecting us to product liability claims, which are uninsured.

Use of our product during current clinical trials may entail risk of product liability. We maintain clinical trial liability insurance; however, it is possible this coverage may not provide full protection against all risks. Given the scope and complexity of the clinical development process, the uncertainty of product liability litigation, and the shrinking capacity of insurance underwriters, it is not possible at this time to assess the adequacy of current clinical trial coverage, nor the ability to secure continuing coverage at the same level and at reasonable cost in the foreseeable future. While we carry, and intend to continue carrying amounts believed to be appropriate under the circumstances, it is not possible at this time to determine the adequacy of such coverage.

In addition, the sale and commercial use of our product entails risk of product liability. We currently do not carry any product liability insurance for this purpose. There can be no assurance that we will be able to obtain appropriate levels of product liability insurance prior to any sale of our pharmaceutical products. An inability to obtain insurance on economically feasible terms or to otherwise protect against potential product liability claims could inhibit or prevent the commercialization of products developed by us. The obligation to pay any product liability claim or a recall of a product could have a material adverse effect on our business, financial condition and future prospects.

Our technologies may become obsolete.

The pharmaceutical industry is characterized by rapidly changing markets, technology, emerging industry standards and frequent introduction of new products. The introduction of new products embodying new technologies, including new manufacturing processes and the emergence of new industry standards may render our products obsolete, less competitive or less marketable. The process of developing our products is extremely complex and requires significant continuing development efforts and third party commitments. Our failure to develop new technologies and products and the obsolescence of existing technologies could adversely affect our business.

We may be unable to anticipate changes in our potential customer requirements that could make our existing technology obsolete. Our success will depend, in part, on our ability to continue to enhance our existing technologies, develop new technology that addresses the increasing sophistication and varied needs of the market, and respond to technological advances and emerging industry standards and practices on a timely and cost-effective basis. The development of our proprietary technology entails significant technical and business risks. We may not be successful in using our new technologies or exploiting our niche markets effectively or adapting our businesses to evolving customer or medical requirements or preferences or emerging industry standards.

Our license, development, supply and distribution agreement with Adlai Nortye Biopharma Co. is subject to certain risks and uncertainties related to our dependence on Adlai and doing business in foreign jurisdictions.

On November 16, 2017, we announced that we had entered into the Licensing Agreement with Adlai. Under the terms of the Licensing Agreement, Adlai will have exclusive development and commercialization rights to pelareorep in China, Hong Kong, Macau, Singapore, South Korea and Taiwan (the "Territories"). Pursuant to the Licensing Agreement, along with payments to be received by us upon meeting certain requirements and milestones, we are also eligible to receive royalty payments in excess of 10% associated with the commercialization of pelareorep for all indications, subject to regulatory approval. Under the terms of the Licensing Agreement, Adlai will be responsible for all clinical, regulatory and commercialization activities respecting pelareorep in the Territories and therefore the Company will be dependent upon Adlai in successfully undertaking those actions in a timely and economic manner and in compliance with all applicable legal and regulatory requirements within the Territories. If Adlai is unable to fulfill its obligations under the terms of the Licensing Agreement and in compliance with all applicable legal and regulatory requirements, including clinical, regulatory and commercialization of pelareorep, our prospective revenue from royalty payments

related to the commercialization of pelareorep in the Territories may be materially diminished, delayed or never realized, which could negatively effect our operating results and financial condition.

Further, conducting business with Adlai within the Territories, and specifically China, subjects us to certain economic, political, currency and legal risks and uncertainties regarding, among other things, the development and commercialization of pelareorep and the release and receipt of payments under the terms of the Licensing Agreement, including the payment of royalties upon commercialization of pelareorep. These risks include:

- different regulatory requirements for drug approvals in foreign countries;
- different standards of care in various countries that could complicate the evaluation of our product candidates;
- different U.S. and foreign drug import and export rules;
- reduced protection for intellectual property rights in certain countries;
- unexpected changes in tariffs, trade barriers and regulatory requirements;
- different reimbursement systems and different competitive drugs indicated to treat the indications for which our product candidates are being developed;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with the FCPA, and other anti-corruption and anti-bribery laws;
- U.S. and foreign taxes;
- foreign currency fluctuations, which could result in reduced revenues, and other obligations incident to doing business in another country;
- a reliance on CROs, clinical trial sites, principal investigators and other third parties that may be less experienced with clinical trials or have different methods of performing such clinical trials than we are used to in the U.S.;
- potential liability resulting from development work conducted by foreign distributors; and
- business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters.

The government's of the Territories, and specifically the Chinese government, exercise significant control over all aspects of their respective economies. Accordingly, any adverse change in the economy, the legal system or governmental, economic or other policies could have a material adverse effect on the business prospects of the the Licensing Agreement with Adlai, including our ability to receive and transfer money out of China under the terms of the Licensing Agreement. Any disruption in relations, inability to work efficiently or disadvantageous treatment of Adlai by the governments of the Territories or other authorities could have a material adverse effect on our business prospects under the Licensing Agreement. Additionally, the regulatory environment in the Territories is evolving, and officials in the governments in the Territories exercise broad discretion in deciding how to interpret and apply regulations. There can be no assurance that Adlai will be successful in the development and commercialization of pelareorep in the Territories.

We have no operating revenues and a history of losses.

To date, we have not generated sufficient revenues to offset our research and development costs and accordingly have not generated positive cash flow or made an operating profit. As of December 31, 2018, we had an accumulated deficit of $311.5 million and we incurred net losses of $17.0 million, $15.6 million and $15.1 million, for the years ended December 31, 2018, 2017 and 2016, respectively. We anticipate that we will continue to incur significant losses during 2019 and in the foreseeable future. We do not expect to reach profitability at least until after successful and profitable commercialization of one or more of our products. Even if one or more of our products are profitably commercialized, the initial losses incurred by us may never be recovered.

We may need additional financing in the future to fund the research and development of our products and to meet our ongoing capital requirements.

We anticipate that we may need additional financing in the future to fund research and development and to meet our ongoing capital requirements. The amount of future capital requirements will depend on many factors, including continued scientific progress in our drug discovery and development programs, progress in our pre-clinical and clinical evaluation of drug candidates, time and expense associated with filing, prosecuting and enforcing our patent claims and costs associated with obtaining regulatory approvals. In order to meet such capital requirements, we will consider contract fees, collaborative research and development arrangements, and additional public or private financings (including the incurrence of debt and the issuance of additional equity securities) to fund all or a part of particular programs as well as potential partnering or licensing opportunities. There can be no assurance that additional funding will be available or, if available, that it will be available on acceptable terms. If adequate funds are not available on terms favorable to us, we may have to reduce substantially or eliminate expenditures for research and development, testing, production and marketing of our proposed product, or obtain funds through arrangements with corporate partners that require us to relinquish rights to certain of our technologies or product. There can be no assurance that we will be able to raise additional capital if our current capital resources are exhausted.

The cost of director and officer liability insurance may continue to increase substantially or may not be available to us and may affect our ability to retain quality directors and officers.

We carry liability insurance on behalf of our directors and officers. Given a number of large director and officer liability insurance claims in the US equity markets, director and officer liability insurance has become increasingly more expensive with increased restrictions. Consequently, there is no assurance that we will continue to be offered this insurance or be able to obtain adequate coverage. The inability to acquire the appropriate insurance coverage may limit our ability to attract and maintain directors and officers as required to conduct our business.

We incur some of our expenses in foreign currencies and therefore are exposed to foreign currency exchange rate fluctuations.

We incur some of our manufacturing, clinical, collaborative and consulting expenses in foreign currencies, primarily the US dollar, the Euro and the British pound ("GBP"). We are therefore exposed to foreign currency rate fluctuations. Also, as we expand to other foreign jurisdictions there may be an increase in our foreign exchange exposure.

We earn interest income on our excess cash reserves and are exposed to changes in interest rates.

We invest our excess cash reserves in investment vehicles that provide a rate of return with little risk to principal. As interest rates change the amount of interest income we earn will be directly impacted.

Other MD&A Requirements

We have 18,840,010 common shares outstanding at March 7, 2019. If all of our options, restricted share units and performance share units (1,569,326) and common share purchase warrants (16,443,500 warrants exercisable into 1,730,894 common shares) were exercised or were to vest, we would have 22,140,230 common shares outstanding.

Our 2018 annual report on Form 20-F will be available on www.sedar.com.

Disclosure Controls and Procedures

Evaluation of Disclosure Controls and Procedures:
Our chief executive and financial officers reviewed and evaluated our disclosure controls and procedures. Based on that evaluation, they have concluded that our disclosure controls and procedures are effective in providing them with timely material information relating to the Company.

Management's Annual Report on Internal Control Over Financial Reporting:
Our management is responsible for establishing and maintaining adequate internal control over financial reporting, and has designed such internal control over financial reporting to provide reasonable assurance regarding the reliability of financial reporting and the preparation and fair presentation of financial statements for external purposes in accordance with International Financial Reporting Standards.

Management, including the Chief Executive Officer and Chief Financial Officer, does not expect that our internal controls and procedures over financial reporting will prevent all error and all fraud. A control system can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving our stated goals under all potential future conditions. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has evaluated the design and operation of our internal control over financial reporting as of December 31, 2018, and has concluded that such internal control over financial reporting is effective as of December 31, 2018. There are no material weaknesses that have been identified by management in this regard. This assessment was based on criteria for effective internal

control over financial reporting described in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework).

Changes in Internal Controls over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the last fiscal year that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Consolidated Financial Statements

Oncolytics Biotech® Inc.
December 31, 2018 and 2017

STATEMENT OF MANAGEMENT'S RESPONSIBILITY

Management is responsible for the preparation and presentation of the consolidated financial statements, Management's Discussion and Analysis ("MD&A") and all other information in the Annual Report.

In management's opinion, the accompanying consolidated financial statements have been properly prepared within reasonable limits of materiality and in accordance with the appropriately selected International Financial Reporting Standards as issued by the International Accounting Standards Board consistently applied and summarized in the consolidated financial statements.

The consolidated financial statements include estimates that are necessary when transactions affecting the current accounting period cannot be finalized with certainty until after the balance sheet date. Based on careful judgments by management, such estimates have been properly reflected in the accompanying consolidated financial statements. The financial information presented elsewhere in the Annual Report has been reviewed to ensure consistency with that in the consolidated financial statements. The MD&A also includes information regarding the impact of current transactions and events, sources of liquidity and capital resources and risks and uncertainty. Actual results in the future may differ materially from our present assessment of this information because future events and circumstances may not occur as expected.

Systems of internal controls, including organizational and procedural controls and internal controls over financial reporting, assessed as reasonable and appropriate in the circumstances, are designed and maintained by management to provide reasonable assurance that assets are safeguarded from loss or unauthorized use and to produce reliable records for preparation of financial statements.

Ernst & Young LLP, an independent firm of Charter Professional Accountants, has been engaged, as approved by a vote of the shareholders' at the Company's most recent Annual General Meeting, to audit and provide their independent audit opinions on the following:

- the Company's consolidated financial statements as at and for the year ended December 31, 2018; and
- the effectiveness of the Company's internal control over financial reporting as at December 31, 2018.

Ernst & Young have full and free access to our Board of Directors and its Committees to discuss audit, financial reporting and related matters.

The Board of Directors is responsible for ensuring that management fulfills its responsibilities for financial reporting and internal control. The Board exercises this responsibility through the Audit Committee of the Board, which is comprised entirely of independent directors. This Committee meets with management and the external auditors to satisfy itself that management's responsibilities are properly discharged and to review the consolidated financial statements and MD&A before they are presented to the Board of Directors for approval. The consolidated financial statements have been approved by the Board on the recommendation of the Audit Committee.

/s/ Matt Coffey

Matt Coffey, PhD, MBA
Chief Executive Officer

/s/ Kirk Look

Kirk Look, CA
Chief Financial Officer

The following report is provided by management in respect of the company's internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) under the U.S. Securities Exchange Act of 1934):

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

1. Management is responsible for establishing and maintaining adequate internal control over the company's financial reporting.

2. Management has used the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework (2013) in Internal Control - Integrated Framework to evaluate the effectiveness of the company's internal control over financial reporting.

3. Management has assessed the effectiveness of the company's internal control over financial reporting as at December 31, 2018, and has concluded that such internal control over financial reporting was effective as of that date. Additionally, based on this assessment, management determined that there were no material weaknesses in internal control over financial reporting as at December 31, 2018. Because of inherent limitations, systems of internal control over financial reporting may not prevent or detect misstatements and even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

4. The effectiveness of the company's internal control over financial reporting as at December 31, 2018 has been audited by Ernst & Young, independent auditor, as stated in their report which appears herein.

/s/ Matt Coffey

Matt Coffey, PhD, MBA
Chief Executive Officer

/s/ Kirk Look

Kirk Look, CA
Chief Financial Officer

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Oncolytics Biotech Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated statements of financial position of **Oncolytics Biotech Inc.** (the "Company") as of December 31, 2018 and 2017, the related consolidated statements of loss, comprehensive loss, shareholders' equity and cash flows for each of the two years in the period ended December 31, 2018, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2018, in conformity with International Financial Reporting Standards (IFRSs) as issued by the International Accounting Standards Board.

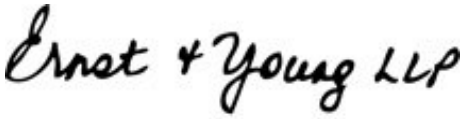
We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"), and our report dated March 7, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

We have served as the Company's auditor since 1999.



Chartered Professional Accountants

March 7, 2019

Report on Internal Control over Financial Reporting

To the Board of Directors and Shareholders of Oncolytics Biotech Inc.:

Opinion on Internal Control over Financial Reporting

We have audited Oncolytics Biotech Inc.'s (the "Company") internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework)," (the COSO criteria). In our opinion, Oncolytics Biotech Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018 based on the COSO criteria**.**

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements of Oncolytics Biotech Inc., which comprise the consolidated statements of financial position as at December 31, 2018 and 2017, the consolidated statements of loss, comprehensive loss, shareholders' equity and cash flows for the years ended December 31, 2018 and 2017, and the related notes, and our report dated March 7, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

Oncolytics Biotech Inc.'s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on Oncolytics Biotech Inc.'s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to Oncolytics Biotech Inc. in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Chartered Professional Accountants

March 7, 2019

ONCOLYTICS BIOTECH INC.
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

As at December 31,	Notes	2018 $	2017 $
Assets			
Current assets			
Cash and cash equivalents	*5*	**13,699,881**	11,836,119
Contract receivable	*10*	**—**	4,767,100
Other receivables		**51,650**	37,726
Prepaid expenses		**700,986**	1,176,063
Total current assets		**14,452,517**	17,817,008
Non-current assets			
Property and equipment	*6*	**412,736**	333,441
Total non-current assets		**412,736**	333,441
Total assets		**14,865,253**	18,150,449
Liabilities And Shareholders' Equity			
Current Liabilities			
Accounts payable and accrued liabilities		**1,825,853**	3,684,023
Contract liability	*10*	**927,400**	1,545,645
Other liabilities	*11*	**61,322**	—
Total current liabilities		**2,814,575**	5,229,668
Non-current liabilities			
Contract liability	*10*	**5,802,887**	4,636,935
Other liabilities	*11*	**52,428**	—
Total non-current liabilities		**5,855,315**	4,636,935
Total liabilities		**8,669,890**	9,866,603
Commitments and contingencies	*11, 12 and 17*		
Shareholders' equity			
Share capital Authorized: unlimited Issued: December 31, 2018 – 17,399,749 December 31, 2017 – 141,805,722 pre-consolidation December 31, 2017 – 14,926,840 post-consolidation	*7*	**285,193,061**	271,710,138
Warrants	*7*	**3,617,570**	3,617,900
Contributed surplus	*8*	**28,260,613**	27,028,238
Accumulated other comprehensive income		**607,504**	373,730
Accumulated deficit		**(311,483,385)**	(294,446,160)
Total shareholders' equity		**6,195,363**	8,283,846
Total liabilities and equity		**14,865,253**	18,150,449

See accompanying notes

On behalf of the Board:

/s/ Angela Holtham — Director

/s/ Wayne Pisano — Director

ONCOLYTICS BIOTECH INC.
CONSOLIDATED STATEMENTS OF LOSS AND COMPREHENSIVE LOSS

For the years ending December 31,	Notes	2018 $	2017 $	2016 $
Expenses				
Research and development	*8, 19, 20*	**9,417,888**	9,392,623	9,770,007
Operating	*8, 19, 20*	**7,244,791**	6,212,831	5,524,500
Loss before the following		**(16,662,679)**	(15,605,454)	(15,294,507)
Interest		**173,496**	130,101	163,902
Loss before income taxes		**(16,489,183)**	(15,475,353)	(15,130,605)
Income tax expense	*13*	**(548,042)**	(141,498)	(9,374)
Net loss		**(17,037,225)**	(15,616,851)	(15,139,979)
Other comprehensive income (loss) items that may be reclassified to net loss				
Translation adjustment		**233,774**	(180,330)	(206,918)
Net comprehensive loss		**(16,803,451)**	(15,797,181)	(15,346,897)
Basic and diluted loss per common share	*9*	**(1.06)**	(1.12)	(1.20)
Weighted average number of shares (basic and diluted)		**16,016,366**	13,936,387	12,618,942

See accompanying notes

ONCOLYTICS BIOTECH INC.
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

	Notes	Share Capital $	Warrants $	Contributed Surplus $	Accumulated Other Comprehensive Income $	Accumulated Deficit $	Total $
As at December 31, 2015		261,324,692	—	26,277,966	760,978	(263,689,330)	24,674,306
Net loss and other comprehensive income		—	—	—	(206,918)	(15,139,979)	(15,346,897)
Issued pursuant to incentive share award plan	*8*	41,000	—	(41,000)	—	—	—
Issued pursuant to "At the Market" Agreement	*7*	1,456,296	—	—	—	—	1,456,296
Share based compensation	*8*	—	—	406,078	—	—	406,078
Share issue costs	*7*	(500,163)	—	—	—	—	(500,163)
As at December 31, 2016		262,321,825	—	26,643,044	554,060	(278,829,309)	10,689,620
Net loss and other comprehensive loss		—	—	—	(180,330)	(15,616,851)	(15,797,181)
Issued pursuant to stock option plan	*8*	536,949	—	(193,509)	—	—	343,440
Issued pursuant to "At the Market" Agreement	*7*	2,348,821	—	—	—	—	2,348,821
Issued pursuant to public offering	*7*	7,893,600	3,617,900	—	—	—	11,511,500
Share based compensation	*8*	—	—	578,703	—	—	578,703
Share issue costs	*7*	(1,391,057)	—	—	—	—	(1,391,057)
As at December 31, 2017		271,710,138	3,617,900	27,028,238	373,730	(294,446,160)	8,283,846
Net loss and other comprehensive income		—	—	—	233,774	(17,037,225)	(16,803,451)
Issued pursuant to "At the Market" Agreement	*7*	620,010	—	—	—	—	620,010
Issued pursuant to public offering	*7*	11,606,882	—	—	—	—	11,606,882
Issued pursuant to Common Stock Purchase Agreement	*7*	3,314,097	—	—	—	—	3,314,097
Issued pursuant to stock option plan	*8*	197,245	—	(73,707)	—	—	123,538
Issued pursuant to incentive share award plan	*8*	109,751	—	(109,751)	—	—	—
Issued pursuant to warrant agreement	*7*	1,747	(330)	—	—	—	1,417
Share based compensation	*8*	—	—	1,415,833	—	—	1,415,833
Share issue costs	*7*	(2,366,809)	—	—	—	—	(2,366,809)
As at December 31, 2018		**285,193,061**	**3,617,570**	**28,260,613**	**607,504**	**(311,483,385)**	**6,195,363**

See accompanying notes

ONCOLYTICS BIOTECH INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

For the years ending December 31,	Notes	2018 $	2017 $	2016 $
Operating Activities				
Net loss for the year		**(17,037,225)**	(15,616,851)	(15,139,979)
Depreciation - property and equipment		**95,375**	90,768	162,233
Share based compensation	*8, 19, 20*	**1,415,833**	578,703	406,078
Unrealized foreign exchange gain		**(374,337)**	(124,793)	(139,810)
Onerous lease contract	*11*	**67,588**	—	—
Amortization - lease incentive liability	*11*	**8,189**	—	—
Net change in non-cash working capital	*16*	**3,904,339**	180,855	2,233,865
Cash used in operating activities		**(11,920,238)**	(14,891,318)	(12,477,613)
Investing Activities				
Acquisition of property and equipment	*6*	**(107,466)**	(105,765)	(23,527)
Redemption (purchase) of short-term investments		**—**	2,088,800	(27,823)
Cash (used in) provided by investing activities		**(107,466)**	1,983,035	(51,350)
Financing Activities				
Proceeds from Common Stock Purchase Agreement	*7*	**2,533,980**	—	—
Proceeds from "At the Market" equity distribution agreement	*7*	**451,675**	2,103,166	956,133
Proceeds from public offering	*7*	**10,188,526**	10,366,098	—
Proceeds from exercise of stock options	*8*	**123,538**	343,440	—
Proceeds from exercise of warrants	*7*	**1,417**	—	—
Cash provided by financing activities		**13,299,136**	12,812,704	956,133
Increase (decrease) in cash		**1,271,432**	(95,579)	(11,572,830)
Cash and cash equivalents, beginning of year		**11,836,119**	12,034,282	24,016,275
Impact of foreign exchange on cash and cash equivalents		**592,330**	(102,584)	(409,163)
Cash and cash equivalents, end of year		**13,699,881**	11,836,119	12,034,282

See accompanying notes

Note 1: Incorporation and Nature of Operations

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

Our consolidated financial statements for the year ended December 31, 2018, were authorized for issue in accordance with a resolution of the Board of Directors (the "Board") on March 7, 2019. We are a limited company incorporated and domiciled in Canada. Our shares are publicly traded on the Nasdaq Capital Markets and the Toronto Stock Exchange. Our registered office is located at 210, 1167 Kensington Crescent NW, Calgary, Alberta, Canada.

We are 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. Our lead product, pelareorep, is a potential immuno-oncology viral-agent that may be a novel treatment for certain types of cancer and may be an alternative to existing cytotoxic or cytostatic therapies. Our clinical development program for pelareorep emphasizes three programs: chemotherapy combinations to assist the escape of the virus from the vasculature and enhance its distribution in the tumor; immuno-therapy combinations to create an inflamed phenotype promoting synergies with immune checkpoint inhibitors; and immune modulator/targeted combinations to upregulate natural killer cells promoting synergies with targeted therapies.

Note 2: Basis of Financial Statement Presentation

Our consolidated financial statements include our financial statements and the financial statements of our subsidiaries Oncolytics Biotech (Barbados) Inc., Oncolytics Biotech (US) Inc., and Oncolytics Biotech (UK) Inc. and are presented in Canadian dollars, our functional currency.

The accounts are prepared on the historical cost basis, except for certain assets and liabilities which are measured at fair value as explained in the notes to these financial statements.

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

Basis of consolidation
Our accounts include the accounts of Oncolytics Biotech Inc. and our subsidiaries. Subsidiaries are entities over which we have control which is achieved when we are exposed, or have the rights, to variable returns from our involvement with the investee and has the ability to affect those returns through our power to govern. Accounting policies of subsidiaries are consistent with our accounting policies and all intra-group transactions, balances, income and expenses are eliminated on consolidation.

A change in ownership interest of a subsidiary, without a change in control, is accounted for as an equity transaction.

Note 3: Summary of Significant Accounting Policies

The consolidated financial statements have, in management's opinion, been properly prepared within reasonable limits of materiality and within the framework of the significant accounting policies summarized below.

Deferred income taxes

We follow the liability method of accounting for income taxes. Under the liability method, deferred income taxes are recognized for the difference between financial statement carrying values and the respective income tax basis of assets and liabilities (temporary differences). Deferred income tax assets and liabilities are measured using substantively enacted income tax rates and laws expected to apply in the years in which temporary differences are expected to be recovered or settled. The effect on deferred income tax assets and liabilities of a change in tax rates is charged or credited to income, except when it is related to items charged or credited to either other comprehensive income or directly to equity.

Financial instruments

Classification and measurement
Financial assets
Financial assets are initially measured at fair value. In the case of a financial asset not at fair value through profit or loss, the financial asset is initially measured at fair value plus or minus transaction costs.

Under IFRS 9 *Financial Instruments ("IFRS 9")*, financial assets are subsequently measured at amortised cost, fair value through profit or loss (FVPL), or fair value through other comprehensive income (FVOCI). The classification is based on two criteria: the Company's business model for managing the assets; and whether the financial asset's contractual cash flows represent 'solely payments of principal and interest' on the principal amount outstanding (the 'SPPI criterion').

Our financial assets include cash and cash equivalents and other receivables. The classification and measurement of these financial assets are at amortized cost, as these assets are held within our business model with the objective to hold the financial assets in order to collect contractual cash flows that meet the SPPI criterion.

Financial liabilities
Financial liabilities are initially measured at fair value and are subsequently measured at amortised cost. Our financial liabilities include trade accounts payable.

Impairment
Under IFRS 9, accounting for impairment losses for financial assets uses a forward-looking expected credit loss (ECL) approach.

IFRS 9 requires that we record a loss allowance for ECLs on all financial assets not held at FVPL. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Company expects to receive. The shortfall is then discounted at an approximation to the asset's original effective interest rate.

We applied the simplified approach permitted by IFRS 9 and calculated ECLs based on lifetime expected credit losses. We have established a provision matrix that is based on historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

Fair Value Measurement
Fair value is the price that would be received to sell an asset, or paid to transfer a liability in an orderly transaction between market participants, at the measurement date. In determining the fair value measurement of our financial instruments we prioritize the related inputs used in measuring fair value into the following hierarchy:

Level 1 - Quoted prices (unadjusted) in active markets for identical assets or liabilities;

Level 2 - Inputs other than quoted prices included within Level 1 that are either directly or indirectly observable;

Level 3 - Unobservable inputs in which little or no market activity exists, therefore requiring an entity to develop its own assumptions about the assumptions that market participants would use in pricing.

Foreign currency translation

The financial statements for each of our subsidiaries are prepared using their functional currency. Our presentation currency is the Canadian dollar which is also Oncolytics Biotech Inc.'s functional currency. Foreign currency transactions are translated into the functional currency using exchange rates prevailing at the dates of the transactions. Exchange differences resulting from the settlement of such transactions and from the translation at exchange rates ruling at the statement of financial position date of monetary assets and liabilities denominated in currencies other than the functional currency are recognized directly in the consolidated statement of loss and comprehensive loss.

Exceptions to this are where the monetary items form part of the net investment in a foreign operation and the foreign operation's functional currency is the local currency. These exchange differences are initially recognized in equity. The statement of financial position of foreign operations is translated into Canadian dollars using the exchange rate at the statement of financial position date

and the income statements are translated into Canadian dollars using the average exchange rate for the period. Where this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, the exchange rate on the transaction date is used. Exchange differences on translation into Canadian dollars are recognized as a separate component of equity. On disposal of a foreign operation, any cumulative exchange differences held in equity are transferred to the consolidated statement of loss and comprehensive loss.

Investment tax credits

Investment tax credits ("ITCs") relating to qualifying scientific research and experimental development expenditures that are refundable are accounted for as a reduction in research and development expenditures. ITCs that are non-refundable, but are recoverable against future taxes payable, are accrued only when there is reasonable assurance that the credits will be realized.

ITCs are subject to technical and financial review by the Canadian tax authorities on a project-by-project basis. Therefore, amounts ultimately received may vary significantly from the amounts recorded. Any such differences are recorded as an adjustment to the recognized amount in the year the review by the Canadian tax authority is completed and the results are made known to us.

Loss per common share

Basic loss per common share is determined using the weighted average number of common shares outstanding during the period.

We use the treasury stock method to calculate diluted loss per common share. Under this method, diluted loss per common share is computed in a manner consistent with basic loss per common share except that the weighted average common shares outstanding are increased to include additional common shares from the assumed exercise of options and warrants, if dilutive. The number of additional common shares is calculated by assuming that any outstanding “in the money” options, restricted share units, performance share units and warrants were exercised at the later of the beginning of the period or the date of issue and that the proceeds from such exercises were used to acquire shares of common stock at the average market price during the reporting period.

Property and equipment

Property and equipment are recorded at cost. Depreciation is provided on bases and at rates designed to amortize the cost of the assets over their estimated useful lives. Depreciation is recorded using the declining balance method at the following annual rates:

Office equipment and furniture	20%
Medical equipment	20%
Computer equipment	30%
Leasehold improvements	Straight-line over the term of the lease

Research and development costs

Research costs are expensed as incurred, net of recoveries. We record accruals for the estimated costs of our research and development activities performed by third parties. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows to our vendors. Payments under the contracts depend on factors such as the achievement of certain events, successful enrollment of patients, and completion of certain clinical trial activities. We generally accrue costs associated with the treatment phase of clinical trials based on the total estimated cost of the treatment phase on a per patient basis and we expense the per patient cost ratably over the estimated patient treatment period based on patient enrollment in the trials. Advance payments for goods or services that will be used or rendered for future research and development activities are capitalized as prepaid expenses and recognized as expense as the related goods are delivered or the related services are performed. We base our estimates on the best information available at the time. However, additional information may become available to us which may allow us to make a more accurate estimate in future periods. In this event, we may be required to record adjustments to research and development expenses in future periods when the actual level of activity becomes more certain. Such increases or decreases in cost are generally considered to be changes in estimates and will be reflected in research and development expenses in the period identified.

Development costs that meet specific criteria related to technical, market and financial feasibility will be capitalized. To date, all development costs have been expensed.

Revenue recognition

Revenue relates to a long-term contract associated with a regional licensing agreement (the "Licensing Agreement") with Adlai Nortye Biopharma Co., Ltd. ("Adlai"). The pricing for the contract was based on the specific negotiations with Adlai and includes non-refundable upfront license fees, development and regulatory milestone payments, royalties and sales-based milestone payments. We account for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable.

Under the Licensing Agreement, we have granted a regional license to our intellectual property. The granting of this license is accounted for as one performance obligation. We have determined that we provide Adlai with a right to access our intellectual property, and therefore recognize revenue related to the upfront license fee over time. Revenue is recognized based on the extent of progress towards completion of the performance obligation using the input method. Under the input method, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. We use this method because Adlai receives and consumes the benefit of our intellectual property as we undertake activities that impact the intellectual property. Management must use judgment in making assumptions and estimates regarding total estimated costs, the complexity of the work to be performed, and the length of time to complete the performance obligation, among other variables.

The contract also provides for development and regulatory milestone payments, royalties and sales-based milestone payments. These amounts are contingent on the occurrence of a future event and therefore give rise to variable consideration. We estimate variable consideration at the most likely amount to which we expect to be entitled. We include estimated amounts in the transaction price when it becomes highly probable that the amount will not be subject to significant reversal when the uncertainty associated with the variable consideration is resolved. Our estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of our anticipated performance and all information (historical, current and forecasted) that is reasonably available to us. Based on this information and related analysis, any quarterly adjustments to revenue are recognized as necessary in the period they become known.

The upfront license fee is not considered a significant financing component because it is used to meet working capital demands that can be higher in the early stages of a contract and to protect us from the other party failing to adequately complete some or all of its obligations under the contract.

Revenue from sales-based royalties and the achievement of annual sales volumes will be recognized when the subsequent sale occurs, as the license of the intellectual property is the predominant item to which the royalty relates. We consider payments associated with the achievement of annual sales volumes to be, in substance, royalty payments and we will recognize such sales-based payments upon achievement of such sales volumes, provided that collection is reasonably assured.

Contract receivable - Contract receivable includes amounts billed and currently due from customers. When appropriate, we provide for an allowance for doubtful accounts by reserving for specifically identified doubtful accounts. We perform a review of our customer's credit risk and payment histories, including payments made subsequent to year-end.

Contract liability - Our contract liability includes upfront license fees and billings in excess of revenue recognized. Contract liabilities are recognized as revenue as or when we perform under the contract. We classify our contract liability as current or noncurrent based on the timing of when we expect to recognize revenue.

Share based payments

Stock option plan

We have one stock option plan (the "Option Plan") available to officers, directors, employees and consultants with grants under the Option Plan approved from time to time by our Board of Directors (the "Board"). Under the Option Plan, the exercise price of each option is set at equal to or higher than the trading price of our stock on the date of grant in accordance with Toronto Stock Exchange guidelines. Vesting is provided for at the discretion of the Board and the expiration of options is to be no greater than 10 years from the date of grant. Exercised stock options are settled with common shares issued from treasury.

We use the fair value based method of accounting for stock option awards granted under the Option Plan. We recognize compensation expense and a corresponding adjustment to contributed surplus equal to the fair value of the stock options granted using the Black Scholes Option Pricing Model. The fair value of stock options with a graded vesting schedule is determined based on different expected lives for the options that vest each year, as it would be if the award were viewed as several separate awards, each with a different vesting date, and it is accounted for over the respective vesting period taking into consideration forfeiture estimates. Compensation expense is adjusted for subsequent changes in management's estimate of the number of options that are expected to vest.

Share based payments to non-employees are measured at the date we obtain the goods or the date the counterparty renders the service.

Incentive share award plan
Our incentive share award plan (the "Share Plan") is available to directors, officers and employees. Under our Share Plan, performance share units and restricted share units may be approved from time to time by the Board. Performance share units ("PSUs") are an award to certain officers and employees to which common shares shall be issued based upon achieving the applicable performance criteria. Restricted share units ("RSUs") are an award to certain officers and employees and to non-employee directors to which common shares shall be issued in accordance with the Share Plan.

We recognize compensation expense and a corresponding adjustment to contributed surplus equal to the market value of our common shares at the date of grant based on the number of PSUs/RSUs expected to vest, recognized over the term of the vesting period. Compensation expense is adjusted for subsequent changes in management's estimate of the number of PSUs/RSUs that are expected to vest. The effect of these changes is recognized in the period of the change.

Adoption of New Accounting Standards

IFRS 9 *Financial Instruments*
IFRS 9 replaces IAS 39 *Financial Instruments: Recognition and Measurement* for annual periods beginning on or after January 1, 2018. IFRS 9 includes guidance on the classification and measurement of financial assets and financial liabilities and impairment of financial assets.

We have applied IFRS 9 retrospectively, with the initial application date of January 1, 2018. Under IAS 39, our financial assets were classified as follows: cash and cash equivalents - held for trading and other receivables - loans and receivables. Under IFRS 9, our financial assets, consisting of cash and cash equivalents and other receivables, were classified at amortized cost. There were no changes to the measurement of our financial assets and liabilities or adjustments to comparative information as a result of the adoption of IFRS 9.

Accounting Standards and Interpretations Issued but Not Yet Effective

IFRS 16 *Leases*
In January 2016, the IASB issued IFRS 16 - *Leases* ("IFRS 16"), which replaces IAS 17 - *Leases* ("IAS 17") and related interpretations. IFRS 16 provides a single lessee accounting model, requiring the recognition of assets and liabilities for all leases, unless the lease term is 12-months or less or the underlying asset has a low value. We are currently finalizing the accounting relative to this new standard and will adopt IFRS 16 on January 1, 2019 using the modified retrospective approach. In applying IFRS 16, we expect to elect most of the available practical expedients, including:

- Exemption for short-term leases that have a remaining lease term of less than 12 months as at Jan 1, 2019;
- Excluding initial direct costs for the measurement of the right-of-use asset at the date of initial application; and
- Measuring the right-of-use assets at an amount equal to the lease liability, adjusted by the amount of lease incentive liability relating to that lease recognized in the statement of financial position immediately before the date of initial application.

We expect that the adoption of this standard will have a material impact on our consolidated statement of financial position related to the recognition of right-of-use assets and lease liabilities, but is not expected to have a material impact on the consolidated statements of loss and comprehensive loss or cash flows.

Note 4: Significant Judgments, Estimates and Assumptions

Judgments

The preparation of our consolidated financial statements requires us to make judgments, estimates and assumptions that affect the reported amount of expenses, assets, liabilities, and the disclosure of contingent liabilities, at the end of the reporting period. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods.

Estimates and assumptions

Because a precise determination of many assets and liabilities is dependent upon future events, the preparation of financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of expenses during the reporting periods. Actual results could differ from those estimates and such differences could be significant. Significant estimates made by management affecting our consolidated financial statements include:

Revenue recognition
We entered into a Licensing Agreement which provides, among other payments, for upfront license fees in exchange for a regional license to our intellectual property. Management uses its judgment in applying the input method when determining the extent of progress towards completion of the performance obligation. Revenue recognition requires assumptions and estimates regarding total estimated costs, the complexity of the work to be performed, and the length of time to complete the performance obligation, among other variables.

Share based payments
Part of our share based payment expense is measured by reference to the fair value of our stock options at the date at which they are granted. Estimating fair value for granted stock options requires determining the most appropriate valuation model which is dependent on the terms and conditions of the grant. This estimate also requires determining the most appropriate inputs to the valuation model including the expected life of the option, volatility, dividend yield, and rate of forfeitures and making assumptions about them. The value of the share based payment expense for the year along with the assumptions and model used for estimating fair value for share based compensation transactions are disclosed in Note 8.

Income taxes
Uncertainties exist with respect to the interpretation of complex tax regulations and the amount and timing of future taxable income. Currently, we are accumulating tax loss carry forward balances in various tax jurisdictions creating a deferred tax asset. Deferred tax assets are recognized for all unused tax losses to the extent that it is probable that taxable profit will be available against which the losses can be utilized. Management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and the level of future taxable profits together with future tax planning strategies.

To date we have determined that none of our deferred tax assets should be recognized. Our deferred tax assets are mainly comprised of our net operating losses from prior years, prior year research and development expenses, and non-refundable investment tax credits. These tax pools relate to entities that have a history of losses, have varying expiry dates, and may not be used to offset taxable income within our other subsidiaries. As well, there are no taxable temporary differences or any tax planning opportunities available that could partly support the recognition of these losses as deferred tax assets.

Note 5: Cash Equivalents

Cash Equivalents
Cash equivalents consist of interest bearing deposits with our bank totaling $9,977,409 (December 31, 2017 – $9,204,919). The current annual interest rate earned on these deposits is 2.71% (December 31, 2017 – 1.38%).

Note 6: Property and Equipment

	Medical Equipment	Computer Equipment	Office Furniture	Office Equipment	Leasehold Improvements	Total
Cost						
As at December 31, 2016	197,870	705,375	214,085	89,466	466,635	1,673,431
Additions, net of foreign exchange impact	—	24,778	11,811	—	67,665	104,254
Disposals	—	(48,168)	—	—	—	(48,168)
As at December 31, 2017	197,870	681,985	225,896	89,466	534,300	1,729,517
Additions, net of foreign exchange impact	—	88,202	21,542	15,763	49,163	174,670
Disposals	(137,492)	(424,246)	—	—	(85,096)	(646,834)
As at December 31, 2018	**60,378**	**345,941**	**247,438**	**105,229**	**498,367**	**1,257,353**
Amortization						
As at December 31, 2016	144,969	554,174	137,624	64,167	452,542	1,353,476
Amortization for the year	9,365	43,558	9,710	4,620	23,515	90,768
Disposals	—	(48,168)	—	—	—	(48,168)
As at December 31, 2017	154,334	549,564	147,334	68,787	476,057	1,396,076
Amortization for the year	7,622	49,635	10,415	4,041	23,662	95,375
Disposals	(137,492)	(424,246)	—	—	(85,096)	(646,834)
As at December 31, 2018	**24,464**	**174,953**	**157,749**	**72,828**	**414,623**	**844,617**
Net book value						
As at December 31, 2018	**35,914**	**170,988**	**89,689**	**32,401**	**83,744**	**412,736**
As at December 31, 2017	43,536	132,421	78,562	20,679	58,243	333,441

Note 7: Share Capital

Authorized:
Unlimited number of no par value common shares

Share Consolidation:
On May 22, 2018, we completed the consolidation of our common shares on the basis of 9.5 pre-consolidation common shares for each one post-consolidation common share (the "Share Consolidation"). Fractional interests were rounded down to the nearest whole number of common shares. Outstanding stock options, restricted share units and performance share units were similarly adjusted by the consolidation ratio. Outstanding warrants were adjusted such that, following the Share Consolidation, 9.5 2017 warrants will entitle the holder to purchase one whole common share until June 1, 2022.

Issued:	Shares		Warrants	
	Number	Amount $	Number	Amount $
Balance, December 31, 2015	118,151,622	261,324,692	—	—
Issued pursuant to incentive share award plan	100,000	41,000	—	—
Issued pursuant to "At the Market" equity distribution agreement[(a)]	3,006,600	1,456,296	—	—
Share issue costs	—	(500,163)	—	—
Balance, December 31, 2016	121,258,222	262,321,825	—	—
Issued pursuant to stock option plan	801,000	536,949	—	—
Issued pursuant to "At the Market" equity distribution agreement[(a)]	3,301,500	2,348,821	—	—
Issued pursuant to public offering[(b)]	16,445,000	7,893,600	16,445,000	3,617,900
Share issue costs	—	(1,391,057)	—	—
Balance, December 31, 2017	141,805,722	271,710,138	16,445,000	3,617,900
Issued pursuant to "At the Market" equity distribution agreement[(a)]	519,500	553,650	—	—
Share issue costs	—	(33,335)	—	—
Issued pursuant to stock option plan	71,000	38,269	—	—
Balance, May 22, 2018 - pre-consolidation	142,396,222	272,268,722	16,445,000	3,617,900
Balance, May 22, 2018 - post-consolidation	14,988,995	272,268,722	16,445,000	3,617,900
Issued pursuant to public offering[(c)]	1,532,278	11,606,882	—	—
Issued pursuant to warrant agreement[(b)]	157	1,747	(1,500)	(330)
Issued pursuant to stock option plan	34,329	158,976	—	—
Issued pursuant to incentive share award plan	28,297	109,751	—	—
Issued pursuant to Common Stock Purchase Agreement[(d)]	797,691	3,314,097	—	—
Issued pursuant to "At the Market" equity distribution agreement[(e)]	18,002	66,360	—	—
Share issue costs	—	(2,333,474)	—	—
Balance, December 31, 2018	**17,399,749**	**285,193,061**	**16,443,500**	**3,617,570**

(a) On February 25, 2016, we entered into an "at-the-market" ("ATM") equity distribution agreement with Canaccord Genuity Inc. acting as our sole agent with an aggregate offering value of up to $4.6 million which allows us to sell our common shares through the facilities of the Toronto Stock Exchange or other "marketplace" (as defined in National Instrument 21-101 Marketplace Operation) in Canada (our "Canadian ATM"). Subject to the terms of our Canadian ATM, we are able to determine, at our sole discretion, the timing and number of shares to be sold under this ATM facility. During 2018, we sold 519,500 pre-consolidation shares (approximately 54,684 post-consolidation shares) (2017 - 3,301,500 pre-consolidation shares (approximately 347,526 post-consolidation shares) common shares for gross proceeds of $553,650 (2017 - $2,348,821). We incurred share issue costs of $33,335 (2017 - $245,655).

(b) On June 1, 2017, pursuant to an underwritten public offering, 16,445,000 units were sold at a purchase price of $0.70 per unit for gross proceeds of $11,511,500. Each unit included one pre-consolidation common share with an ascribed value of $0.48 (0.106 post-consolidation common share with an ascribed value of $4.56) and one pre-consolidation common share purchase warrant with an ascribed value of $0.22 (one post-consolidation common share purchase warrant with an ascribed value of $2.09). Each pre-consolidation common share purchase warrant entitled the the holder to purchase one pre-consolidation common share at an exercise price of $0.95. Following the Share Consolidation, 9.5 pre-consolidation common share purchase warrants entitles the holder to purchase one post-consolidation common share in the capital of the Company until June 1, 2022, at an exercise price of approximately $9.025. The post-consolidation common share purchase warrants will be subject to acceleration if the volume weighted average price of the Company's common shares equals or exceeds $23.75 for 15 consecutive trading dates. The ascribed value was determined using the relative fair value method. The ascribed value of the common share purchase warrants was determined using the Black Scholes option pricing model. We incurred share issue costs of $1,145,402.

(c) On June 5, 2018, pursuant to an underwritten public offering, 1,532,278 common shares were sold at a purchase price of US $5.83 per share for gross proceeds of US$8,933,181. We incurred share issue costs of $1,418,356.

(d) On September 27, 2018, we entered into a Common Stock Purchase Agreement (the "Agreement") with Lincoln Park Capital Fund, LLC ("LPC"). Subject to the terms and conditions of the Agreement and at our sole discretion, we may sell up to US $26,000,000 worth of common shares to LPC over the 30-month term. The purchase price of the common shares will be based on the prevailing market prices immediately preceding the notice of sale without any fixed discount. Subject to the terms of the Agreement, we control the timing and amount of any future investment and LPC is obligated to make such purchases, if and when we elect. The Agreement does not impose any upper price limit restrictions, negative covenants or restrictions on our future financing activities. We can terminate the Agreement at any time at our sole discretion without any monetary cost or penalty.

Upon signing of the Agreement, LPC purchased 248,762 common shares for gross proceeds of US$1,000,000. In consideration for entering into the Agreement, we issued an initial commitment fee of 110,754 common shares to LPC valued at fair value of US$455,000. An additional 110,754 common shares will be issued on a pro rata basis under the terms of the Agreement as an additional commitment fee. 4,260 additional commitment fee common shares valued at fair value of US$17,501 were issued upon signing of the Agreement. Subsequent to the signing of the Agreement, we issued 429,420 common shares for gross proceeds of US$1,055,207 and 4,495 commitment shares. The commitment shares have been valued at fair value of US$11,189 and have been recorded as additional share issue costs. The initial commitment fee and additional commitment fee common shares were recorded as share issue costs in addition to cash share issue costs of $208,726.

(e) On October 24, 2018, we entered into an ATM equity offering sales agreement with Canaccord Genuity Inc. The ATM allows us, at our sole discretion, to issue common shares, at prevailing market price, with an aggregate offering value of up to US $30,000,000 over the next 19 months through the facilities of the NASDAQ in the United States. During 2018, we sold 18,002 common shares for gross proceeds of US$50,046. We incurred share issue costs of $135,000.

Warrants

The following table summarizes our outstanding warrants at December 31, 2018:

Exercise Price	Outstanding, Beginning of the Year	Exercised During the Year	Outstanding, End of the Year[(1)]	Weighted Average Remaining Contractual Life (years)
$ 9.025	16,445,000	(1,500)	16,443,500	3.42

(1) Exercisable into 1,730,894 common shares.

Note 8: Share Based Payments

Share Consolidation:
On May 22, 2018, we completed the consolidation of our common shares on the basis of 9.5 pre-consolidation common shares for each one post-consolidation common share (the "Share Consolidation"). Fractional interests were rounded down to the nearest whole number of common shares. Outstanding stock options, restricted share units and performance share units were similarly adjusted by the consolidation ratio.

Stock Option Plan

We have issued stock options to acquire common stock through our stock option plan of which the following are outstanding at December 31:

	2018		2017		2016	
	Stock Options	Weighted Average Exercise Price $	Stock Options	Weighted Average Exercise Price $	Stock Options	Weighted Average Exercise Price $
Outstanding, beginning of the year	**647,156**	**13.20**	912,995	17.42	901,114	20.58
Granted during the year	**750,467**	**4.97**	42,625	4.60	165,460	2.67
Forfeited during the year	**(105,338)**	**11.67**	(211,847)	32.80	(77,629)	6.18
Expired during the year	**(1,122)**	**13.78**	(12,302)	21.13	(75,950)	34.27
Exercised during the year	**(41,802)**	**2.96**	(84,315)	4.07	—	—
Outstanding, end of the year	**1,249,361**	**8.73**	647,156	13.20	912,995	17.42
Options exercisable, end of the year	**777,245**	**11.04**	573,984	14.36	689,883	22.03

The following table summarizes information about the stock options outstanding and exercisable at December 31, 2018:

Range of Exercise Prices	Number Outstanding	Weighted Average Remaining Contractual Life (years)	Weighted Average Exercise Price $	Number Exercisable	Weighted Average Exercise Price $
$2.47 - $3.99	711,827	5.95	3.21	442,231	3.25
$4.84 - $7.81	335,092	3.76	7.21	132,572	7.09
$13.77 - $19.00	92,308	4.63	16.94	92,308	16.94
$20.23 - $36.96	51,777	2.71	32.29	51,777	32.29
$38.09 - $63.84	58,357	2.93	50.85	58,357	50.85
	1,249,361	4.99	8.73	777,245	11.04

Non-exercisable options vest annually over periods ranging from one to three years.

The estimated fair value of stock options issued during the year was determined using the Black Scholes Option Pricing Model using the following weighted average assumptions and fair value of options:

	2018	2017	2016
Risk-free interest rate	**2.02%**	1.18%	0.82%
Expected hold period to exercise	**3.0 years**	3.0 years	3.0 years
Volatility in the price of the Company's shares	**81.15%**	90.73%	94.84%
Rate of forfeiture	**3.67%**	3.67%	3.67%
Dividend yield	**Nil**	Nil	Nil
Weighted average fair value of options	**$2.67**	$2.65	$1.59

We use historical data to estimate the expected dividend yield and expected volatility of our stock in determining the fair value of the stock options. The risk-free interest rate is based on the Government of Canada benchmark bond yield rates in effect at the time of grant and the expected life of the options represents the estimated length of time the options are expected to remain outstanding.

Incentive Share Award Plan

Restricted Share Units

We have issued restricted share units ("RSUs") to non-employee directors through our incentive share award plan. Grants of RSUs to non-employee directors vest either on the third anniversary date from the grant date or when the director ceases to be a member of the board. We have also issued RSUs to certain officers and employees of the Company. Grants of RSUs to certain officers and employees of the Company vest over a three year period. The following RSUs are outstanding at December 31:

	2018	2017	2016
Outstanding, beginning of the year	**190,407**	139,237	38,823
Granted during the year	**102,855**	51,170	110,940
Forfeited during the year	**(4,210)**	—	(10,526)
Vested during the year	**(28,297)**	—	—
Outstanding, end of the year	**260,755**	190,407	139,237

(1) The weighted average fair value of the RSUs granted was $3.35 in 2018 (2017 - $5.96; 2016 - $2.92).

Performance Share Units

We have also issued performance share units ("PSUs") to certain officers and employees of the Company. Grants of PSUs require completion of certain performance criteria and cliff vest after 3 years or vest over a three year period, depending on the grant. PSU grants to certain officers will vest immediately upon a change of control of the Company. If certain officers cease employment with the Company, vesting occurs on a pro rata basis prior to the third anniversary of the grant but after the first anniversary. The following PSUs are outstanding at December 31:

	2018	2017	2016
Outstanding, beginning of the year	**94,734**	88,419	—
Granted during the year	**—**	6,315	157,892
Forfeited during the year	**(31,578)**	—	(69,473)
Outstanding, end of the year	**63,156**	94,734	88,419

(1) The weighted average fair value of the PSUs granted was nil in 2018 (2017 - $3.33; 2016 - $3.38).

We have reserved 1,739,975 common shares for issuance relating to our outstanding equity compensation plans. Compensation expense related to stock options, RSUs and PSUs for the year ended December 31, 2018 was $1,415,833 (2017 - $578,703; 2016 - $406,078).

Note 9: Loss Per Common Share

Loss per common share is calculated using net loss for the year and the weighted average number of common shares outstanding for the year ended December 31, 2018 of 16,016,366 (2017 - 13,936,387; 2016 - 12,618,942). The effect of any potential exercise of our stock options and warrants outstanding during the year has been excluded from the calculation of diluted loss per common share, as it would be anti-dilutive.

Note 10: Contract Liability and Receivable

Regional licensing agreement
We entered into a regional licensing agreement (the "Licensing Agreement") with Adlai Nortye Biopharma Co., Ltd. ("Adlai") in November 2017. Under the terms of the Licensing Agreement, Adlai will have exclusive development and commercialization rights to pelareorep in China, Hong Kong, Macau, Singapore, South Korea and Taiwan. We are entitled to receive upfront license fees, development and regulatory milestone payments, royalties and sales-based milestone payments.

Warrant purchase agreement
We also entered into a warrant purchase agreement with Adlai. Under the terms of the warrant purchase agreement, we were entitled to receive two milestone payments totaling US$8 million made up of two common share purchase warrants:

- One common share purchase warrant of US$2 million whereby, upon exercise, Adlai may purchase our common shares priced at a 20% premium to the five-day weighted average closing price immediately preceding the exercise date. We have the right to call this warrant when the first patient is enrolled in the phase 3 metastatic breast cancer study or six months after execution of the Agreement, whichever is later. As at December 31, 2018, this common share purchase warrant expired unexercised.
- One common share purchase warrant of US$6 million whereby, upon exercise, Adlai may purchase our common shares priced at a 20% premium to the five-day weighted average closing price immediately preceding the exercise date. We have the right to call this warrant upon the enrollment of the 50th patient in the phase 3 metastatic breast cancer study.

Contract liability
Our contract liability balance at December 31, which we expect to record in revenue over the next five years, is as follows:

	2018	2017
Balance, beginning of the year	**6,182,580**	—
Regional licensing agreement	**547,707**	6,182,580
Revenue recognized in the year	**—**	—
Balance, end of the year	**6,730,287**	6,182,580
Contract liability - current	**927,400**	1,545,645
Contract liability - non-current	**5,802,887**	4,636,935
	6,730,287	6,182,580

Contract receivable
Our contract receivable due from Adlai at December 31, 2018 is nil (December 31, 2017 - $4,767,100 (US$3,800,000)). On collection of the contract receivable, an income tax expense of $547,707 was recorded with a corresponding credit to the contract liability.

Note 11: Commitments

We are committed to payments totaling $8,199,509 for activities related to our clinical trial, manufacturing and collaboration programs which are expected to occur over the next year.

We are committed to rental payments (excluding our portion of operating costs and rental taxes) under the terms of our office leases. In 2018, we entered into a new multi-year lease agreement which provided for lease incentives of $77,911 to be recognized over the lease term. We also recorded an onerous lease provision related to the old lease of $67,588 as a result of this lease agreement. Annual payments under the terms of these leases are as follows:

	Amount $
2019	423,718
2020	371,282
2021	166,575
	961,575

Under a clinical trial agreement entered into with the Alberta Cancer Board (“ACB”), we have agreed to repay the amount funded under the agreement together with a royalty, to a combined maximum amount of $400,000 plus an overhead repayment of $100,000, upon sales of a specified product. We agreed to repay the ACB in annual installments in an amount equal to the lesser of: (a) 5% of gross sales of a specified product; or (b) $100,000 per annum once sales of a specified product commence.

Note 12: Contingencies

Assumption Agreement
In 1999, we entered into an agreement that assumed certain obligations (the “Assumption Agreement”) in connection with a Share Purchase Agreement (the “Share Purchase Agreement”) between SYNSORB and our former shareholders to make milestone payments and royalty payments.

As of December 31, 2018, a milestone payment was still outstanding for $1.0 million, due within 90 days of the first receipt from an Appropriate Regulatory Authority, for marketing approval to sell pelareorep to the public or the approval of a new drug application for pelareorep.

This milestone payment, when payable, will be accounted for as research and development expense and will not be deductible for income tax purposes.

In addition to the milestone payment, payments may become due and payable in accordance with the Share Purchase Agreement upon realization of sales of pelareorep. If we receive royalty payments or other payments as a result of entering into partnerships or other arrangements for the development of the reovirus technology, we are obligated to pay to the founding shareholders 10.75% (2017 - 10.75%) of the royalty payments and other payments received. Alternatively, if we develop the reovirus treatment to the point where it may be marketed at a commercial level, the payments referred to in the foregoing sentence will be amended to a royalty payment of 2.15% (2017 - 2.15%) of Net Sales received for such products.

BRI “Work in Kind” Contribution
We entered into an engineering and process development agreement with the Biotechnology Research Institute of the National Research Council of Canada (“BRI”). The terms of this agreement include a “work in kind” contribution from BRI. In exchange for this “work in kind” contribution, we agreed to provide a royalty, contingent upon receiving Sales Revenue, at the lesser of 0.5% of Sales Revenue or $20,000 per year. The total royalty under this Agreement is equal to two times the “work in kind” contribution. As of December 31, 2018, we estimate that the accumulated work in kind totals approximately $301,000.

Note 13: Income Taxes

The provision for income taxes recorded in the consolidated financial statements differs from the amount which would be obtained by applying the statutory income tax rate to the loss before income taxes as follows:

	2018	2017	2016
Loss before income taxes	**(16,489,183)**	(15,475,353)	(15,130,605)
Statutory Canadian corporate tax rate	**27.00%**	27.00%	27.00%
Anticipated tax recovery	**(4,452,079)**	(4,178,345)	(4,085,263)
Foreign jurisdiction tax rate difference	**3,312,963**	2,899,190	2,184,796
Employee stock based compensation	**382,275**	156,250	109,641
Adjustment to opening tax pools	**(238,222)**	162,162	(39,569)
Other permanent differences	**(35,912)**	53,039	100,525
Change in deferred tax benefits deemed not probable to be recovered	**1,579,017**	1,051,725	1,739,557
Current income taxes	**548,042**	144,021	9,687
Adjustment in respect to prior periods	**—**	(2,523)	(313)
Net current tax expense	**548,042**	141,498	9,374

As at December 31, 2018, we have the following non-capital losses for income tax purposes in Canada:

Expiry	$
2026	9,809,000
2027	12,170,000
2029	4,009,000
2030	4,774,000
2031	4,343,000
2032	2,873,000
2033	2,457,000
2034	2,472,000
2035	3,125,000
2036	6,430,000
2037	4,812,000
2038	5,083,000
	62,357,000

As at December 31, 2018, we have the following non-refundable federal investment tax credits for income tax purposes in Canada:

Expiry	$
2020	189,000
2021	471,000
2022	465,000
2023	361,000
2024	228,000
2025	271,000
2026	520,000
2027	596,000
2028	622,000
2029	173,000
2030	91,000
2031	114,000
2032	381,000
2033	487,000
2034	270,000
2035	183,000
2036	41,000
2037	600
	5,463,600

As well, we have unclaimed scientific research and experimental development expenditures available to reduce future years' taxable income of approximately $27,400,000. We have not recorded the potential benefits of these tax pools in these consolidated financial statements.

Deferred tax assets are recognized, to the extent that it is probable that taxable income will be available, against which the deductible temporary differences and the carry-forward of unused tax credits and unused tax losses can be utilized. The components of our unrecognized deferred tax asset are as follows:

	2018 $	2017 $	2016 $
Net operating losses carried forward	**20,664,345**	19,160,218	17,821,631
Scientific research and experimental development	**7,406,169**	7,406,099	7,394,707
Investment tax credits	**3,988,606**	3,988,325	3,990,664
Undepreciated capital costs in excess of book value of property and equipment and intellectual property	**1,949,611**	1,927,640	1,908,654
Share issue costs	**696,346**	493,343	432,659
Net capital losses carried forward	**7,598**	7,598	7,598
Unrecognized deferred tax asset	**34,712,675**	32,983,223	31,555,913

Note 14: Capital Disclosures

Our objective when managing capital is to maintain a strong statement of financial position. We achieve our objective by obtaining 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 and cash and cash equivalents in the definition of capital.

	2018 $	2017 $
Cash and cash equivalents	**13,699,881**	11,836,119
Shareholders' equity	**6,195,363**	8,283,846

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 pelareorep.

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. 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 May 4, 2018, we renewed our short form base shelf prospectus (the "Base Shelf") that qualifies for distribution of up to $150,000,000 of common shares, subscription receipts, warrants, or units (the "Securities") in either Canada, the US or both. Under a 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 subject to change, 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.

Renewing our 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 as a result of using our Base Shelf would be used in line with our Board approved budget and multi-year plan. Our renewed Base Shelf will be effective until May 25, 2020.

Our Base Shelf allowed us to enter into our Common Stock Purchase Agreement in September 2018 and our ATM equity offering sales agreement in October 2018 (see Note 7). We will use these equity arrangements to assist us in achieving our capital objective. Each arrangement provides us with the opportunity to raise capital at our sole discretion providing us with the ability to better manage our cash resources.

We are not subject to externally imposed capital requirements and there have been no changes in how we define or manage our capital in 2018.

Note 15: Financial Instruments

Our financial instruments consist of cash and cash equivalents, other receivables and accounts payable. As at December 31, 2018, there are no significant differences between the carrying values of these amounts and their estimated market values.

Credit risk
Credit risk is the risk of financial loss if a counterparty to a financial instrument fails to meet its contractual obligations. We are exposed to credit risk on our cash and cash equivalents 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.

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.

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. 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. In the normal course of our operations, we are exposed to currency risk from the purchase of goods and services primarily in the U.S., the U.K. and the European Union. In addition, we are exposed to currency risk to the extent cash is held in foreign currencies from either the purchase of foreign currencies or when we receive foreign currency proceeds from operating and financing activities. As well, we are exposed to currency risk related to our regional licensing agreement. 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 in 2018 by approximately $19,006. The impact of a $0.10 increase in the value of the British pound against the Canadian dollar would have increased our net loss in 2018 by approximately $31,029. The impact of a $0.10 increase in the value of the Euro against the Canadian dollar would have increased our net loss in 2018 by approximately $9,209.

We mitigate our foreign exchange risk by maintaining sufficient foreign currencies, through the purchase of foreign currencies or receiving foreign currencies from financing activities, to settle our foreign accounts payable.

Balances in foreign currencies at December 31, 2018 are as follows:

	US dollars $	**British pounds** £	**Euro** €
Cash and cash equivalents	8,889,796	26,936	31,499
Accounts payable	(304,801)	(32,735)	(661)
	8,584,995	(5,799)	30,838

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 14. Accounts payable are all due within the current operating period.

Note 16: Additional Cash Flow Disclosures

Net Change In Non-Cash Working Capital

	2018 $	2017 $	2016 $
Change in:			
Contract receivable	**4,767,100**	(4,767,100)	—
Other receivables	**(13,924)**	16,680	285,653
Prepaid expenses	**475,077**	(915,222)	245,828
Accounts payable and accrued liabilities	**(1,858,170)**	(384,641)	1,359,172
Contract liability	**547,707**	6,182,580	—
Other liabilities	**(27,982)**	—	—
Non-cash impact of foreign exchange	**14,531**	48,558	343,212
Change in non-cash working capital related to operating activities	**3,904,339**	180,855	2,233,865

Other Cash Flow Disclosures

	2018 $	2017 $	2016 $
Cash interest received	**173,496**	130,101	163,902
Cash taxes paid	**15,728**	136,163	4,468

Note 17: Indemnification of Officers and Directors

Our corporate by-laws require that, except to the extent expressly prohibited by law, we will indemnify our officers and directors against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment reasonably incurred in respect of any civil, criminal or administrative action or proceeding as it relates to their services to the Company. The by-laws provide no limit to the amount of the indemnification. We have purchased directors' and officers' insurance coverage to cover claims made against the directors and officers during the applicable policy periods. The amounts and types of coverage have varied from period to period as dictated by market conditions. We believe that we have adequate insurance coverage; however, there is no guarantee that all indemnification payments will be covered under our existing insurance policies.

There is no pending litigation or proceeding involving any of our officers or directors as to which indemnification is being sought, nor are we aware of any threatened litigation that may result in claims for indemnification.

Note 18: Economic Dependence

We are economically dependent on our toll manufacturers. We primarily use one toll manufacturer in the US to produce the clinical grade pelareorep required for our clinical trial program. Any significant disruption of the services provided by our primary toll manufacturer has the potential to delay the progress of our clinical trial program. We have used another toll manufacturer in the U.K. that has also produced clinical grade pelareorep at a smaller scale. We have attempted to mitigate this risk by producing sufficient pelareorep in advance of patient enrollment in a particular clinical trial.

Note 19: Other Expenses and Adjustments

We present our expenses based on the function of each expense and therefore include realized foreign exchange gains and losses, unrealized non-cash foreign exchange gains and losses and non-cash stock based compensation associated with research and development activity as a component of research and development expenses and amortization of property and equipment and stock based compensation associated with operating activities as a component of operating expenses.

	2018 $	2017 $	2016 $
Included in research and development expenses:			
Realized foreign exchange (gain) loss	**(1,995)**	(120,794)	104,851
Unrealized non-cash foreign exchange (gain) loss	**(608,111)**	55,538	67,109
Non-cash share based compensation	**735,292**	230,141	233,919
Included in operating expenses			
Depreciation - property and equipment	**95,375**	90,768	162,233
Non-cash share based compensation	**680,541**	348,562	172,159
Office minimum lease payments	**331,769**	231,509	148,600
Onerous lease contract	**67,588**	—	—
Amortization - lease incentive liability	**8,189**	—	—

Note 20: Related Party Transactions

Compensation of Key Management Personnel

Key management personnel are those persons having authority and responsibility for planning, directing and controlling our activities as a whole. We have determined that key management personnel consists of the members of the Board of Directors along with certain officers of the Company.

	2018 $	2017 $	2016 $
Short-term employee compensation and benefits	**2,680,621**	2,596,082	2,753,553
Termination benefits	**—**	779,666	1,330,828
Share-based payments	**1,067,195**	459,298	372,008
	3,747,816	3,835,046	4,456,389

Assumption Agreement

In November 2017, with the signing of the Licensing Agreement with upfront license fees (see Note 10), the Company triggered a liability of US$178,125 to an officer as detailed in the Assumption Agreement (see Note 12). As at December 31, 2018, the liability was nil (December 31, 2017 - US$178,125 was included in accounts payable and accrued liabilities).

Shareholder Information

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

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Officers

Matt Coffey, PhD, MBA
President and Chief Executive Officer
Kirk Look, CA
Chief Financial Officer
Rita Laeufle, MD, PhD
Chief Medical Officer
Andrew de Guttadauro
President, Oncolytics Biotech (U.S.) Inc.

Directors

Deborah M. Brown, BSc, MBA
Managing Partner, Accelera Canada
Matt Coffey, PhD, MBA
President and CEO, Oncolytics Biotech Inc.
Angela Holtham, MBA, FCPA, FCMA, ICD.D
Corporate Director
J. Mark Lievonen, CM, FCPA, FCA, MBA, LLD
Corporate Director
Wayne Pisano
Corporate Director
William G. Rice, PhD
Chairman, President and CEO, Aptose Biosciences, Inc.
Bernd R. Seizinger, MD, PhD
Corporate Director

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