Liminal BioSciences

Annual Report 2019

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Press Release

For immediate release

LIMINAL BIOSCIENCES REPORTS FOURTH QUARTER AND 2019 YEAR END RESULTS

Key 2019 Events:

- $114.4 million aggregate gross proceeds were raised through a combination of a private placement offering of our common shares, followed by an equity rights offering
- Listing of common shares on the Nasdaq Global Market ("Nasdaq") completed in the fourth quarter
- Divestiture of Prometic Bioseparations Limited ("PBL"), our affinity chromatography resins business, to a subsidiary of KKR & Co. in the fourth quarter for potential gross proceeds of up to $78.5 million
- Strengthening of the Board of Directors and leadership team, including the addition of Ms. Moira Daniels as Head of Regulatory Affairs and Quality Assurance also in the fourth quarter

LAVAL, QC, and CAMBRIDGE, UK – March 20, 2020 – Liminal BioSciences Inc. (Nasdaq & TSX: LMNL) ("Liminal BioSciences" or the "Company"), a clinical-stage biopharmaceutical company focused on discovering, developing and commercializing novel treatments for patients suffering from diseases related to fibrosis, including respiratory, liver and kidney diseases that have high unmet medical need, today reported its financial results for the fourth quarter and year-ended December 31, 2019.

"Since becoming CEO in April 2019, we have made significant progress on the strategic transformation of our Company", said Kenneth Galbraith, Liminal BioSciences' Chief Executive Officer. "We have taken substantial steps, including the divestment of our bioseparations business, to allow us to simplify our operations and continue the

transition of Liminal BioSciences from a multi-platform company into a streamlined organization focusing, in the future, on the development and commercialization of small molecule product candidates with a growing diversity of biological targets and product candidate development programs."

"We have taken steps to improve our financial position through additional capital raised in equity offerings in the second quarter, and by managing our cash runway. We expect to close our Rockville, Maryland operations by the end of 2020."

"We continue to review all of our product candidate development programs in order to streamline our R&D strategy. We believe this will allow us to focus on advancing the development of our most promising clinical-stage product candidates, while remaining committed to the development of our early-stage R&D pipeline of potential new product candidates."

"We are looking forward to our expected resubmission, in the first half of 2020, of a Biological License Application ("BLA") with the United States Food and Drug Administration ("FDA") for Ryplazim® (plasminogen) for the treatment of patients with congenital plasminogen deficiency, and working with the FDA to review our anticipated resubmission during 2020," continued Mr. Galbraith. "Our first product approval from the FDA, if received, would be a historic event for Liminal BioSciences and our shareholders who have supported the Company's efforts to make this potential treatment available to patients in the United States, and eventually other countries."

Anticipated 2020 Milestones

- Anticipated resubmission of a BLA with FDA for Ryplazim® for the treatment of congenital plasminogen deficiency, in the first half of 2020
- Exploring alternatives for the future commercialization of Ryplazim®, if approved, including through a third-party marketing collaboration, and other ongoing preparation for the potential commercial launch of Ryplazim®, if approved, in the United States
- Continued clinical development of fezagepras and PBI-4547
- Anticipated development of oral GPR84 antagonists for the treatment of fibrosis

Fourth Quarter and Year End 2019 Financial Results:

Following the sale of PBL, we have restated the prior periods to remove the impact of those operations from the all lines in the financial statements and have reclassified those results to the discontinued operations line in the financial statement:

- Working Capital: As of December 31, 2019, the Company's working capital, i.e. the current assets net of current liabilities, amounts to a surplus of $63.6 million compared to $5.1 million as of December 31, 2018. Our cash and cash equivalents position at December 31, 2019 was $61.3 million. We also have an unutilized line of credit from Structured Alpha LP, or SALP, in the amount of $29.1 million as of March 20, 2020.
- Revenues were $1.1 million for the fourth quarter of 2019, as compared to $3.4 million for the fourth quarter of 2018. The decrease was principally due to sales of excess normal source plasma inventory that occurred in 2018 and were not repeated in the fourth quarter of 2019.
- R&D expenses were $17.3 million for the fourth quarter of 2019, as compared to $19.2 million for the fourth quarter of 2018. This was primarily due to a decrease in inventory expensed to supply clinical trial patients and third-party costs incurred for the clinical trials, and due to lower rental costs included in R&D due to the impact of adoption of IFRS 16, Leases. This was partially offset by an increase in compensation expense including severances due to headcount reductions.
- Administration, selling and marketing ("SG&A") expenses were $10.3 million for the fourth quarter of 2019, as compared to $10.2 million for the fourth quarter of 2018. The increase was primarily due to the increase in the director and officer insurance following the listing of our common shares on the Nasdaq, which was mostly offset by a reduction in employee compensation expense.
- Net loss from continuing operations was $39.6 million for the fourth quarter of 2019 compared to $142.1 million for the fourth quarter of 2018. The decrease was mainly driven by a decrease of impairment losses of $137.6 million, the reduction in finance costs due to the debt restructuring in April 2019 and the absence of a gain on extinguishment of liabilities of $34.9 million due to the debt modification that took place during the quarter ended December 31, 2018.

- Net loss and net loss attributable to the Company's shareholders were $14.5 million and $14.4 million, respectively, for the fourth quarter of 2019 compared to a net loss and a net loss attributable to the Company's shareholders of $141.3 million and $103.0 million, respectively, for the fourth quarter of 2018. Net loss attributable to the Company's shareholders on a basic and diluted per share basis was $0.62 for the fourth quarter of 2019 compared to $124.04 per share for the fourth quarter of 2018.
- Revenues were $4.9 million for the year ended December 31, 2019, as compared to $24.6 million for the year ended December 31, 2018. The decrease was mainly due to the sales of excess normal source plasma inventory in 2018.
- R&D expenses were $75.1 million for the year ended December 31, 2019, as compared to $84.9 million for the year ended December 31, 2018. The decrease was primarily due to a reduction in spending with third parties on clinical trials, preclinical studies and the validation of analytical assays and in-process controls in the manufacturing of Ryplazim®.
- SG&A expenses were $45.3 million for the year ended December 31, 2019, as compared to $29.4 million for the year ended December 31, 2018. The increase was mainly attributable to employee compensation expense, which includes an increase in share-based payments expense of $10.7 million, as well as legal and audit fees of $2.7 million. This was partially offset by a decrease in consultant fees relating to the potential marketing of products.
- Net loss from continuing operations was $234.2 million for the year ended December 31, 2019, as compared to $239.8 million for the year ended December 31, 2018. The decrease was mainly driven by the decrease on the impairment losses of $137.6 million in year ended December 31, 2019 compared to the corresponding period in 2018. This was partially offset by an increase of the loss on extinguishment of liabilities of $126.0 million which was principally caused by the debt restructuring that occurred in April 2019. The increase in the share-based payments expense of $15.1 million was partially offset by the decrease in other R&D expenses.
- Net loss and net loss attributable to the Company's shareholders were $206.8 million and $205.7 million, respectively, for the year ended December 31, 2019 compared to a net loss and a net loss attributable to the Company's shareholders of $237.9 million and $195.4 million, respectively, for the year

ended December 31, 2018. Net loss attributable to the Company's shareholders on a basic and diluted per share basis was $12.81 for the year ended December 31, 2019 compared to $235.95 per share for the year ended December 31, 2018.

About Liminal BioSciences Inc.

Liminal BioSciences is a clinical-stage biopharmaceutical company focused on discovering, developing and commercializing novel treatments for patients suffering from diseases related to fibrosis, including respiratory, liver and kidney diseases that have high unmet medical need. Liminal BioSciences has a deep understanding of certain biological targets and pathways that have been implicated in the fibrotic process, including fatty acid receptors such as G-protein-coupled receptor 40, or GPR40, and G-protein-coupled receptor 84, or GPR84, and peroxisome proliferator-activated receptors, or PPARs. In preclinical studies, we observed that targeting these receptors promoted normal tissue regeneration and scar resolution, including preventing the progression of, and reversing established fibrosis. We also have encouraging clinical data that we believe supports the translatability of our preclinical data observations to the clinic. We have leveraged this understanding, as well as our experience with generating small molecules, to build a pipeline of differentiated product candidates. Our lead small molecule product candidate, fezagepras (PBI-4050), is expected to enter an additional Phase 1 clinical trial to evaluate multiple ascending doses of fezagepras in healthy volunteers, at dose levels higher than those previously evaluated in our completed Phase 1 and Phase 2 clinical trials. The data from this Phase 1 clinical trial will inform dose selection for future clinical trials of fezagepras, including placebo-controlled, randomized Phase 2 clinical trials in respiratory disease indications such as Idiopathic Pulmonary Fibrosis (IPF) and other Interstitial Lung Diseases (ILDs).

Liminal BioSciences has also leveraged its experience in bioseparation technologies through its wholly-owned subsidiary Prometic Bioproduction Inc. to isolate and purify biopharmaceuticals from human plasma. Our lead plasma-derived product candidate is Ryplazim® (plasminogen), for which the Company expects to resubmit a BLA with the FDA in the first half of 2020 seeking approval to treat patients with congenital plasminogen deficiency.

Liminal BioSciences has active business operations in Canada, the United Kingdom and the United States.

Forward Looking Statement

This press release contains forward-looking statements about Liminal BioSciences' objectives, strategies and businesses and unaudited financial information that involve risks and uncertainties. Forward-looking information includes statements concerning, among other things, statements with respect to the timing of any planned BLA resubmission, development of R&D programs, the timing of initiation of clinical trials, the exploration of alternatives for the future commercialization of Ryplazim®, if approved, including through a third-party marketing collaboration, and the potential commercial launch of Ryplazim®, if approved.

These statements are "forward-looking" because they are based on our current expectations about the markets we operate in and on various estimates and assumptions. Actual events or results may differ materially from those anticipated in these forward-looking statements if known or unknown risks affect our business, or if our estimates or assumptions turn out to be inaccurate. At this stage, the product candidates of the Company have not been authorized for sale in any country. Among the factors that could cause actual results to differ materially from those described or projected herein include, but are not limited to, Liminal BioSciences' ability to develop, manufacture, and successfully commercialize product candidates, if ever, the availability of funds and resources to pursue R&D projects, the successful and timely completion of clinical trials, the ability of Liminal BioSciences' to take advantage of business opportunities in the pharmaceutical industry, uncertainties associated generally with research and development, clinical trials and related regulatory reviews and approvals and general changes in economic conditions. You will find a more detailed assessment of these risks, uncertainties and other risks that could cause actual events or results to materially differ from our current expectations in the filings the Company makes with the U.S. Securities and Exchange Commission from time to time. As a result, we cannot guarantee that any forward-looking statement will materialize. Existing and prospective investors are cautioned not to place undue reliance on these forward-looking statements and estimates, which speak only as of the date hereof. We assume no obligation to update any forward-looking statement contained in this Press Release

even if new information becomes available, as a result of future events or for any other reason, unless required by applicable securities laws and regulations.

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Management Discussion & Analysis

For the quarter and year ended December 31, 2019

This Management's Discussion and Analysis, or MD&A, is intended to help the reader to better understand Liminal BioSciences Inc.'s or Liminal or the Company operations, financial performance and results of operations, as well as the present and future business environment. This MD&A has been prepared as of March 20, 2020 and should be read in conjunction with Liminal's consolidated financial statements for the year ended December 31, 2019. Additional information related to the Company, including the Company's Annual form on Form 20-F ("AIF"), is available on SEDAR at www.sedar.com and EDGAR at www.sec.gov/edgar. All amounts are in thousands of Canadian dollars, except where otherwise noted.

FORWARD-LOOKING STATEMENTS

This MD&A contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, that are based on our management's beliefs and assumptions and on information currently available to our management. These statements are "forward-looking" because they represent our expectations, intentions, plans and beliefs about our business and the markets we operate in and on various estimates and assumptions based on information available to our management at the time these statements are made. For example, statements around financial performance and revenues are based on financial modelling undertaken by our management. This financial modelling takes into account revenues that are uncertain. It also includes forward-looking revenues from transactions based on probability. In assessing probability, management considers the status of negotiations for any revenue generating transactions, and the likelihood, based on the probability of income, that associated costs will be incurred. Management then ranks the probabilities in such a way that only those revenues deemed highly or reasonably likely to be secured are included in the projections.

All statements other than statements of historical facts may be forward-looking statements. Without limiting the generality of the foregoing, words such as "may", "will", "expect", "believe", "anticipate", "intend", "could", "might", "would", "should", "estimate", "continue", "plan" or "pursue", "seek", "project", "predict", "potential" or "targeting" or the negative of these terms, other variations thereof, comparable terminology or similar expressions, are intended to identify forward-looking statements although not all forward-looking statements contains these terms and phrases.

Forward-looking statements are provided for the purposes of assisting you in understanding us and our business, operations, prospects and risks at a point in time in the context of historical and possible future developments and therefore you are cautioned that such information may not be appropriate for other purposes. Actual events or results may differ materially from those anticipated in these forward-looking statements if known or unknown risks affect our business, or if estimates or assumptions turn out to be inaccurate. In particular, forward-looking statements included in this MD&A include, without limitation, statements in respect to:

- our ability to develop, manufacture and successfully commercialize value-added pharmaceutical products;
- our ability to obtain required regulatory approvals;
- the availability of funds and resources to pursue research and development projects;
- the successful and timely completion of our clinical trials;
- our ability to take advantage of business opportunities in the pharmaceutical industry;
- our reliance on key personnel, collaborative partners and other third parties;
- the validity and enforceability of our patents and proprietary technology;
- expectations regarding our ability to raise capital;
- the use of certain hazardous materials;
- the availability and sources of raw materials;

- our manufacturing capabilities;
- currency fluctuations;
- the value of our intangible assets;
- negative operating cash flow;
- the outcome of any current or pending litigation against us;
- uncertainties related to the regulatory process and approvals;
- increasing data security costs;
- costs related to environmental safety regulations;
- competing drugs, as well as from current and future competitors;
- developing products for the indications we are targeting;
- market acceptance of our product candidates by patients and healthcare professionals;
- availability of third-party coverage and adequate reimbursement;
- general changes in economic or market conditions;
- volatility of our share price; and
- other risks and uncertainties, including those listed in the AIF titled "Item 3.D—Risk Factors."

You should refer to the section of the AIF titled "Item 3.D—Risk Factors" for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this MD&A will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame or at all. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

You should read this MD&A and the documents that we reference in this MD&A completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

This MD&A contains market data and industry forecasts that were obtained from industry publications. These data involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. We have not independently verified any third-party information. While we believe the market position, market opportunity and market size information included in this MD&A is generally reliable, such information is inherently imprecise.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this MD&A, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete. Our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

Operating and Financial Review and Prospects.

Overview

We are a clinical-stage biopharmaceutical company focused on discovering, developing and commercializing novel treatments for patients suffering from diseases related to fibrosis, including respiratory, liver and kidney diseases that have high unmet medical need. We have a deep understanding of certain biological targets and pathways that have been implicated in the fibrotic process, including fatty acid receptors such as G-protein-coupled receptor 40, or GPR40, and G-protein-coupled receptor 84, or GPR84, and peroxisome proliferator-activated receptors, or PPARs. In preclinical studies, we observed that targeting these receptors promoted normal tissue regeneration and scar resolution, including preventing the progression of, and reversing established fibrosis. We also have encouraging clinical data that we believe supports the translatability of our preclinical data observations to the clinic. We have leveraged this understanding, as well as our experience with generating small molecules, to build a pipeline of differentiated product candidates.

Our lead small molecule product candidate, fezagepras (also known as PBI-4050), is currently being developed for the treatment of idiopathic pulmonary fibrosis, or IPF, other interstitial lung diseases, or ILDs and an ultra-rare, multi-organ fibrotic disease known as Alström syndrome. Fezagepras is an anti-inflammatory and anti-fibrotic small molecule designed to modulate the activity of multiple receptors, including GPR40, GPR84, PPAR alpha and PPAR gamma.

Our lead plasma-derived product candidate, Ryplazim®, is a highly purified glu-plasminogen derived from human plasma that acts as a plasminogen replacement therapy for patients deficient in plasminogen protein. We plan to resubmit a Biologics License Application, or BLA, with the U.S. Food and Drug Administration, or FDA, in the first half of 2020 based on the results from our open-label Phase 2/3 clinical trial completed in October 2018.

Financial Performance

Amounts in tables are expressed in thousands of Canadian dollars, except per share amounts.

On July 5, 2019, we performed a 1000 to 1 share consolidation of our issued equity instruments including common shares, warrants, options and restricted stock units, or RSU. Any quantity relating to these instruments for 2018 and up to July 5, 2019 or any per unit price such as exercise prices, presented throughout this MD&A have been restated for the share consolidation. The weighted average number of shares outstanding used in the basic and diluted earnings per share, or EPS, have been retroactively adjusted to give effect to the share consolidation and the bonus element included in the rights offering, as required by IAS 33, *Earnings per share*, and consequently the basic and diluted earnings per share presented in this MD&A have also been adjusted.

On November 25, 2019, we completed a disposition of all our shares in Prometic Bioseparations Ltd. or PBL to Gamma Biosciences GP LLC, a subsidiary of KKR & Co. As a result of this transaction, we no longer retain any interest in PBL and its subsidiary Prometic Manufacturing Inc. or PMI and have ceased to consolidate these entities in our consolidated financial statements as of the date of the disposal. Our interest in PBL and PMI has been presented separately as "Discontinued Operations" in the current and comparative results, in accordance with the guidance under IFRS 5, *Non-Current Asset Held for Sale and Discontinued Operations*. Unless otherwise indicated, all financial information represents results from continuing and discontinuing operations.

Financial operations overview

Revenue

Revenues include revenues from plasma sales, milestone and licensing revenues, revenues from the rendering of research and development services and rental revenues.

Cost of sales and other production expenses

Cost of sales and other production expenses includes the cost of the inventory sold, as well as non-capitalizable overhead related to commercial inventory and inventory write-downs.

Research and development expenses

Research and development or R&D expenses comprise the costs to manufacture the plasma-derived product candidates, including Ryplazim®, used in pre-clinical studies, clinical trials, and supplied to clinical trial patients and certain other patients in connection with expanded access programs, including on a named patient basis and via a compassionate use programs until Ryplazim® is commercially approved and available, if ever, and for the development of our production processes for Ryplazim® in preparation of the resubmission of the BLA. It also includes the cost of product candidates used in our small molecule clinical trials such as fezagepras, the cost of external consultants supporting the clinical trials and pre-clinical studies, employee compensation and other operating expenses involved in research and development activities.

Administration, selling and marketing expenses

Administration, selling and marketing expenses mainly consist of salaries and benefits related to our executive, finance, human resources, business development, legal, intellectual property, and information technology support functions. Professional fees reported under administrative expenses mainly include legal fees, accounting fees, audit fees, financial printer fees and fees for taxation advisory. It also includes operating expenses such as insurance costs, office expenses, and travel costs pertaining to the administration, selling and marketing activities.

Selling and marketing expenses include costs associated with managing our commercial activities as we prepare for our first commercial launch.

Bad debt expense

For trade receivables, we apply the simplified approach permitted by IFRS 9, *Financial instrument* or IFRS 9, which requires lifetime expected losses to be recognized from initial recognition of the receivables. Such expected losses are recognized in the statement of operations as bad debt expense.

Loss (gain) on foreign exchange

Gain or loss on foreign exchange includes the effects of foreign exchange variations on monetary assets and liabilities denominated in foreign currencies between the rates at which they were initially recorded at in the functional currency at the date of the transaction and when they are retranslated at the functional currency spot rate of exchange at the reporting date. All differences are included in the consolidated statement of operations.

Finance costs

Finance costs mainly includes interest expense from the long-term debt and from the lease liabilities following the adoption of IFRS 16, *Leases* or IFRS 16 and banking charges. Finance costs are presented net of interest income which primarily results from the interest earned on the cash and cash equivalents we hold.

Loss (gain) on extinguishments of liabilities

When the terms of our long-term debt are modified significantly, the then existing debt is considered extinguished and the carrying amount of the debt before modification is derecognized, and the fair value of the modified debt is recognized. The difference is recorded as a loss (gain) on extinguishment of liabilities. Deferred financing fees carried on the statement of financial position that pertain to the pre-modified debt are expensed immediately and are also included in the loss or gain.

Change in fair value of financial instruments measured at fair value through profit or loss

Fair value increases and decreases on financial instruments measured at fair value through profit or loss are presented here. Over the past three years, this caption includes the changes in fair values of the convertible debt, investments in equity and the warrant liability.

Impairment losses

Impairment losses includes impairments recorded on capital and intangible assets.

Share of losses of an associate

Our pro rata share of the losses incurred by an associate are recognized in the profit and loss. An associate is an entity over which we exercise significant influence.

Income tax expense

Income tax expense includes the current tax expense that will be payable to or collectable from the taxation authorities in the various jurisdiction in which we operate. This includes the U.K. small and medium enterprise R&D tax credits we were eligible for until 2018 inclusively. Income tax expense also includes deferred income tax expense and recoveries. Deferred income tax assets are recognized to the extent that it is probable that future tax profits will allow the deferred tax assets to be recovered.

Discontinued operations

Following the sale of two of our subsidiaries previously included in our bioseparations segment, we have restated the prior periods to remove the impact of those operations from the all lines in the financial statements (revenues, cost of sales and production cost, R&D and administration, selling and marketing being the lines most impacted) and have reclassified those results to the discontinued operations line in the financial statement. The amounts showing in the discontinued operations line do not equal the results reported in prior periods for the bioseparation segment since the ownership of one subsidiary that was part of this segment was not sold and since certain of the corporate expenses that were previously allocated to the segment were not reclassified in the results of discontinued operations if those cost remained going forward.

Operating Results

Comparison of years ended December 31, 2019, 2018 and 2017

The consolidated statements of operations for the year ended December 31, 2019 compared to the corresponding periods in 2018 and 2017 are presented in the following tables:

	Year ended December 31			Change	
	2019	2018	2017	2019 vs 2018	2018 vs 2017
Revenues	$ 4,904	$ 24,633	$ 22,313	$ (19,729)	$ 2,320
Expenses					
Cost of sales and other production expenses	2,763	25,707	3,689	(22,944)	22,018
Research and development expenses	75,114	84,858	93,523	(9,744)	(8,665)
Administration, selling and marketing expenses	45,283	29,448	29,563	15,835	(115)
Bad debt expense	-	-	20,491	-	(20,491)
Loss (gain) on foreign exchange	(1,451)	4,696	(781)	(6,147)	5,477
Finance costs	14,056	22,041	7,889	(7,985)	14,152
Loss (gain) on extinguishments of liabilities	92,374	(33,626)	4,191	126,000	(37,817)
Change in fair value of financial instruments measured at fair value through profit or loss	(1,140)	1,000	-	(2,140)	1,000
Impairment losses	12,366	149,952	-	(137,586)	149,952
Share of losses of an associate	-	22	-	(22)	22
Net loss from continuing operations before taxes	$(234,461)	$(259,465)	$(136,252)	$ 25,004	$ (123,213)
Income tax expense (recovery) from continuing operations:					
Current	(348)	(5,822)	(2,691)	5,474	(3,131)
Deferred	111	(13,815)	(11,611)	13,926	(2,204)
	(237)	(19,637)	(14,302)	19,400	(5,335)
Net loss from continuing operations	$(234,224)	$(239,828)	$(121,950)	$ 5,604	$ (117,878)
Discontinued operations, net of taxes					
Gain on sale of subsidiaries	26,346	-	-	26,346	-
Net income from discontinued operations	1,125	1,932	1,914	(807)	18
Net loss	$(206,753)	$(237,896)	$(120,036)	$ 31,143	$ (117,860)
Net income (loss) attributable to:					
Non-controlling interests - continuing operations	(1,044)	(42,530)	(10,305)	41,486	(32,225)
Owners of the parent					
- Continuing operations	(233,180)	(197,298)	(111,645)	(35,882)	(85,653)
- Discontinued operations	27,471	1,932	1,914	25,539	18
	(205,709)	(195,366)	(109,731)	(10,343)	(85,635)
Net loss	$(206,753)	$(237,896)	$(120,036)	$ 31,143	$ (117,860)
Income (loss) per share					
Attributable to the owners of the parent basic and diluted:					
From continuing operations	$ (14.52)	$ (238.28)	$ (140.26)	$ 223.77	$ (98.03)
From discontinued operations	1.71	2.33	2.40	(0.62)	(0.07)
Total loss per share	$ (12.81)	$ (235.95)	$ (137.85)	$ 223.14	$ (98.10)
Weighted average number of outstanding shares (in thousands)	16,062	828	796	15,234	32

Revenues from continuing operations

The following tables provides the breakdown of total revenues from continuing operations by source of revenue for the year ended December 31, 2019 compared to the corresponding periods in 2018 and 2017:

	Year ended December 31			Change	
	2019	2018	2017	2019 vs 2018	2018 vs 2017
Revenues from the sale of goods	$ 4,734	$ 23,874	$ 1,469	$ (19,140)	$ 22,405
Milestone and licensing revenues	-	-	19,724	-	(19,724)
Revenues from the rendering of services	34	260	120	(226)	140
Rental revenue	136	499	1,000	(363)	(501)
	$ 4,904	$ 24,633	$ 22,313	$ (19,729)	$ 2,320

Revenues in 2019 and 2018 were mainly driven by sales of plasma while revenues in 2017 were mainly driven by milestone and licensing revenues.

The decrease of $19.1 million in revenues from the sale of goods during the year ended December 31, 2019 compared to the corresponding period in 2018, and the increase of $22.4 million during the year ended December 31, 2018 compared to the corresponding period in 2017, are mainly due to the sales of excess normal source plasma inventory in 2018.

We had this excess normal source plasma inventory in 2018, as a result of the change in production forecasts due to the complete response letter, or CRL, from the FDA, following the submission of our BLA for Ryplazim®. Since then, we reduced our plasma purchasing commitments and the sales of excess normal source plasma has been much lower in 2019 at $0.4 million for the year ended December 31, 2019 compared to $22.9 million in 2018. We did not sell normal source plasma in 2017.

The decrease from the sales of normal source plasma in the year ended December 31, 2019 was partially offset by an increase in sales of specialty plasma collected at our plasma collection center by $3.7 million compared to the year ended December 31, 2018. The sales of specialty plasma were at similar levels in the year ended December 31, 2018 compared to the corresponding period in 2017.

In the year ended December 31, 2017, we recognized revenues of $19.7 million, generated by the small molecule therapeutics segment and pertaining to a licensing agreement signed with Jiangsu Renshou Pharmaceutical Co, Ltd. or JRP an affiliate of Shenzhen Royal Asset Management Co., LTD or SRAM, regarding the licensing of the Chinese rights to our small molecules fezagepras, PBI-4547 and PBI-4425. Having not received the licensing and milestone revenues within the specified payment terms, we opted to terminate the licensing agreement in March 2018, thereby resulting in the return of all the rights previously conferred under the licensing agreement back to us.

Cost of sales and other production expenses

Cost of sales and other production expenses includes the cost of the inventory sold, as well as non-capitalizable overhead related to commercial inventory and inventory write-downs.

Cost of sales and other production expenses during the year ended December 31, 2019 decreased by $22.9 million compared to the corresponding period in 2018. Cost of sales and other production expenses during the year ended December 31, 2018 increased by $22.0 million compared to the corresponding period in 2017. These changes mainly reflect the varying volumes of normal source plasma sold. Margins were higher during the year ended December 31, 2019 due to the increase in the sales of the specialty plasma compared to 2018 and 2017. In 2018 the volume of sales was mostly driven by the normal source plasma which generated low margins.

Research and development expenses

The R&D expenses for the year ended December 31, 2019 compared to the same periods in 2018 and 2017, broken down into its two main components, are presented in the following tables:

	Year ended December 31			Change	
	2019	2018	2017	2019 vs 2018	2018 vs 2017
Manufacturing and purchase cost of product candidates used for R&D activities	$ 37,044	$ 38,667	$ 34,703	$ (1,623)	$ 3,964
Other research and development expenses	38,070	46,191	58,820	(8,121)	(12,629)
Total research and development expenses	$ 75,114	$ 84,858	$ 93,523	$ (9,744)	$ (8,665)

R&D expenses include the cost to manufacture plasma-derived product candidates and small molecule product candidates for use in clinical trials, to supply to clinical trial patients and certain other patients in connection with expanded access programs, including on a named patient basis and via a compassionate use programs until Ryplazim® is commercially approved and available, if ever, and for the development of our production processes for Ryplazim® in preparation for the resubmission of the BLA. In 2018 and 2019, there was no commercial production of plasma-derived product candidates we focused on addressing comments received from the FDA in the CRL received in March 2018 and therefore, the cost of manufacturing was classified as R&D expenses. In 2017, some of the plasminogen work in progress inventory was capitalized as part of the inventories carried at December 31, 2017 on the expectation that it would be used for commercial purposes but then it was used in 2018 for processing test runs and to supply participants in the plasminogen congenital deficiency clinical trial and was expensed in R&D during the year.

The plasma-derived product candidates are produced at the Laval plant and the Winnipeg contract manufacturing organization or CMO while the small molecule product candidates are manufactured by third party CMOs. The manufacturing and purchase cost of these product candidates for the year ended December 31, 2019 decreased by $1.6 million compared to the corresponding period in 2018, mainly due to 1) lower expensing of inventories for the production of Ryplazim®, that are expected to be supplied to clinical trial patients and certain other patients in connection with expanded access programs, including on a named patient basis and via a compassionate use programs until Ryplazim® is commercially approved and available, if ever, or for engineering runs at our manufacturing locations, 2) a reduction in the cost for small molecule product candidates, as we did not need to purchase additional materials and 3) the lower rental costs included in R&D due to the impact of the adoption of IFRS 16 in 2019. This decrease was partially offset by an increase in employee salaries due to an increase in manufacturing headcount and an increase in share-based payments expense.

The manufacturing and purchase cost of these product candidates for the year ended December 31, 2018 increased by $4.0 million compared to the corresponding period in 2017, mainly due to the expensing of plasminogen inventory that was on hand as of the previous year end in 2018 as the timeline for the resubmission of the BLA became clearer and it became evident that a portion of the inventory capitalized in 2017 would be used for additional process testing runs while the balance would be used to supply the patients who were part of the clinical trials while awaiting FDA approval of Ryplazim®, if ever.

The decrease of $8.1 million in other R&D expenses during the year ended December 31, 2019 compared to the corresponding period in 2018 was mainly due to a reduction in spending with third parties on clinical trials and pre-clinical studies and the validation of analytical assays and in-process controls in the manufacturing of Ryplazim® amounting to $7.7 million. Clinical trial expenses in the small molecule therapeutics segment declined by $2.0 million as trials undertaken in previous years were completed or nearing their completion and as we were still in the planning stage of future potential clinical trials. Employee compensation expense increased by $2.4 million due to the increase in share-based compensation of $4.3 million, explained below, and was partially offset by a decrease in salaries expense due to a reduction of headcount of $3.0 million.

The decrease of $12.6 million in other R&D expenses during the year ended December 31, 2018 compared to the corresponding period in 2017 was mainly due to the reduction in the clinical trial and pre-clinical research expenses in both the small molecules and plasma-derived therapeutics segments and was partially offset by

additional spending in the implementation and validation of additional analytical assays and "in-process" controls in the manufacturing of Ryplazim®.

Administration, selling and marketing expenses

The increase of $15.8 million in administration, selling and marketing expenses during the year ended December 31, 2019 compared to the corresponding period in 2018 was mainly attributable to the increase in employee compensation expense of $11.4 million, which includes an increase in share-based payments expense of $10.7 million, and is also explained by the increase in legal and audit fees of $2.7 million. This was partially offset by a decrease in consultant fees relating to marketing of products. Legal and audit fees increased in 2019 as a result of the number of complex transactions incurred and in connection with the preparation for the listing of our common shares on the Nasdaq Stock Market LLC, or the Nasdaq.

The administration, selling and marketing expense during the year ended December 31, 2018 remained relatively flat compared to the corresponding period in 2017.

Bad debt expense

There was no bad debt expense during the year ended December 31, 2019 and 2018 compared to $20.5 million for the corresponding period in 2017. The 2017 expense is due to the write-off, affecting the fourth quarter of 2017, of the amounts due from Jiangsu Renshou Pharmaceutical Co, Ltd or JRP in regards to a license agreement. Since we did not receive the licensing and milestone revenues within the specified payment terms, we terminated the agreement in March 2018 and all the rights previously conferred under the license agreement were returned to us.

Share-based payments expense

Share-based payments expense represents the expense recorded as a result of share options and RSU issued to employees and board members. This expense has been recorded as follows in the consolidated statements of operations:

	Year ended December 31			Change	
	2019	2018	2017	2019 vs 2018	2018 vs 2017
Cost of sales and other production expenses	$ 107	$ 299	$ 370	$ (192)	$ (71)
Research and development expenses	7,137	2,295	4,150	4,842	(1,855)
Administration, selling and marketing expenses	14,786	4,128	4,142	10,658	(14)
	$ 22,030	$ 6,722	$ 8,662	$ 15,308	$ (1,940)

The above table includes the share-based payment expense included in both continuing and discontinued operations.

Share-based payments expense increased by $15.3 million during the year ended December 31, 2019, compared to the corresponding period in 2018.

During 2019, we made significant changes to our long-term equity incentive plan to ensure alignment with performance and building shareholder value, and attraction and retention of key employees to drive our future growth. The following important changes were made:

- the cancellation in June 2019 and August 2019 of the outstanding share options for active employees in return for the issuance of new vested options having an exercise price reflecting the share price at the time of the grant subject to stockholder approval;
- the modification of the outstanding performance-based RSU into time-vesting RSU; and
- the issuance of the 2019 annual stock option grant to employees and executives. The vesting terms have been changed from those set in the recent years, especially at the executive level; a portion of the

executive grants vested immediately while the overall vesting period was extended up to a period of 6 years.

Some of these changes triggered an immediate or accelerated recognition of share-based compensation expense resulting in a significant impact on the results during the quarter ended June 30, 2019. Further details of these changes and their accounting impact are provided in Note 19 to the consolidated financial statements for the year ended December 31, 2019.

Share-based payments expense decreased by $1.9 million during the year ended December 31, 2018, compared to the corresponding period in 2017. This decrease is mainly explained by the fact that there were less RSU that vested during the year ended December 31, 2018 compared to the corresponding period in 2017.The RSU expense for performance based RSU can vary significantly from period to period as certain milestones are met, changes in the likelihood of product candidate approvals occur as projects advance, and the timelines to achieve the milestones before expiry become nearer.

Finance costs

Finance costs decreased during the year ended December 31, 2019 by $8.0 million compared to the corresponding period in 2018. This decrease reflects the lower level of debt during 2019 following the April 23, 2019 debt restructuring discussed further below, compared to the same period in 2018.

The adoption of the new lease standard, IFRS 16, at the beginning of 2019, under which lease liabilities are recognized in the consolidated statement of financial position for the discounted value of the future lease payments at initial adoption and with interest expense recognized over the term of each lease, contributes to the increase of finance costs in 2019. The new standard was adopted using the modified retrospective approach and as such, the 2018 figures are not restated. Previously, the embedded interest component in each lease payment was recognized as part of the lease expense included in the various functions presented in the statement of operations such as cost of sales and other production expenses, R&D, and administration, selling and marketing. The interest expense on the lease liabilities from continuing operations for the year ended December 31, 2019 was $6.4 million and is partially offset by the decline in interest expense from long-term debt.

Finance costs increased during the year ended December 31, 2018 by $14.2 million compared to the corresponding period in 2017. This increase reflects the higher level of debt during the year ended December 31, 2018 compared to the same period in 2017 reflecting the amounts drawn on pursuant to a credit facility agreement and the increase in the Original Issue Discount or OID balances, as well as the higher implicit financing rate, when considering the stated interest and the warrants issued, demanded by our lender over the years.

Loss (gain) on extinguishments of liabilities

Loss on extinguishments of liabilities was $92.4 million for the year ended December 31, 2019, mainly due to the debt restructuring agreement on April 23, 2019 with our major creditor, SALP. The debt was reduced to $10.0 million plus interest due, in exchange for the issuance of 15,050,312 common shares. The difference between the adjustment to the carrying value of the loan of $141.5 million and the amount recorded for the shares issued of $228.9 million was recorded as a loss on extinguishment of a loan of $87.4 million, this amount essentially representing the immediate recognition of the accreted interest that would have otherwise been recognized as finance costs over the years until the maturity of the long-term debt. Legal fees related to the debt restructuring of $0.6 million were also recognized as part of the loss on extinguishments of liabilities.

The shares issued in relation to the debt restructuring contained trading restrictions and accordingly, we determined that their quoted price did not fairly represent the value of the shares issued. As such, the issued shares were recorded at fair value using a market approach under a level 2 fair value measurement of $15.21 per share, resulting in a value of the shares issued of $228.9 million. The fair value was based on a share issuance for cash on the same date with a non-related party.

The portion of the loan that was not settled was modified into an interest-bearing loan at 10% stated interest, payable quarterly. The modification of the terms was treated as an extinguishment of the previous loan and the reissuance of a new loan for accounting purposes. The difference between the carrying amount of the extinguished loan of $4.7 million and the fair value of the new loan of $8.5 million was recorded as a loss on debt extinguishment of $3.9 million. The new loan has a higher fair value mainly because the spread between the effective interest rate of 15.05% and the stated interest rate of the amended loan of 10% is smaller compared to the previous spread between the implicit rate used to calculate the face value and the effective interest rate of the loan before modification of 20.06%. The recorded loss represents an immediate recognition of a portion of the unrecognized interest expense on the old loan.

As part of the cost to complete the debt restructuring, the 168,735 warrants held by SALP (Warrants #1, 2, 8 and 9) were cancelled and replaced with an equivalent number of Warrants #10 that will be exercisable at an exercise price of $15.21 per common share and expire on April 23, 2027. The increase of $0.4 million in the fair value of the replacement warrants compared to those cancelled was recorded as part of the loss on extinguishment of liabilities.

The debt restructuring resulted in a recording of a loss on extinguishment of liabilities of $92.3 million; the impacts of the different aspects of this transaction and other elements included in the loss on extinguishments of liabilities in the consolidated statements of operations are detailed in the following table:

Loss on extinguishment of liabilities due to April 23, 2019 loan modification		
Comprising the following elements:		
Debt to equity conversion	$	87,379
Expensing of financing fees on loan extinguishment		653
Extinguishment of previous loan		(4,667)
Recognition of modified loan		8,521
Expensing of increase in the fair value of the warrants		408
Loss on extinguishment of liabilities due to April 23, 2019 loan modification	$	92,294
Loss on extinguishment of liabilities to suppliers		80
Loss on extinguishments of liabilities	$	92,374

Gain on extinguishments of liabilities was $33.6 million for the year ended December 31, 2018. On November 14, 2018, we and the holder of our debt modified the terms of the four loan agreements subject to compliance with covenants and debt servicing obligations, to extend the maturity date of our then-existing credit facility from November 30, 2019 to September 30, 2024 and all three OID loans from July 31, 2022 to September 30, 2024. Interest on amounts outstanding on this credit facility would continue to be payable quarterly at an annual rate of 8.5% during the period of the extension. As of July 31, 2022, the OID loans would be restructured into cash paying loans bearing interest at an annual rate of 10%, payable quarterly. The outstanding face values of the OID loans at that date would become the principal amounts of the restructured loans. As additional consideration for the extension of the maturity dates, we agreed to cancel 100,117 existing warrants (Warrants #3 to 7) and issue replacement warrants to the holder of the long-term debt, bearing a term of 8 years and exercisable at a per share price equal to $1,000.00. The exact number of warrants to be granted was to be set at a number that would result in the holder of the long-term debt having a 19.99% fully-diluted ownership level of our company upon the issuance of the warrants2019. On November 30, 2018, Warrants #3 to 7 were cancelled and 128,057 warrants to purchase common shares ("Warrants #8"), representing a portion of the replacement warrants, were issued. At the end of the agreed upon measurement period for calculating the number of new warrants to be issued, we were to issue the remaining replacement warrants under a new series of warrants ("Warrants #9"), which gave the holder the right to acquire preferred shares. The holder of the long-term debt also obtained our best efforts to support the election of a second representative of the lender to on our board of directors, and the extension of the security to the royalty agreement.

We assessed the changes made to the previous agreements and determined that the modification should be accounted for as an extinguishment of the previous loans and the recording of new loans at their fair value determined as of the date of the modification. The carrying amount of the previous loans of $155.1 million were derecognized followed by the recognition of the fair value of the modified loans of $107.7 million which were

determined using a discounted cash flow model with a market interest rate of 20.1%. Any fees incurred with this transaction were expensed, including legal fees and the difference in fair value between the warrants that were cancelled, and the new warrants issued.

In addition, the fees incurred in regards of this credit facility that were previously recorded in the consolidated statement of financial position as other long-term assets and were being amortized and recognized in the consolidated statement of operations over the original term of this credit facility were expensed upon the modification.

The modification resulted in the recording of a gain on extinguishment of liabilities of $34.9 million; the impacts of the different aspects of this transaction and other elements included in the loss on extinguishments of liabilities in the consolidated statements of operations are detailed in the following table.

Gain on extinguishment of liabilities due to November 14, 2018 debt modification	
Comprising the following elements:	
Extinguishment of previous loans	$(155,055)
Expensing of deferred financing fees on Credit Facility	3,245
Recognition of modified loans	107,704
Expensing of increase in the fair value of the warrants	8,778
Warrants proceeds	(10)
Expensing of legal fees incurred with the debt modification	434
Gain on extinguishment of liabilities due to November 14, 2018 debt modification	$ (34,904)
Loss on extinguishment of liabilities due to set-off of principal	1,278
Gain on extinguishments of liabilities	$ (33,626)

Netted against the above gain in 2018 were some losses on extinguishment of liabilities due to the set-off of principal. A similar loss was recorded in 2017. SALP, the holder of the long-term debt, used the set-off of principal right in the loan agreements, to settle various amounts due to us under a royalty purchase agreement in 2018 and its participation in a private placement in 2017.

In August and September 2018, the face value of the second OID loan was reduced by $3.9 million from $21.2 million to $17.3 million, in settlement of $3.9 million due by SALP under the royalty agreement. The carrying amount of the loan was reduced by $2.6 million and a loss on extinguishment of liabilities of $1.3 million.

On July 6, 2017, the face value of the third OID loan was reduced by $8.6 million, from $39.2 million to $30.6 million. The reduction of $8.6 million is equivalent to the value of 5,045 common shares issued at the agreed price of $1,700.00. The difference of $4.2 million between the adjustment to the carrying value of the loan of $4.1 million and the amount recorded for the shares issued of $8.3 million was recognized as a loss on extinguishment of liabilities.

Change in fair value of financial instruments measured at fair value through profit or loss

In November 2018, we issued Warrant #9 to SALP as part of a completed financing transaction with SALP. These warrants did not meet the definition of an equity instrument and were treated as a derivative instrument which was measured at recurring fair value. The change in fair value of the warrant liability, recognized in the consolidated statements of operations, during the year ended December 31, 2019 and 2018 was a gain of $1.1million and $0.2 million respectively.

In 2015, we entered into research and development agreements as well as a license agreement with ProThera Biologics Inc., or ProThera to develop, manufacture and market Inter-alpha Inhibitor Proteins or IaIP, for the treatment of two indications, one of which is Necrotizing Enterocolitis. In 2016 and 2018, we invested in a convertible debt instrument of ProThera. During the year ended December 31, 2018, the decision was made to halt the development of IaIP and to focus on Ryplazim®. Accordingly, a $1.2 million loss was recorded on the

reduction in the fair value of our investment in the convertible debt of ProThera. In 2019, the license agreement, development agreements, the convertible debt instrument was terminated.

Impairment losses

2019

During the year 2019, we, headed by our new Chief Executive Officer, have been evaluating our intellectual property and the related market opportunities in the context of our financial situation and have made further decisions about the areas we will or will not pursue.

One of these decisions affecting our plasma-derived therapeutics segment, was to no longer pursue other indications relating to the human-plasma protein plasminogen. As such, we believe we have ensured sufficient resources to complete and re-submit a BLA for Ryplazim® for the treatment of congenital plasminogen deficiency to the FDA, and to secure ongoing manufacturing supply. We have ceased all R&D activities in the plasma-derived therapeutics segment not relating to our Ryplazim®. Because of this, our long-term production forecasts for plasminogen were reduced and one of our planned manufacturing facilities and a technical transfer facility are no longer required. We also intend to close our R&D facility in Rockville, MD by the end of 2020. Consequently, the capital and intangible assets in the plasma-derived therapeutics segment that were no longer to be used as originally planned were reviewed for impairment and written-down to their net recoverable value determined as the fair value less cost of disposal using a market approach. We assessed the resale value of the property, plant and equipment, the licenses and patents in their present condition, less cost of disposal and consequently, recorded an impairment of $7.1 million and $4.5 million on capital assets and intangible assets, respectively, for the year ended December 31, 2019.

In reviewing our portfolio of compounds in the small molecule therapeutics segment, we identified compounds that where not within the areas of fibrosis in which we intend to focus and evaluated the net recoverable value of those related patents as nil, determined as the fair value less cost of disposal using a market approach. An impairment on intangible assets of $0.6 million was recognized for the year ended December 31, 2019.

As a result of the sale of two of our subsidiaries previously included in our bioseparations segment, some intellectual property including patents that we retained are no longer expected to be developed. We evaluated the net recoverable value of those patents as nil, using a fair value less cost of disposal using a market approach. An impairment on intangible assets of $0.1 million was recognized for the year ended December 31, 2019.

2018

As a result of various events during 2018, including: 1) the delay of the expected commercial launch of Ryplazim® following the identification by the FDA of a number of changes required in the Chemistry, Manufacturing and Controls, or CMC section of our BLA submission for Ryplazim® for the treatment of congenital plasminogen deficiency, 2) our limited financial resources since the fourth quarter of 2018, which significantly delayed manufacturing expansion plans as we focused our resources on the resubmission of the Ryplazim® BLA with the FDA; 3) the recognition of the larger than anticipated commercial opportunities for Ryplazim®, if approved, and 4) the change in executive leadership in the fourth quarter of 2018, which realigned our strategic plans in the fourth quarter of 2018 to focus all available plasma-derived therapeutic segment resources on the manufacturing and development of Ryplazim® for the treatment of congenital plasminogen deficiency and other indications.

These changes and their various impacts prompted us to perform an impairment test of the intravenous Immunoglobulin, or IVIG, cash generating unit, or CGU, which includes assets such as the licenses held by NantPro Biosciences, LLC and Prometic Biotherapeutics Inc., manufacturing equipment located at our Canadian manufacturing facilities and the CMO facility at December 31, 2018, and to review whether other assets pertaining to follow-on proteins might be impaired. The license held by NantPro allows it to market and offer

for sale in the U.S., IVIG manufactured using the PPPS process for the treatment of primary immunodeficiency, if approved. NantPro is our subsidiary.

In regards to the IVIG CGU, the substantial work, time and investment required and limited resources available to complete a robust CMC package for IVIG prior to filing a BLA, and the reduction of the forecasted IVIG production capacity at all plants would significantly delay the commercialisation of IVIG compared to previous timelines. As a result, cash inflows beginning beyond 2023 were not considered in the calculation of the value in use impairment test due to the inherent uncertainty in forecasting cash flows beyond a five-year period. The value in use for the IVIG CGU was therefore $nil. Management also evaluated the fair value less cost to sell and determined that this value also approximated $nil.

Consequently, impairment losses for the totality of the carrying amounts of the NantPro Biosciences, LLC license and a second license acquired in January 2018, giving the rights to use Masterplasma IVIG clinical data and the design plans for a plant with a production capacity in excess of current needs, of $141.0 million and $1.6 million, respectively, were recorded. An impairment was also recorded on the option to purchase equipment in the amount of $0.7 million since we determined the likelihood of exercising this option was low in view of the manufacturing and production plans. Finally, an impairment of $5.7 million was recorded on IVIG production equipment to reduce their value to the fair value less cost to sell.

We also reviewed the carrying amount of other assets pertaining to ProThera and the development of IaIP we acquired, since the resources for further advancement of these assets were limited due to the focus on Ryplazim®. As a result, we recorded an impairment on our investment in an associate of $1.2 million. We also considered the uncertainty of future cash flows for product candidates that have not yet commenced Phase 1 clinical trials in making this estimate.

Income taxes

Current income tax recovery during the year ended December 31, 2019, decreased by $5.5 million compared to the corresponding period in 2018. The decrease during the year ended December 31, 2019 was primarily because we were no longer eligible for certain R&D tax credits in the U.K. following the change in control that resulted after our debt restructuring in April 2019 and therefore no income tax recovery was recorded during the year ended December 31, 2019 on R&D expenditures incurred during the year. This was partially offset by the recognition of R&D tax credits for previous years following the resolution of tax uncertainties regarding the eligibility of certain expenses for 2018 and prior years, upon conclusion of an audit by the taxation authorities. In addition, during the year ended December 31, 2019, we recorded an income tax expense of $1.3 million following the utilization of previously unrecognized non-refundable federal R&D tax credits which were recognized in reduction of R&D expenses.

Current income tax recovery during the year ended December 31, 2018 increased by $3.1 million compared to the corresponding period in 2017. The increase was principally due to the increase in refundable R&D tax credits in the U.K.

Deferred income tax recovery in 2019 was significantly reduced to an expense of $0.1 million as we no longer recognized deferred tax assets in regards to the losses attributed to us as a partner in NantPro Biosciences, LLC since 2019 given there is no longer a balance of deferred tax liabilities against which such deferred tax assets can be recognized. In the year ended December 31, 2018 and 2017, the deferred income tax recovery recognized for NantPro Biosciences, LLC was $14.1 million and $10.7 million, respectively.

Non-controlling interest

The non-controlling interest for the year ended December 31, 2019 compared to the same periods in 2018 and 2017, broken down into its three main components, are presented in the following table:

	Year ended December 31			Change	
	2019	2018	2017	2019 vs 2018	2018 vs 2017
Consolidated statements of operations:					
Prometic Bioproduction Inc.	$ -	$ (927)	$ (4,750)	$ 927	$ 3,823
Pathogen Removal and Diagnostic Technologies Inc.	(713)	(641)	(778)	(72)	137
NantPro Biosciences, LLC	(331)	(40,962)	(4,777)	40,631	(36,185)
Total non-controlling interests	$ (1,044)	$ (42,530)	$ (10,305)	$ 41,486	$ (32,225)

The decrease in the non-controlling interests share in the losses of $41.5 million during the year ended December 31, 2019 compared to the corresponding period in 2018 was mainly due to the impact of the impairment of the carrying amount of the NantPro license in NantPro Biosciences, LLC in 2018 on the non-controlling interest. We also acquired the full ownership of Prometic Bioproduction Inc. in April 2018 which explains why there is no longer any non-controlling interest sharing in the losses of this subsidiary in the consolidated statements of operations since that date.

Net loss from continuing operations

The net loss from continuing operations decreased by $5.6 million during the year ended December 31, 2019 compared to the corresponding period in 2018. This was mainly driven by the decrease on the impairment losses of $137.6 million in year ended December 31, 2019 compared to the corresponding period in 2018. This was partially offset by an increase of the loss on extinguishment of liabilities of $126.0 million which was principally caused by the debt restructuring that occurred in April 2019. The increase in the share-based payments expense of $15.1 million was partially offset by the decrease in other R&D expenses.

The net loss from continuing operations increased by $117.9 million during the year ended December 31, 2018 compared to the corresponding period of 2017. This was mainly driven by the impairment losses of $150.0 million recorded in year ended December 31, 2018. This was partially offset by the bad debt expense of $20.5 million recorded in 2017.

Net income from discontinued operations

Following the sale of our interests in PBL and PMI in November 2019, the results of the two subsidiaries are presented separately as discontinued operations in our current and comparative results. The net income from discontinued operations was relatively stable over the last three year representing a net income of $1.1 million, $1.9 million and $1.9 million for the years ended December 2019, 2018 and 2017 respectively. The sale of the subsidiaries generated a gain of $26.3 million that is broken down into its main components in the following table:

Fair value of the consideration received and receivable:	$ 51,927
Less:	
Carrying amount of net assets sold	(22,015)
Transaction costs	(5,015)
Add: Reclassification of foreign currency translation reserve from other comprehensive income into the statement of operations	1,449
Gain on sale of subsidiaries (income tax $nil)	$ 26,346

Comparison of quarters ended December 31, 2019, 2018 and 2017

The consolidated statements of operations for the quarter ended December 31, 2019 compared to the same periods in 2018 and 2017 are presented in the following tables:

	Quarter ended December 31			Change	
	2019	2018	2017	2019 vs 2018	2018 vs 2017
Revenues	$ 1,050	$ 3,379	$ 458	$ (2,329)	$ 2,921
Expenses					
Cost of sales and other production expenses	528	3,359	747	(2,831)	2,612
Research and development expenses	17,253	19,191	26,440	(1,938)	(7,249)
Administration, selling and marketing expenses	10,278	10,165	8,251	113	1,914
Bad debt expense	-	-	20,491	-	(20,491)
Loss (gain) on foreign exchange	(205)	3,819	(1,518)	(4,024)	5,337
Finance costs	1,858	6,554	2,621	(4,696)	3,933
Loss (gain) on extinguishments of liabilities	-	(34,904)	-	34,904	(34,904)
Change in fair value of financial instruments measured at fair value through profit or loss	-	1,000	-	(1,000)	1,000
Impairment losses	12,366	149,952	-	(137,586)	149,952
Net loss from continuing operations before taxes	$ (41,028)	$ (155,757)	$ (56,574)	$ 114,729	$ (99,183)
Income tax expense (recovery) from continuing operations:					
Current	(1,587)	(1,887)	(4,661)	300	2,774
Deferred	111	(11,725)	(7,983)	11,836	(3,742)
	(1,476)	(13,612)	(12,644)	12,136	(968)
Net loss from continuing operations	$ (39,552)	$ (142,145)	$ (43,930)	$ 102,593	$ (98,215)
Discontinued operations, net of taxes					
Gain on sale of subsidiaries	26,346	-	-	26,346	-
Net income(loss) from discontinued operations	(1,303)	831	2,284	(2,134)	(1,453)
Net loss	$ (14,509)	$ (141,314)	$ (41,646)	$ 126,805	$ (99,668)
Net income (loss) attributable to:					
Non-controlling interests - continuing operations	(155)	(38,361)	(3,367)	38,206	(34,994)
Owners of the parent					
- Continuing operations	(39,397)	(103,784)	(40,563)	64,387	(63,221)
- Discontinued operations	25,043	831	2,284	24,212	(1,453)
	(14,354)	(102,953)	(38,279)	88,599	(64,674)
Net loss	$ (14,509)	$ (141,314)	$ (41,646)	$ 126,805	$ (99,668)
Income (loss) per share					
Attributable to the owners of the parent basic and diluted:					
From continuing operations	$ (1.69)	$ (125.04)	$ (49.35)	$ 123.35	$ (75.69)
From discontinued operations	1.07	1.00	2.78	0.07	(1.78)
Total loss per share	$ (0.62)	$ (124.04)	$ (46.57)	$ 123.42	$ (77.47)
Weighted average number of outstanding shares (in thousands)	23,313	830	822	22,483	8

Revenues from continuing operations

The following tables provides the breakdown of total revenues from continuing operations by source for the quarter ended December 31, 2019 compared to the corresponding periods in 2018 and 2017:

	Quarter ended December 31			Change	
	2019	2018	2017	2019 vs 2018	2018 vs 2017
Revenues from the sale of goods	$ 1,016	$ 3,332	$ 221	$ (2,316)	$ 3,111
Rental revenue	34	47	237	(13)	(190)
	$ 1,050	$ 3,379	$ 458	$ (2,329)	$ 2,921

The decrease of $2.3 million in the revenues from the sale of goods during the quarter ended December 31, 2019 compared to the corresponding period in 2018 and the increase of $3.1 million during the quarter ended December 31, 2018 compared to the corresponding period in 2017 are mainly due to $3.1 million of sales of excess normal source plasma inventory that occurred in the quarter ended December 31, 2018. In 2019, this decrease was partially offset by the increase in sales of specialty plasma of $0.8 million in the quarter ended December 31, 2019 compared to the corresponding period in 2018.

Cost of sales and other production expenses

Cost of sales and other production expenses during the quarter ended December 31, 2019 decreased by $2.8 million compared to the corresponding period in 2018 while cost of sales and other production expenses during the quarter ended December 31, 2018 increased by $2.6 million compared to the corresponding period in 2017. These variations are mainly due to the sale of excess normal plasma that occurred during the quarter ended December 31, 2018 and were not replicated in the comparative period.

Research and development expenses

The R&D expenses for the quarter ended December 31, 2019 compared to the same periods in 2018 and 2017, broken down into its two main components, are presented in the following table:

	Quarter ended December 31			Change	
	2019	2018	2017	2019 vs 2018	2018 vs 2017
Manufacturing and purchase cost of product candidates used for R&D activities	$ 6,592	$ 10,463	$ 10,911	$ (3,871)	$ (448)
Other research and development expenses	10,661	8,728	15,529	1,933	(6,801)
Total research and development expenses	$ 17,253	$ 19,191	$ 26,440	$ (1,938)	$ (7,249)

The manufacturing and purchase cost of product candidates for the quarter ended December 31, 2019 decreased by $3.9 million compared to the corresponding period in 2018, mainly due to less expensing of inventories that were expected to be supplied to clinical trial patients until Ryplazim® is commercially approved and available, if ever, and due to the lower rental costs included in R&D due to the impact of the adoption of IFRS 16 in 2019. The manufacturing and purchase cost of product candidates used for R&D activities for the quarters ended December 31, 2018 and 2017 remained stable.

The increase of $1.9 million in other R&D during the quarter ended December 31, 2019 compared to the corresponding period in 2018 was mainly due to an increase in employee compensation expenses of $1.9 million due to severance benefits following reduction of headcount. The increase in other R&D is also due to a reduction of $0.8 million in R&D tax credit being recognized against R&D cost as we reduced the amount of the credit receivable as we re-evaluated the uncertainties about the eligibility of certain expenses. This was partially offset by the reduction in spending with third parties on clinical trials and pre-clinical studies of $1.4 million. Clinical trial expenses declined as trials undertaken in previous years were completed or nearing their completion.

The decrease of $6.8 million in other R&D expenses during the quarter ended December 31, 2018 compared to the corresponding period in 2017 was mainly due to the reduction in the clinical trial and pre-clinical research expenses in both the small molecules and plasma-derived therapeutics segments which were partially offset by

additional spending in the implementation and validation of additional analytical assays and "in-process" controls in the manufacturing of Ryplazim®.

Administration, selling and marketing expenses

The increase of $0.1 million in administration, selling and marketing expenses during the quarter ended December 31, 2019 compared to the corresponding period in 2018 was mainly attributable to the increase in the director and officer insurance following the listing of our common shares on the Nasdaq, which was partially offset by a reduction in salaries expense of $0.9 million, since , we recorded a significant severance expense with the departure of the former CEO during the quarter ended December 31, 2018. This also explains why the administration costs during this period were higher than those for the quarter ended December 31, 2017.

Share-based payments expense

Share-based payments expense represents the expense recorded as a result of share options and RSU issued to employees and board members. This expense has been recorded as follows in the consolidated statements of operations:

	Quarter ended December 31			Change	
	2019	2018	2017	2019 vs 2018	2018 vs 2017
Cost of sales and other production expenses	$ 12	$ 128	$ 71	$ (116)	$ 57
Research and development expenses	963	1,008	1,280	(45)	(272)
Administration, selling and marketing expenses	1,995	2,603	1,220	(608)	1,383
	$ 2,970	$ 3,739	$ 2,571	$ (769)	$ 1,168

The above table includes the share-based payment expense included in both continuing and discontinued operations.

Share-based payments expense decreased by $0.8 million during the quarter ended December 31, 2019 compared to the corresponding period in 2018. The decrease is mainly due to the change in the RSU vesting period for the 2019 grant compared to previous year grants, as the 2019 RSU were issued and vested during the first half of 2019 instead of being amortized over several years, as we did in previous years. As such the expense during the fourth quarter is lower since there was less expense to recognize for unvested RSU.

Share-based payments expense increased by $1.2 million during the quarter ended December 31, 2018 compared to the corresponding period in 2017. The increase was mainly due to an additional charge of $1.2 million during the fourth quarter of 2018, in anticipation of the vesting of certain awards might be accelerated as part of termination benefits still being negotiated, for our former CEO, at the end of the year.

Finance costs

Finance costs increased significantly from 2017 to 2018 as the interest expense on the long-term debt increased until the debt restructuring on April 23, 2019. Post debt restructuring, interest expense has declined significantly as the principal amount of loans outstanding decreased to below $11.0 million. Offsetting some of this decrease in 2019 was the impact of the adoption of IFRS 16 whereby the interest expense on the lease liability was captured under finance costs.

Bad debt expense, gain on extinguishments of liabilities, change in fair value of financial instruments measured at fair value through profit or loss and impairment losses

The details regarding the transaction for the gain on extinguishment of liabilities due to debt modification, the bad debt expense, the change in fair value of financial instruments measured at fair value through profit or loss and the impairment losses and the explanation of the variances over the various periods can be found in the results of operations for the years ended December 31, 2019, 2018 and 2017.

Income taxes

Current income tax recovery during the quarter ended December 31, 2019, decreased by $0.3 million compared to the corresponding period in 2018. The decrease was primarily because we were no longer eligible for certain R&D tax credits in the U.K. in 2019 following the change in control that resulted after our debt restructuring in April 2019. This decrease was partially offset by the revision of the amount we recorded as R&D tax credit receivable following more advanced discussions with the applicable regulatory authority eliminating certain uncertainties we previously had about the eligibility of certain expenditures. Current income tax recovery during the quarter ended December 31, 2018 decreased by $2.8 million compared to the corresponding period in 2017. The decrease was mainly due to timing of the recognition of R&D tax credits for the U.K. in 2017 which were delayed until the end of the year since we were unsure whether we would still qualify for the SME R&D tax credit until that time.

Deferred income tax recovery in 2019 was $0.1 million, as we no longer recognized deferred tax assets in regards to the losses attributed to us as a partner in NantPro Biosciences, LLC since there was no longer a balance of deferred tax liabilities against which such deferred tax assets can be recognized.

Deferred income tax recovery was $11.7 million during the quarter ended December 31, 2018 compared to $8.0 million for the corresponding period of 2017, representing an increase of $3.7 million.

During the first three quarters of 2018 and during the year ended December 31, 2017, we recorded income tax recoveries from the recognition of deferred tax assets pertaining to the unused tax losses attributable to us as a partner in NantPro. During the fourth quarter of 2017, there was a significant increase in the deferred income tax recovery recorded due to the change in the US federal income tax rate from 35% to 21%, producing a significant decrease in the deferred tax liability that was recognized in the business combination of NantPro. During the fourth quarter of 2018, following the impairment of the NantPro license, the deferred tax liability of $27.5 million for that asset was reversed and the deferred tax assets of $14.6 million relating to the unused tax losses were derecognized.

Non-controlling interest

The non-controlling interests for the quarter ended December 31, 2019 compared to the same periods in 2018 and 2017, shown by entity are presented in the following tables:

	Quarter ended December 31			Change	
	2019	2018	2017	2019 vs 2018	2018 vs 2017
Consolidated statements of operations:					
Prometic Bioproduction Inc.	$ -	$ (1)	$ (1,305)	$ 1	$ 1,304
Pathogen Removal and Diagnostic Technologies Inc.	(92)	(7)	(76)	(85)	69
NantPro Biosciences, LLC	(63)	(38,353)	(1,986)	38,290	(36,367)
Total non-controlling interests	$ (155)	$ (38,361)	$ (3,367)	$ 38,206	$ (34,994)

The increase in the non-controlling interests of $38.2 million during the quarter ended December 31, 2019 compared to the corresponding period in 2018 was mainly due to the impairment of the carrying amounts of the NantPro license in NantPro Biosciences, LLC in 2018 and its effect on the non-controlling interest. We also acquired the full ownership of Prometic Bioproduction Inc. in April 2018 which explains why there was no non-controlling interest share in the losses recognized for this subsidiary in the consolidated statements of operations in the quarters ended December 31, 2019 and 2018. The low level of operational activities in Pathogen Removal and Diagnostic Technologies Inc. and NantPro Biosciences, LLC explain the low value of the non-controlling interests pick up in the consolidated statements of operations.

Net loss from continuing operations

The net loss from continuing operations decreased by $102.6 million during the quarter ended December 31, 2019 compared to the corresponding period in 2018. This was mainly driven by a decrease of impairment losses of $137.6 million, the reduction in finance costs due to the debt restructuring in April 2019 and the absence of

a gain on extinguishment of liabilities of $34.9 million due to debt modification during the quarter ended December 31, 2019 as there was in the same period in 2018.

The net loss from continuing operations increased by $98.2 million during the quarter ended December 31, 2018 compared to the corresponding period in 2017. The increase was mainly generated by the impairment losses recognized in 2018 which was partially offset by the gain on extinguishment of liabilities, by a reduction in R&D in the same period and as a result of the recognition of $20.5 million bad debt expense recorded on the JRP during the quarter ended December 31, 2017.

Discontinued operations, net of taxes

The results from discontinued operations have been separated into two components to distinguish the gain we made upon the sale of the business from the results from its operations.

Net income from discontinued operations decreased by $2.1 million during the quarter ended December 31, 2019 compared to the corresponding period in 2018. This decrease is due to the reduction of the contribution from the net margin of $1.2 million due to a reduction in sales and was also due to the recording of bonus expenses paid to employees upon the successful completion of the sale of the bioseparations operations and regular bonuses under our employee bonus program while no bonuses were paid for 2018.

Net income from discontinued operations decreased by $1.5 million for the quarter ended December 31, 2018 compared to the corresponding period of 2017 mainly because a higher portion of the sales were for lower margin products in 2018 compared to 2017.

During the quarter ended December 31, 2019, we realized a gain upon the sale of the bioseparations operations of $26.3 million which was determined as follows:

Fair value of the consideration received and receivable:	$ 51,927
Less:	
Carrying amount of net assets sold	(22,015)
Transaction costs	(5,015)
Add: Reclassification of foreign currency translation reserve from other comprehensive income into the statement of operations	1,449
Gain on sale of subsidiaries (income tax $nil)	$ 26,346

The details of this transaction are described in Note 5 of the consolidated financial statements for the year ended December 31, 2019

Adjusted EBITDA analysis

Adjusted EBITDA is a measure that is not defined or standardized under IFRS and it is unlikely to be comparable to similar measures presented by other companies. We believe that adjusted EBITDA provides additional insight regarding cash used in operating activities on an on-going basis. It also reflects how management analyses performance and compares that performance against other companies. In addition, we believe that adjusted EBITDA is a useful measure as some investors and analysts use EBITDA and similar measures to compare us against other companies. Adjusted EBITDA adjusts net loss for the elements presented in the table above.

The Adjusted EBITDA for the years ended December 31, 2019, 2018 and 2017 are presented in the following table:

	Year ended December 31			Change	
	2019	2018	2017	2019 vs 2018	2018 vs 2017
Net loss from continuing operations	$(234,224)	$(239,828)	$(121,950)	$ 5,604	$ (117,878)
Adjustments to obtain adjusted EBITDA:					
Loss (gain) on foreign exchange	(1,451)	4,696	(781)	(6,147)	5,477
Finance costs	14,056	22,041	7,889	(7,985)	14,152
Loss (gain) on extinguishments of liabilities	92,374	(33,626)	4,191	126,000	(37,817)
Change in fair value of financial instruments measured at fair value through profit or loss	(1,140)	1,000	-	(2,140)	1,000
Impairment losses	12,366	149,952	-	(137,586)	149,952
Share of losses of an associate	-	22	-	(22)	22
Income tax recovery	(237)	(19,637)	(14,302)	19,400	(5,335)
Depreciation and amortization	8,858	4,539	3,669	4,319	870
Share-based payments expense	21,541	6,400	8,268	15,141	(1,868)
Adjusted EBITDA from continuing operations	$ (87,857)	$(104,441)	$(113,016)	$ 16,584	$ 8,575
Plus: adjusted EBITDA from discontinued operations	29,722	2,795	2,896	26,927	(101)
Adjusted EBITDA	$ (58,135)	$(101,646)	$(110,120)	$ 43,511	$ 8,474

The comparability of the 2019 adjusted EBITDA figures compared to those of 2018 and 2017 have been impacted by the adoption of IFRS 16 in 2019. The effect of the adoption of IFRS 16 is discussed further in this MD&A under the section titled "Changes in Accounting Policies". Since the lease component costs of lease agreements are now captured in the statement of operations as depreciation of right-of-use assets, the depreciation expense is higher in 2019 and the interest component is now captured in financing costs. Therefore, the effect of IFRS 16 is to improve adjusted EBITDA as these items are excluded from the computation. The 2018 and 2017 comparative adjusted EBITDA figures have not been restated for IFRS 16.

The increase of $43.5 million of the total adjusted EBITDA for the year ended December 31, 2019 compared to the corresponding period in 2018 was mainly due to the gain from the sale of the bioseparations operations which increased the adjusted EBITDA from discontinued operations by $26.9 million and the decrease in R&D expenses, excluding share-based payments, of $14.6 million. This is also explained by the increase in margin from the sales of goods from continuing operations of $3.2 million. This was partially offset by the increase in administration, selling and marketing, excluding share-based payments expense, of $5.2 million. The removal of the depreciation of right-of-use assets of $4.9 million and the interest expense on the lease liabilities of $7.1 million in the year ended December 31, 2019 are other factors explaining the difference. This comparison is limited however as the accounting for leases is different in each period.

The increase of $8.5 million of the total adjusted EBITDA for the year ended December 31, 2018 compared to the corresponding period in 2017 was mainly a result of the decrease in R&D expenditures, excluding share based payments of $6.8 million during the year ended December 31, 2018 compared to the corresponding period in 2017.

The adjusted EBITDA for the quarters ended December 31, 2019, 2018 and 2017 are presented in the following tables:

	Quarter ended December 31			Change	
	2019	2018	2017	2019 vs 2018	2018 vs 2017
Net loss from continuing operations	$ (39,552)	$ (142,145)	$ (43,930)	$ 102,593	$ (98,215)
Adjustments to obtain adjusted EBITDA:					
Loss (gain) on foreign exchange	(205)	3,819	(1,518)	(4,024)	5,337
Finance costs	1,858	6,554	2,621	(4,696)	3,933
Loss (gain) on extinguishments of liabilities	-	(34,904)	-	34,904	(34,904)
Change in fair value of financial instruments measured at fair value through profit or loss	-	1,000	-	(1,000)	1,000
Impairment losses	12,366	149,952	-	(137,586)	149,952
Income tax recovery	(1,476)	(13,612)	(12,644)	12,136	(968)
Depreciation and amortization	2,322	1,210	1,039	1,112	171
Share-based payments expense	2,745	3,608	2,468	(863)	1,140
Adjusted EBITDA from continuing operations	$ (21,942)	$ (24,518)	$ (51,964)	$ 2,576	$ 27,446
Plus: adjusted EBITDA from discontinued operations	25,535	870	2,539	24,665	(1,669)
Adjusted EBITDA	$ 3,593	$ (23,648)	$ (49,425)	$ 27,241	$ 25,777

The increase of $27.2 million of the total adjusted EBITDA for the quarter ended December 31, 2019 compared to the corresponding period in 2018 was mainly due to the increase in adjusted EBITDA from discontinued operations due to the gain from the sale of the bioseparations operations. This is also explained by the decrease in R&D expenses. The removal of the depreciation of right-of-use assets of $1.2 million and the interest expense on the lease liabilities of $1.6 million in the year ended December 31, 2019 are other factors explaining the difference.

The increase of $25.8 million of the total adjusted EBITDA for the quarter ended December 31, 2018 compared to the corresponding period in 2017 was mainly explained by the bad debt expense of $20.5 million recorded during the quarter ended December 31, 2017 compared to none being recorded during the corresponding period in 2018. A decrease in R&D expenses, excluding share-based payments, of $7.0 million between both periods explains the remainder of this increase in adjusted EBITDA.

Segmented information analysis

Comparison of years ended December 31, 2019, 2018 and 2017

The loss and the net loss before income taxes from continuing operations for each segment for the years ended December 31, 2019, 2018 and 2017 are presented in the following tables.

For the year ended December 31, 2019	Small molecule therapeutics	Plasma-derived therapeutics	Reconciliation to statement of operations	Total
Revenues	$ 34	$ 4,736	$ 134	$ 4,904
Cost of sales and other production expenses	-	2,633	130	2,763
Manufacturing and purchase cost of product candidates used for R&D activities	132	37,107	(195)	37,044
R&D - Other expenses	15,419	22,366	285	38,070
Administration, selling and marketing expenses	4,709	8,368	32,206	45,283
Segment loss	$ (20,226)	$ (65,738)	$ (32,292)	$ (118,256)
Gain on foreign exchange				(1,451)
Finance costs				14,056
Loss on extinguishments of liabilities				92,374
Change in fair value of financial instruments measured at fair value through profit or loss				(1,140)
Impairment loss				12,366
Net loss before income taxes from continuing operations				$ (234,461)
Other information				
Depreciation and amortization	$ 779	$ 7,400	$ 679	$ 8,858
Share-based payment expense	4,782	4,390	12,369	21,541

For the year ended December 31, 2018	Small molecule therapeutics	Plasma-derived therapeutics	Reconciliation to statement of operations	Total
Revenues	$ -	$ 24,521	$ 112	$ 24,633
Cost of sales and other production expenses	-	25,297	410	25,707
Manufacturing and purchase cost of product candidates used for R&D activities	1,692	37,107	(132)	38,667
R&D - Other expenses	14,234	31,727	230	46,191
Administration, selling and marketing expenses	3,522	10,393	15,533	29,448
Segment loss	$ (19,448)	$ (80,003)	$ (15,929)	$ (115,380)
Loss on foreign exchange				4,696
Finance costs				22,041
Gain on extinguishments of liabilities				(33,626)
Share of losses of an associate				22
Impairment losses				149,952
Change in fair value of financial instruments measured at fair value through profit or loss				1,000
Net loss before income taxes from continuing operations				$ (259,465)
Other information				
Depreciation and amortization	$ 480	$ 3,644	$ 415	$ 4,539
Share-based payment expense	1,270	1,524	3,606	6,400

For the year ended December 31, 2017	Small molecule therapeutics	Plasma-derived therapeutics	Reconciliation to statement of operations	Total
Revenues	$ 19,724	$ 2,529	$ 60	$ 22,313
Cost of sales and other production expenses	-	4,014	(325)	3,689
Manufacturing and purchase cost of product candidates used for R&D activities	1,755	32,764	184	34,703
R&D - Other expenses	17,426	40,963	431	58,820
Administration, selling and marketing expenses	3,669	13,488	12,406	29,563
Bad debt expense	20,491	-	-	20,491
Segment loss	$ (23,617)	$ (88,700)	$ (12,636)	$ (124,953)
Loss (gain) on foreign exchange				(781)
Finance costs				7,889
Loss (gain) on extinguishments of liabilities				4,191
Net loss before income taxes from continuing operations				$ (136,252)
Other information				
Depreciation and amortization	$ 428	$ 2,880	$ 361	$ 3,669
Share-based payment expense	1,509	2,269	4,490	8,268

As mentioned previously, the amounts for depreciation and amortization expense during 2019 have increased for all segments since the adoption of IFRS 16 captures part of the lease cost as depreciation of right-of-use assets.

Small molecule therapeutics segment

The loss for the small molecule therapeutics segment was $20.2 million during the year ended December 31, 2019 compared $19.4 million during the corresponding period in 2018, representing an increase of segment loss of $0.8 million. This increase was mainly due to an increase of share-based payment expense of $3.5 million which was partially offset by a reduction in the purchases of product candidates manufactured by third parties used for clinical trials and pre-clinical research, as no purchases were required in 2019, as well as a reduction in the clinical trials and pre-clinical research expenditures.

The loss for the small molecule therapeutics segment was $19.4 million during the year ended December 31, 2018 compared $23.6 million during the corresponding period in 2017, representing a decrease of segment loss of $4.2 million mainly due to a decrease of $3.2 million in other R&D expenses reflecting the lower spending on pre-clinical studies carried out during 2018. With regard to the 2017 segment results, the revenues as well as bad debt expense reflects the impact of a transaction concluded with JRP during that year. During the quarter ended September 30, 2017, the segment recognized $19.7 million in milestone and licensing revenues for a licensing agreement signed with JRP, an affiliate of SRAM. During the quarter ended December 31, 2017, the segment wrote-off the related accounts receivable since the license agreement was subsequently terminated. The net impact of this transaction was effectively Nil for the year ended December 31, 2017.

Plasma-derived therapeutic segment

2019 compared to 2018

The revenues for the plasma-derived therapeutics segment are usually generated from the sales of specialty plasma to third parties. However, in 2018 and to a smaller extent in 2019, revenues have also been generated from the sale of excess normal source plasma to third parties as a result of the change in production forecasts due to the complete response letter we received from the FDA, following the submission of our BLA for Ryplazim®. Revenues were $4.7 million in the year ended December 31, 2019 compared to $24.5 million in the corresponding period of 2018, representing a decrease of $19.8 million. This decrease was mainly due to a $22.4 million reduction in sales of normal source plasma in 2019, offset by an increase of $3.7 million in sales of specialty plasma products. The normal source plasma sales generate lower margin while the other specialty plasma products generate higher margins. Other production costs that are not capitalizable into inventories are also included in cost of sales and other production expenses, which were higher in 2018 compared to 2019.

The manufacturing cost of plasma-derived product candidates to be used in clinical trials and for the development of our production processes was at similar levels during the years ended December 31, 2019 and 2018 at around $37.1 million. Despite this overall comparability, some expenses comprised in this R&D category changed more notably than others. The decrease in expense was mainly due to 1) lower expensing of inventories for the production of Ryplazim®, that are expected to be supplied to clinical trial patients and certain other patients in connection with expanded access programs, including on a named patient basis and via a compassionate use programs until Ryplazim® is commercially approved and available, if ever, or for engineering runs at our manufacturing locations, and 2) the lower rental costs included in R&D due to the impact of the adoption of IFRS 16 in 2019. These decreases were partially offset by an increase in employee compensation due to an increase in manufacturing headcount and bonuses paid for 2019 (not for 2018), an increase in share-based payments expense and a decrease in Quebec R&D tax credits recognized, as we reduced the amount we previously recorded as receivable following more advanced discussions with the applicable regulatory authority, which clarified certain uncertainties about the eligibility of certain expenditures.

Other R&D expenses were $22.4 million during the year ended December 31, 2019 compared to $31.7 million during the corresponding period in 2018, representing a decrease of $9.4 million. The decrease was mainly due to the reduction in spending of $7.7 million on clinical trials, pre-clinical research and the implementation and validation of additional analytical assays and in-process controls in the manufacturing of Ryplazim® over the comparative period. This reflects the completion of the IVIG primary immunodeficiencies Phase 3 clinical trial and our decision not to do further work on the development of new proteins. Wages and other payroll benefits expenses also decreased by $2.2 million mainly due to a reduction in headcount. These reductions are reflective of the segment's focus on Ryplazim®, whereas several product candidates in this segment were being developed in the past. These decreases were partially offset by an increase in the share-based payment expenses recognized in other R&D expenses of $2.5 million.

Administration, selling and marketing expenses decreased by $2.0 million during the year ended December 31, 2019 compared to the corresponding period in 2018, mainly due to the reduction of spending for consulting fees related to the preparation of an expected commercial launch in the current period compared to the same period in 2018. The decrease was also due to a reduction in salary expenses due to a reduction in headcount for the plasma-derived therapeutics segment.

The segment loss for the year ended December 31, 2019 was $65.7 million compared to $80.0 million for the corresponding period of 2018, representing a decrease in segment loss of $14.3 million. This decrease was mainly driven by the overall reduction of R&D expenses and administration, selling and marketing expenses.

2018 compared to 2017

The revenues for the Plasma-derived therapeutics segment are usually generated from the sales of specialty plasma to third parties, the provision of services to licensees and rental revenues. During the year ended December 31, 2018, the segment sold $19.7 million of normal source plasma which it had not done in the previous years. This was a result of the change in the production forecast due to the complete response letter we received from the FDA, following the submission of our BLA for Ryplazim®. We sold excess normal source plasma inventory we had at the beginning of the year, in addition to the quantities we were contractually obligated to purchase during the year. We were also able to reduce our purchasing commitments from 2018 to 2022. The normal source plasma sold during the year ended December 31, 2018 was sold at a value slightly below its carrying amount, generating a negative margin of $0.7 million. The remainder of the sales in 2018 pertain to specialty plasma products.

The manufacturing cost of plasma-derived product candidates used for R&D activities was higher during the year ended December 31, 2018 at $37.1 million compared to $32.8 million during the corresponding period of 2017, representing an increase of $4.3 million. In 2018, there was a reduction in production activities at the Laval plant while the facility focused on addressing comments received by the FDA following the FDA's plant inspection of the facility at the end of 2017, as part of the FDA's review of the BLA submission for Ryplazim®. This resulted in a reduction in overall manufacturing expenses for the plasma-derived product candidates, however since there was no commercial production in 2018, none of these expenses were capitalized to inventories compared to 2017. In addition, the plasminogen inventory that was on hand as of the previous year end was expensed throughout the current year. We determined that a portion of the inventory would be used for additional process testing runs while the balance would be supplied to clinical trial patients and certain other patients in connection with expanded access programs, including on a named patient basis and via a compassionate use programs until Ryplazim® is commercially approved and available, if ever. The reduction in plasminogen inventory capitalized more than offset the overall reduction in manufacturing expenses, thus causing an increase in the manufacturing cost of product candidates used for R&D activities for the year ended December 31, 2018 compared to the corresponding period of 2017.

Other R&D expenses were $31.7 million during the year ended December 31, 2018 compared to $41.0 million during the corresponding period of 2017 representing a decrease of $9.2 million. The decrease is mainly due to the reduction in the clinical trial and pre-clinical research expenses which were partially offset by additional spending in relation to the implementation and validation of additional analytical assays and "in-process" controls in the manufacturing of Ryplazim®. The plasminogen congenital deficiency clinical trial and the adult cohort of the IVIG clinical trial were substantially completed in 2017. During the current year, the IVIG clinical trial for pediatric cohort was ongoing and nearing its completion towards the end of 2018 with the last patient receiving their last dose in the first quarter of 2019. This was partially offset by slightly higher compensation expense reflecting the hiring of some of the staff required to start up our Amherst, New York plasma collection center.

Administration, selling and marketing expenses decreased by $3.1 million during the year ended December 31, 2018 compared to the corresponding period in 2017 mainly due to a reduction in commercial launch preparation expenses for Ryplazim®. Additionally, the administrative support that the segment received from our corporate service centers decreased compared to previous year as activities were reduced or postponed due to the delay in the anticipated commercialization.

Overall, the segment loss for Plasma-derived product candidates of $80.0 million during the year ended December 31, 2018 compared to $88.7 million during the corresponding period of 2017, represented a decrease of $8.7 million.

Comparison of quarters ended December 31, 2019, 2018 and 2017

The loss for each segment and the net loss before income taxes from continuing operations for the quarters ended December 31, 2019, 2018 and 2017 are presented in the following tables:

For the quarter ended December 31, 2019	Small molecule therapeutics	Plasma-derived therapeutics	Reconciliation to statement of operations	Total
Revenues	$ 1	$ 1,015	$ 34	$ 1,050
Cost of sales and other production expenses	-	493	35	528
Manufacturing and purchase cost of product candidates used for R&D activities	78	6,511	3	6,592
R&D - Other expenses	5,062	5,444	155	10,661
Administration, selling and marketing expenses	1,268	2,418	6,592	10,278
Segment loss	$ (6,407)	$ (13,851)	$ (6,751)	$ (27,009)
Loss (gain) on foreign exchange				(205)
Finance costs				1,858
Impairment losses				12,366
Net loss before income taxes from continuing operations				$ (41,028)
Other information				
Depreciation and amortization	$ 206	$ 1,899	$ 217	$ 2,322
Share-based payment expense	525	562	1,658	2,745

For the quarter ended December 31, 2018	Small molecule therapeutics	Plasma-derived therapeutics	Reconciliation to statement of operations	Total
Revenues	-	3,352	27	3,379
Cost of sales and other production expenses	-	3,230	129	3,359
Manufacturing and purchase cost of product candidates used for R&D activities	(59)	10,508	14	10,463
R&D - Other expenses	2,587	6,033	108	8,728
Administration, selling and marketing expenses	700	2,120	7,345	10,165
Segment loss	$ (3,228)	$ (18,539)	$ (7,569)	$ (29,336)
Loss (gain) on foreign exchange				3,819
Finance costs				6,554
Loss (gain) on extinguishments of liabilities				(34,904)
Impairment losses				149,952
Change in fair value of financial instruments measured at fair value through profit or loss				1,000
Net loss before income taxes from continuing operations				$ (155,757)
Other information				
Depreciation and amortization	$ 130	$ 920	$ 160	$ 1,210
Share-based payment expense	691	735	2,182	3,608

For the quarter ended December 31, 2017	Small molecule therapeutics	Plasma-derived therapeutics	Reconciliation to statement of operations	Total
Revenues	$ -	$ 437	$ 21	$ 458
Cost of sales and other production expenses	(533)	1,119	161	747
Manufacturing and purchase cost of product candidates used for R&D activities	341	10,566	4	10,911
R&D - Other expenses	4,867	10,571	91	15,529
Administration, selling and marketing expenses	859	4,253	3,139	8,251
Bad debt expense	20,491	-	-	20,491
Segment loss	$ (26,025)	$ (26,072)	$ (3,374)	$ (55,471)
Loss (gain) on foreign exchange				(1,518)
Finance costs				2,621
Net loss before income taxes from continuing operations				$ (56,574)
Other information				
Depreciation and amortization	$ 118	$ 823	$ 98	$ 1,039
Share-based payment expense	492	717	1,259	2,468

Small molecule therapeutics segment

The small molecule therapeutics segment loss was $6.4 million for quarter ended December 31, 2019 compared to $3.2 million in the corresponding period in 2018, representing an increase in segment loss of $3.2 million. The increase in segment loss was mainly due to an increase in R&D expenses due to an increase in employee compensation expense due to severance expense incurred following reduction in headcount during the quarter and higher bonus expense for 2019 whereas in 2018, no bonuses were accrued. These increases were partially offset by a decrease in Quebec R&D tax credits compared to 2018. Administration, selling and marketing expenses increased as more resources and administrative support was provided to the segment from the corporate service centers compared to the previous year.

The loss for small molecule therapeutics segment was $3.2 million for the quarter ended December 31, 2018 compared to $26.0 million during the corresponding period in 2017, representing a decrease in segment loss of $22.8 million. The decrease in loss was primarily due to a write-off in the fourth quarter of 2017 of the license and milestone revenues pertaining to a licencing agreement signed with JRP, an affiliate of SRAM, during the third quarter of 2017. The royalty expense initially recorded was subsequently reversed during the fourth quarter in 2017 in cost of sales. The reduction in other R&D expenditures of $2.3 million during the quarter ended December 31, 2018 compared to the corresponding period, is mainly due to the reduction in pre-clinical studies expenses.

Plasma-derived therapeutic segment

The decrease of $2.3 million in the revenues during the quarter ended December 31, 2019 compared to the corresponding period in 2018 and the increase of $2.9 million during the year ended December 31, 2018 compared to the corresponding period in 2017 are mainly due to $3.1 million of sales of excess normal source plasma inventory that occurred in the quarter ended December 31, 2018. In 2019, this decrease was partially offset by the increase in sales of specialty plasma of $0.8 million in the quarter ended December 31, 2019 compared to the corresponding period in 2018. The increase in sales of specialty plasma impacted the segment profitability positively during the quarter ended December 31, 2019, as the margins were stronger on this product.

The manufacturing and purchase cost of product candidates used for R&D activities for the plasma-derived therapeutics segment decreased by $4.0 million for the quarter ended December 31, 2019 compared to the corresponding period in 2018, mainly due to less expensing of inventories that were expected to be supplied to clinical trial patients and certain other patients in connection with expanded access programs, including on a named patient basis and via a compassionate use programs until Ryplazim® is commercially approved and available, if ever, and the lower rental costs included in R&D due to the impact of the adoption of IFRS 16 in

2019. The manufacturing and purchase cost of product candidates used for R&D activities for the quarters ended December 31, 2018 and 2017 remained stable.

Other R&D expenses decreased slightly by $0.6 million during the quarter ended December 31, 2019 compared to the corresponding period in of 2018 whereas the decrease from the quarter ended December 31, 2017 to the corresponding period in 2018 was $4.5 million. This last decrease is explained by a decrease in clinical trial expenditures reflecting the fact that our IVIG clinical trial for the pediatric cohort was nearing completion at the end of 2018 whereas towards the end of 2017, the adult cohort still had some patients receiving doses and most of the pediatric cohort had started their participation in the trial. There was also less expenses relating to the plasminogen congenital deficiency trial during the fourth quarter of 2018 as the main trial supporting the BLA submission was completed in 2017.

Administration, selling and marketing expenses remained stable during the quarter ended December 31, 2019 compared to the corresponding period in 2018 whereas they were notably higher during the quarter ended December 31, 2017. The decrease of $2.1 million from 2017 to 2018 was mainly caused by a reduction in marketing expenses related to Ryplazim®.

The loss for plasma-derived therapeutics segment was $13.9 million for the quarter ended December 31, 2019 compared to $18.5 million in the corresponding period in 2018, representing a decrease in segment loss of $4.7 million. The decrease was mainly driven by the reduction in manufacturing and purchase cost used for R&D.

The loss for plasma-derived therapeutics segment was $18.5 million for the quarter ended December 31, 2018 compared to $26.1 million in the corresponding period in 2017, representing a decrease in segment loss of $7.5 million. The decrease in loss is mainly due to the decrease in other R&D and administration, selling and marketing expenses. Those decreases are due to reduction in clinical trial expenditures and marketing expenses related to pre-commercialization activities.

Selected annual information

The following table presents selected audited annual information for the years ended December 31, 2019, 2018 and 2017.

	2019	2018	2017
Revenues	$ 4,904	24,633	$ 22,313
Net loss from continuing operations attributable to owners of the parent	(233,180)	(197,298)	(111,645)
Net loss from continuing operations per share attributable to owners of the parent (basic and diluted)	(14.52)	(238.28)	(140.26)
Total assets	165,098	102,892	283,873
Total long-term financial liabilities	$ 38,721	$ 126,965	$ 86,735

Revenues from the sales of goods increased by $22.4 million during 2018 compared 2017 and decreased by $19.1 million in 2019 mainly due $22.9 million in sales of excess normal source plasma in 2018. Milestone and licensing revenues were recognized in 2017 upon the signature of a license agreement, for an amount of $19.7 million.

The net loss from continuing operations attributable to the owners of the parent, defined as the amount attributable to the shareholders of Liminal Biosciences, increased significantly by $85.7 million from 2017 to 2018 due to the impact of two key events: 1) the recording of impairment losses totalling $150.0 million (and its impact on the non-controlling interests share in this loss) which was partially offset by 2) the recognition of a gain on extinguishments of liabilities of $33.6 million following the modifications to the credit facility and OID loans in November 2018. R&D expenses declined by $8.7 million from the previous year while financing cost increased by $14.2 million. The net loss from continuing operations attributable to owners of the parent then increased by $35.9 million in 2019 despite the net loss from continuing operations being slightly lower since the non-controlling interests did not partake in the share of those losses.

The net loss from continuing operations per share attributable to the owners of the parent on a basic and diluted basis reflects the changes in the net loss from continuing operations attributable to the owner of the parent but also the increase in the number of common shares outstanding from year to year and was significantly impacted by the number of shares issued in April 2019 upon a debt restructuring transaction and the issuance of equity following private placements. The weighted average number of shares increased from 796 thousand common shares in 2017 to 828 thousand common shares in 2018 then to 16,062 thousand common shares in 2019, causing the per share amounts in 2019 to be significantly lower.

Total assets increased by $62.2 million from $102.9 million at December 31, 2018 to $165.1 million at December 31, 2019 mainly due to recognition of the right-of-use assets following the adoption of IFRS 16 and a higher cash and cash equivalents balance at December 31, 2019 by $53.9 million. Total assets decreased to $102.9 million at December 31, 2018 from $283.9 million at December 31, 2017, mainly due to the impairment losses recognized on intangible assets, namely the NantPro license, and the reduction in inventories and cash.

Long-term financial liabilities decreased by $88.2 million at December 31, 2019 from December 31, 2018, mainly due to the restructuring of the long-term debt on April 23, 2019, which was partially offset by the recording of the long-term portion of lease liabilities following the adoption of IFRS 16 on January 1, 2019. From December 31, 2017 to December 31, 2018, long-term financial liabilities increased by $40.2 million, mainly due to the increase in debt of $71.7 million from the drawdowns on the then-existing credit facility. This increase was partially offset by the impact of the debt repayment terms modification which reduced the long-term debt by $47.4 million.

Summary of consolidated quarterly results

The following table presents selected quarterly financial information for the last eight quarters:

		Net income (loss) attributable to the owners of the parent			
				Per share	
Quarter ended	Revenues	Continuing operations	Discontinued operations	Continuing basic & diluted	Discontinued basic & diluted
December 31, 2019	$ 1,050	$ (39,397)	$ 25,043	$ (1.69)	$ 1.07
September 30, 2019	828	(29,521)	(81)	(1.27)	(0.00)
June 30, 2019	762	(135,846)	2,229	(8.26)	0.14
March 31, 2019	2,264	(28,416)	280	(33.59)	0.33
December 31, 2018	3,379	(103,784)	831	(125.04)	1.00
September 30, 2018	6,223	(29,020)	548	(34.96)	0.66
June 30, 2018	14,473	(34,217)	1,947	(41.32)	2.35
March 31, 2018	558	(30,277)	(1,394)	(36.74)	(1.69)

Revenues were $0.6 million during the quarter ended March 31, 2018. Revenues from continuing operations are generally those generated from our plasma-derived therapeutics segment via the sale of specialty plasma products. Cost of goods sold were higher due to an inventory write-off on a portion of the normal source plasma held in inventory to net realisable value in advance of a sales transaction to take place during the following quarter but for which the selling price had been settled in advance. R&D expenses were $20.7 million, and administration, selling and marketing expenses were $7.2 million for the quarter. Financing cost were $4.2 million during the quarter. The net loss attributable to the owners of the parent from discontinued operations was $1.4 million during the quarter.

Revenues during the quarter ended June 30, 2018 were $14.5 million, of which the majority was driven by a $14.0 million sale of excess normal source plasma inventory. Cost of sales and other production expenses were $14.5 million, R&D expenses at $22.5 million increased slightly over the previous quarter while administration, selling and marketing expense decreased slightly to $6.4 million. Financing cost increased to $5.3 million reflecting the continuous increase in the debt level and the higher borrowing cost of the credit facility. The net income attributable to the owners of the parent from discontinued operations in the quarter was $1.9 million compared to a net loss attributable to the owners of the parent from discontinued operations of $1.4 million in the previous quarter. The increase was driven by an increase in bioseparation sales of $1.9 million and a

decrease in cost of sales and production of $0.6 million as the increase in sales was mainly driven by higher margin product.

Revenues during the quarter ended September 30, 2018 were $6.2 million due to sales of excess normal source plasma inventory in the amount of $5.7 million. Cost of sales and other production expenses were $5.6 million. R&D expenses at $22.5 million were similar to the previous quarter while administration, selling and marketing expenses decreased slightly to $5.7 million. Financing cost at $5.9 million, continued to increase reflecting the higher debt level as we continued to draw on the credit facility. The net income attributable to the owners of the parent from discontinued operations decreased by $1.4 million to $0.6 million. This decrease is mainly due to the decrease in the net margin of $1.3 million. The sales from discontinued operations were higher during the quarter by $0.4 million but were driven by lower margin product.

Revenues during the quarter ended December 31, 2018 were $3.4 million, which is mainly due to the sale of excess normal source plasma inventory of $3.1 million. Cost of sales and other production expenses decreased by $2.3 million to $3.4 million in line with the decrease in the sale of gods of $2.6 million. R&D expenses decreased slightly to $19.2 million while administration, selling and marketing expenses increased to $10.2 million, impacted by severance expenses. Financing cost increased to $6.6 million reflecting the higher debt level and the higher borrowing cost of the credit facility. During the quarter, a gain on extinguishment of liabilities of $34.9 million was recorded as a result of the modifications to the terms of our long-term debt, namely the extension of the maturity date. Impairments, mainly pertaining to IVIG assets totalling $150.0 million were recognized following changes to our strategic plans which would delay the development of IVIG significantly, if approved. The net income attributable to the owners of the parent from discontinued operations remains relatively stable at $0.8 million, a decrease of $0.3 million.

Revenues were $2.3 million during the quarter ended March 31, 2019 which were lower than those recorded in the previous three quarters as there was no sale of normal source plasma. R&D expenses at $17.5 million were $1.7 million lower and finance costs at $7.1 million increased slightly by $0.6 million compared to the previous quarter. Both R&D and finance costs were impacted by the adoption of IFRS 16 which caused the implicit interest component of the leases to be recorded in finance costs. Administration, selling and marketing decreased by $3.1 million from its higher level in December 2018 which included significant termination benefits. The net income attributable to the owners of the parent from discontinued operations decreased by $0.6 million to $0.3 million mainly due to R&D tax credit recorded in the previous quarter.

Revenues were $0.8 million during the quarter ended June 30, 2019 and were mainly generated from sales of specialty plasma. R&D expenses at $22.3 million were $4.8 higher and administration, selling and marketing expenses at $18.0 million were $11.0 higher, mainly as a result of an increase of the share-based payment expenses recognized in R&D expenses of $4.3 million and in administration, selling and marketing expenses of $8.9 million over the previous quarter as we made various changes to our long-term equity incentive plans to ensure competitiveness of the plans. Finance cost decreased by $3.8 million as the long-term debt declined significantly on April 23, 2019 as part of the debt restructuring which resulted in a loss on extinguishment of liabilities of $92.3 million. The net loss attributable to the owners of the parent from continuing operations for the quarter ended June 30, 2019 was $135.8 million which represents an increase of $107.4 million from the previous quarter. The increase was driven by the loss on extinguishment of liabilities and the increase in share-based payment expense. The net income attributable to the owners of the parent from discontinued operations increased by $1.9 million to $2.2 million mainly due to increase in the sales of goods of $2.0 million related to higher margin product, not having any impact on the cost of sales and production expenses.

Revenues remained stable at $0.8 million during the quarter ended September 30, 2019. R&D expenses at $18.1 million declined by $4.2 million and administration, selling and marketing expenses at $9.9 million were $8.2 million lower than the previous quarter. These decreases were mainly driven by a decrease of $4.7 million and $7.5 million in the share-based payment expenses recognized in R&D and in administration, selling and marketing expenses, respectively as such expenditures returned to more normalized levels following the impact of the changes to the long-term equity incentive plans during the quarter ended June 30, 2019. Finance cost decreased by $1.6 million as the balance of long-term debt declined significantly on April 23, 2019 as a result of the debt restructuring. The net income attributable to the owners of the parent from discontinued operations

decreased by $2.3 million to a loss of$0.1 million mainly driven by the decrease in the sales of goods of $3.5 million.

Revenues were $1.1 million during the quarter ended December 31, 2019 and were mainly generated from our specialty plasma sales. Expenses remained relatively stable in the fourth quarter as R&D expenses declined by $0.8 million to $17.3 million and administration, selling and marketing expenses were $0.4 million higher than the previous quarter at $10.3 million. Finance cost increased by $0.2 million to $1.9 million during the fourth quarter of 2019. The net income attributable to the owners of the parent from discontinued operations increased by $25.1 million at $25.0 million mainly driven by the gain of the sales of the discontinued operations of $26.3 million which was offset by an increase in the administration, selling and marketing expenses of $1.4 million due to bonuses we paid to employees upon the successful completion of the sale of the business which were included in the operating results of the discontinued operations.

Outstanding share data

We are authorized to issue an unlimited number of common shares. At March 19, 2020, 23,420,352 common shares, 2,200,864 options to purchase common shares, 4,238 restricted share units and 172,735 warrants to purchase common shares were issued and outstanding.

Transactions between related parties (as defined per IAS 24)

Balances and transactions between our subsidiaries, which are related parties, have been eliminated on consolidation and are not disclosed in this note. These transactions have been recorded at the exchange amount, meaning the amount agreed to between the parties.

Following the debt modification on November 14, 2018, we assessed whether SALP, the holder of the debt, had gained significant influence for accounting purposes, despite holding less than 20% of voting rights. We deemed that qualitative factors were significant enough to conclude that the holder of the debt had gained significant influence over us and had become a related party. SALP subsequently became our majority shareholder following the debt restructuring completed on April 23, 2019.

Details of transactions between us and other related parties are disclosed below and for financing transactions with SALP, they are disclosed in detail in notes 15, 16, and 18a in the consolidated financial statements for the year ended December 31, 2019.

2019

Our former Chief Executive Officer or CEO had a share purchase loan outstanding in the amount of $0.4 million at December 31, 2018. The loan bore interest at prime plus 1% and had a maturity date of the earlier of (i) March 31, 2019 or (ii) 30 days preceding a targeted Nasdaq or New York Stock Exchange listing date of our common shares. As part of the settlement agreement concluded in April 2019 with our former CEO, common shares held in escrow as security for a share purchase loan of $0.4 million to the former CEO were released and the loan extinguished in exchange for the receipt of a payment of $137,000, representing the fair value of the shares at the time of the settlement.

During the year ended December 31, 2019 we paid interest on the loan with SALP in the amount of $7.8 million. We also recorded professional fee expenses, incurred by SALP and recharged to us, during the year ended December 31, 3019 of $0.5 million, all of which were paid as of December 31, 2019.

On November 11, 2019, together with SALP, we amended the April 23, 2019 loan agreement to include a non-revolving line of credit, or LOC, with a limit of up to $75.0 million, bearing a stated interest of 10%, payable quarterly, and maturing on April 23, 2024. The line of credit limit available to draw upon will be automatically reduced by the amounts of net proceeds generated, upon the occurrence of all or any of the following transactions; the sale of the bioseparations operations, a licensing transaction for Ryplazim® or equity raises. Our ability to draw on the line of credit expires on May 11, 2021. As at December 31, 2019, the amount drawn on the line of credit was nil and the amount available to be drawn was $30.3 million. As of the date of this MD&A, the amount drawn on the line of credit was $nil and the amount available to be drawn was $29.1 million.

During the year ended December 31, 2019 we recorded $47,000 R&D expenses, relating to a consulting service agreement with one of our directors in 2019 of which $37,000 remains payable as at December 31, 2019.

2018

During the year ended December 31, 2018, we earned interest revenues on the share purchase loan to our former CEO in the amount of $19,000 and at December 31, 2018, the unpaid interest was $31,000.

Changes in accounting policies

We have applied the accounting policies used in the annual consolidated financial statements in a consistent manner with those applied by us in our December 31, 2018 and 2017 audited annual consolidated financial statements except for the amendments to certain accounting standards which are relevant to us and were adopted as of January 1, 2018 and 2019 as described below.

IFRS 9, *Financial Instruments*

IFRS 9 replaces the provisions of IAS 39, Financial Instruments – Recognition and Measurement and provides guidance on the recognition, classification and measurement of financial assets and financial liabilities, the derecognition of financial instruments, impairment of financial assets and hedge accounting.

We adopted IFRS 9 as of January 1, 2018 and the new standard has been applied retrospectively in accordance with the transitional provisions of IFRS 9. The following table presents the carrying amount of financial assets held by us at December 31, 2017 and their measurement category under IAS 39 and the new model under IFRS 9.

	IAS 39		**IFRS 9**	
	Measurement category	Carrying amount	Measurement category	Carrying amount
Cash and cash equivalents	FVPL	$ 23,166	Amortized cost	$ 23,166
Trade receivables	Amortized cost	1,796	Amortized cost	1,796
Other receivables	Amortized cost	397	Amortized cost	397
Restricted cash	FVPL	226	Amortized cost	226
Long-term receivables	Amortized cost	1,856	Amortized cost	1,856
Equity investments	Cost	1,228	FVPL	1,228
Convertible debt	Cost	87	FVPL	87

There has been no impact caused by the new classification of financial assets under IFRS 9. The classification of all financial liabilities at amortized cost remains unchanged as well as their measurement resulting from their classification.

Under IFRS 9, modifications to financial assets and financial liabilities, must be accounted for by recalculating the present value of the modified contractual cashflows at the original effective interest rate and the adjustment must be recognized as a gain or loss in profit or loss. Under IAS 39, the impact of modifications was recognized prospectively over the remaining term of the debt.

The adoption of the accounting for modifications under the new standard has resulted in the restatement of the opening deficit and the long-term debt at January 1, 2018 as follows:

Deficit	$ 110
Long-term debt	(110)

IFRS 15, *Revenue from contracts with customers*

IFRS 15 replaces IAS 11, *Construction Contracts*, and IAS 18, *Revenue* and related interpretations and represents a new single model for recognition of revenue from contracts with customers. The model features a five-step analysis of transactions to determine the nature of an entity's obligation to perform and whether, how much, and when revenue is recognized.

We adopted IFRS 15 as of January 1, 2018 and the new standard has been applied retrospectively using the modified retrospective approach, where prior periods are not restated and the cumulative effect of initially applying this standard is recognized in the opening deficit balance on January 1, 2018. We have also availed ourselves of the following practical expedients:

the standard was applied retrospectively only to contracts that were not completed on January 1, 2018; and

- for contracts that were modified before January 1, 2018, we analyzed the effects of all modifications when identifying whether performance obligations were satisfied, determining the transaction price and allocating the transaction price to the satisfied or unsatisfied performance obligations.

There has been no impact of the adoption of IFRS 15 as at January 1, 2018 and for the year end December 31, 2018.

IFRIC 22, *Foreign Currency Transactions and Advance Consideration* ("IFRIC 22")

IFRIC 22 addresses how to determine the date of the transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it) and on the derecognition of a non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration in a foreign currency. IFRIC 22 is effective for annual periods beginning on or after January 1, 2018. We adopted IFRIC 22 retrospectively on January 1, 2018. The adoption of the standard did not have a significant impact on the financial statements.

IFRS 16, *Leases*

IFRS 16 replaces IAS 17, *Leases* ("IAS 17"). IFRS 16 provides a single lessee accounting model, requiring the recognition of assets and liabilities for all leases, unless the lease term is less than 12 months, or the underlying asset has a low value. IFRS 16 substantially carries forward the lessor accounting in IAS 17 with the distinction between operating leases and finance leases being retained.

Effective January 1, 2019, we adopted IFRS 16 using the modified retrospective approach and accordingly the information presented for 2018 has not been restated. The cumulative effect of initially applying the standard is recognized at the date of initial application. The current and long-term portions of operating and finance lease inducements and obligations presented in the statement of financial position at December 31, 2018, reflect the accounting treatment under IAS 17 and related interpretations.

We elected to use the transitional practical expedient allowing the standard to be applied only to contracts that were previously identified as leases under IAS 17 and IFRIC 4, *Determining whether an arrangement contains a lease at the date of initial application*. We applied the definition of a lease under IFRS 16 to contracts entered into or changed on or after January 1, 2019.

We also elected to record right-of-use assets for leases previously classified as operating leases under IAS 17 based on the corresponding lease liability, adjusted for prepaids or liabilities existing at the date of the transition that relate to the lease. When measuring lease liabilities, we discounted lease payments using its incremental borrowing rate at January 1, 2019. The weighted average discount rate applied to the total lease liabilities recognized on transition was 18.54%. For leases that were previously classified as finance leases under IAS 17, the carrying amount of the right-of-use asset and the lease liability at the date of adoption was established as the carrying amount of the lease asset classified in capital assets and the finance lease obligation at December 31, 2018. These assets and liabilities are grouped under right-of-use assets and lease liabilities as of January 1, 2019 and IFRS 16 applies to these leases as of that date.

In addition, we elected to apply the practical expedient to account for leases for which the lease term ends within 12 months of the date of initial application as short-term leases for which it is not required to recognize

a right-of-use asset and a corresponding lease liability. We also elected to not apply IFRS 16 when the underlying asset in a lease is of low value.

We have elected, for the class of assets related to the lease of building space, not to separate non-lease components from lease components, and instead account for each lease component and any associated non-lease components as a single lease component.

The table below shows which line items of the consolidated financial statements were affected by the adoption of IFRS 16 and the impact. There was no net impact on the deficit.

	As reported as at December 31, 2018	Adjustments for the transition to IFRS 16	Balance as at January 1, 2019
Assets			
Prepaids	$ 1,452	$ (84)	$ 1,368
Capital assets	41,113	(1,043)	40,070
Right-of-use assets	-	39,149	39,149
Liabilities			
Accounts payable and accrued liabilities	$ 31,855	$ (2,499)	$ 29,356
Current portion of lease liabilities	-	8,575	8,575
Long-term portion of lease liabilities	-	34,126	34,126
Long-term portion of operating and finance lease inducements and obligations	1,850	(1,850)	-
Other long-term liabilities	5,695	(330)	5,365

Prior to adopting IFRS 16, the total minimum operating lease commitments as at December 31, 2018 were $75.0 million. The decrease between the total of the minimum lease payments set out in Note 29 of the audited annual consolidated financial statements for the year ended December 31, 2018 and the total lease liabilities recognized on adoption of $42.7 million was principally due to the effect of discounting on the minimum lease payments. The amount also decreased slightly due to the fact that certain costs that are contractually committed under lease contracts, but which do not qualify to be accounted for as a lease liability, such as variable lease payments not tied to an index or rate, were previously included in the lease commitment table whereas they are not included in the calculation of the lease liabilities. These impacts were partially offset by the inclusion of lease payments beyond minimum commitments relating to reasonably certain renewal periods that had not yet been exercised as at December 31, 2018 which effect is to increase the liability. Right-of-use assets at transition have been measured at an amount equal to the corresponding lease liabilities, adjusted for any prepaid or accrued rent relating to that lease.

The consolidated statement of operations for the year ended December 31, 2019 was impacted by the adoption of IFRS 16 as the recording of depreciation of the right-of-use assets continues to be recorded in the same financial statement line items as it was previously while the implicit financing component of leasing agreements is now recorded under finance costs. The impact is not simply in the form of a reclassification but also in terms of measurement, which are significantly affected by the discount rates used and whether we have included renewal periods when calculating the lease liability.

The consolidated cash flow statement for the year ended December 31, 2019 was also impacted since the cash flows attributable to the lease component of the lease agreements are now shown as payments of principal and interest on lease liabilities which are now part of cash flows from financing activities.

IFRIC 23, *Uncertainty over income tax treatments* ("IFRIC 23")

IFRIC 23 clarifies how the recognition and measurement requirements of IAS 12 – Income Taxes are applied where there is uncertainty over income tax treatments. The Interpretation is effective for annual periods beginning on or after January 1, 2019 and was adopted on that date. We assessed the impact of this Interpretation and concluded that it had no impact on the amounts recorded in its consolidated statements of financial position on the date of adoption.

New Standards and interpretations not yet adopted

There are currently no new standards or interpretations not yet in effect that we reasonably expect would have an impact on its consolidated financial statements.

Critical Accounting Policies and Estimates

Our financial statements are prepared in accordance with IFRS. Some of the accounting methods and policies used in preparing our financial statements under IFRS are based on complex and subjective assessments by our management or on estimates based on past experience and assumptions deemed realistic and reasonable based on the facts and circumstances concerned. The actual value of our assets, liabilities and shareholders' equity and of our EPS could differ from the value derived from these estimates if conditions changed and these changes had an impact on the assumptions adopted. We believe that the most significant management judgments and assumptions in the preparation of our financial statements are described below. We have also provided the critical accounting policies. See Note 2 to our consolidated financial statements for the year ended December 31, 2019 for a description of our other significant accounting policies.

Critical accounting policies

Impairment of tangible and intangible assets

At the end of each reporting period, we review the carrying amounts of our tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If impairment indicators exist, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if any. For intangible assets not yet available for use, we perform an impairment test annually at November 30, until amortization commences, whether or not there are impairment indicators. When it is not possible to estimate the recoverable amount of an individual asset, we estimate the recoverable amount of the cash-generating unit (CGU) which represents the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets, groups of assets or CGUs to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, the corporate assets are also allocated to individual CGUs, or otherwise they are allocated to the smallest group of CGUs for which a reasonable and consistent allocation basis can be identified.

The recoverable amount is the higher of the fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

An impairment loss is recognized when the carrying amount of an asset or a CGU exceeds its recoverable amount by the amount of this excess. An impairment loss is recognized immediately in profit or loss in the period during which the loss is incurred. Where an impairment loss subsequently reverses, the carrying amount of the asset or CGU is increased to the revised estimate of its recoverable amount; on reversal of an impairment loss, the increased carrying amount does not exceed the carrying amount that would have been determined had an impairment loss not been recognized for the asset or CGU in prior periods. A reversal of an impairment loss is recognized immediately in profit or loss.

Lease liabilities

At the commencement date of a lease, we recognize a lease liability measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives, variable lease payments that depend on an index or a rate, and

amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by us and payments of penalties for terminating a lease, if the lease term reflects that we will be exercising the option to terminate. The variable lease payments that do not depend on an index or a rate are recognized as expense in the period on which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, we use the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of a lease liability is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of a lease liability is remeasured if there is a modification, a change in the lease term, a change in the in-substance fixed lease payments or a change in the assessment whether the underlying asset will be purchased.

We apply the short-term lease recognition exemption to leases of 12 months or less, as well as the lease of low-value assets recognition exemption i.e. leases with a value below seven dollars. Lease payments on short-term leases and leases of low-value assets are recognized as expense on a straight-line basis over the lease term.

Prior to the adoption of IFRS 16, Leases on January 1, 2019, as a lessor, we only recognized finance lease obligations while operating leases obligations were only disclosed.

Revenue recognition

To determine revenue recognition for contracts with customers, we perform the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. The five-step model is only applied to contracts when it is probable that we will collect the consideration we are entitled to in exchange for the goods or services we transfer. At contract inception, we assess the goods or services promised within each contract, determine those that are performance obligations, and assess whether each promised good or service is distinct. The transaction price that is allocated to the respective performance obligation is recognized as revenue when (or as) the performance obligation is satisfied.

Sale of goods

Revenue from sale of goods is recognized when the terms of a contract with a customer have been satisfied. This occurs when:

- The control over the product has been transferred to the customer; and
- The product is received by the customer or transfer of title to the customer occurs upon shipment.

Following delivery, the customer bears the risks of obsolescence and loss in relation to the goods. Revenue is recognized based on the price specified in the contract, net of estimated sales discounts and returns.

Rendering of services

Revenues from contracted services are generally recognized as the performance obligations are satisfied over time, and the related expenditures are incurred pursuant to the terms of the agreement. Contract revenue is recognized on a percentage of completion basis based on key milestones contained within the contract.

Unbilled revenues and deferred revenues

If we have recognized revenues but has not issued an invoice, the entitlement is recognized as a contract asset and is presented in the statement of financial position as unbilled revenues. When the amounts are invoiced, then the amounts are transferred into trade receivables. If we have received payments prior to satisfying our performance obligation, the obligation is recognized as a contract liability and is presented in the consolidated statement of financial position as deferred revenues.

Licensing fees and milestone payments

Under IFRS 15, we determine whether our promise to grant a license provides the customer with either a right to access our intellectual property ("IP") or a right to use our IP. A license will provide a right to access the intellectual property if there is significant development of the intellectual property expected in the future

whereas for a right to use, the intellectual property is to be used in the condition it is at the time the license is signed. Revenue from a license that provides to a customer the right to use the Company's IP is recognized at a point in time when the transfers to the licensee is completed and the license period begins. When a license provides access to our IP over a license term, the performance obligation is satisfied over time and, therefore, revenue is recognized over the term of the license arrangement. Milestone payments are immediately recognized as licensing revenue when the condition is met, if the milestone is not a condition to future deliverables and collectability is reasonably assured. Otherwise, they are recognized over the remaining term of the agreement or the performance period.

Rental revenue

We account for the lease or sub-lease with a tenant as an operating lease when we have not transferred substantially all of the risks and benefits of ownership of our property or leased property. Revenue recognition under an operating lease commences when the tenant has a right to use the leased asset, and the total amount of contractual rent to be received from the operating lease is recognized on a straight-line basis over the term of the lease. Rental revenue also includes recoveries of operating expenses and property taxes.

Share-based payments

We have a stock option plan and an RSU plan. The fair value of stock options granted is determined at the grant date using the Black-Scholes option pricing model and is expensed over the vesting period of the options. Awards with graded vesting are considered to be multiple awards for fair value measurement. The fair value of RSU is determined using the market value of our shares on the grant date. The expense associated with RSU awards that vest over time are recognized over the vesting period. When the vesting of RSU is dependent on meeting performance targets as well as a service requirement, we will estimate the outcome of the performance targets to determine the expense to recognize over the vesting period and revise those estimates until the final outcome is determined. An estimate of the number of awards that are expected to be forfeited is also made at the time of grant and revised periodically if actual forfeitures differ from those estimates.

Our policy is to issue new shares upon the exercise of stock options and the release of RSU for which conditions have been met.

Significant judgments and estimates

Going concern - In assessing whether the going concern assumption is appropriate and whether there are material uncertainties that may cast significant doubt about our ability to continue as a going concern, management must estimate future cash flows for a period of at least twelve months following the end of the reporting period by considering relevant available information about the future. We have considered a wide range of factors relating to expected cash inflows such as whether we will earn licensing and milestone revenues, obtain regulatory approval for commercialization of product candidates, if ever, and potential sources of debt and equity financing available to it. We have also estimated expected cash outflows such as operating and capital expenditures and debt repayment schedules, including the ability to delay uncommitted expenditures. These cash flow estimates are subject to uncertainty.

Accounting for loan modifications – When the terms of a loan are modified, we must evaluate whether the terms of the loan are substantially different in order to determine the accounting treatment. If they are considered to be substantially different, the modification will be accounted for as a derecognition of the carrying value of the pre-modified loan and the recognition of a new loan at its fair value. Otherwise, the changes will be treated as a modification which will result in adjusting the carrying amount to the present value of the modified cash flows using the original effective interest rate of the loan instrument. In assessing whether the terms of a loan are substantially different, we perform an analysis of the changes in the cash flows under the previous agreement and the new agreement and we also consider other modifications that have no cash flow impacts. In the context of the simultaneous modification to the terms of several loans with the same lender, we use judgment to determine if the cash flow analysis should be performed on the loans in aggregate or individually. Judgment is also used to evaluate the relative importance of additional rights given to the lender such as additional Board of Director seats and the extension of the term of the security compared to the quantitative analysis.

Revenue recognition – We enter into revenue agreements from time to time which provide, among other payments, up-front and milestone payments in exchange for licenses and other access to intellectual property. We may also enter into several agreements simultaneously that are different in nature such as license agreements, R&D services, supply and manufacturing agreements. In determining the appropriate method for recognizing revenues in a given contract, we may be required to apply significant judgment including the identification of performance obligations.

Determining whether performance obligations are distinct involves evaluating whether the customer can benefit from the good or service on its own or together with other resources that are readily available to the customer. Once the distinct performance obligations are identified, we must then determine if each performance obligation is satisfied at a point in time or over time. For license agreements, this requires us to assess the level of advancement of the intellectual property being licensed.

Functional currency – The functional currency of foreign subsidiaries is reviewed on an ongoing basis to assess if changes in the underlying transactions, events and conditions have resulted in a change. During the years ended December 31, 2019, 2018 and 2017 no changes were deemed necessary. This assessment is also performed for new subsidiaries. When assessing the functional currency of a foreign subsidiary, management's judgment is applied in order to determine, amongst other things, the primary economic environment in which an entity operates, the currency in which the activities are funded and the degree of autonomy of the foreign subsidiary from the reporting entity in its operations and financially. Judgment is also applied in determining whether the inter-company loans denominated in foreign currencies form part of our net investment in the foreign subsidiary. Considering such loans as part of the net investment in the foreign subsidiary results in foreign currency translation gains or losses from the translation of these loans being recorded in other comprehensive loss instead of the consolidated statement of operations.

Fair value of financial instruments – The individual fair values attributed to the different components of a financing transaction, are determined using valuation techniques. we use judgment to select the methods used to determine certain inputs/assumptions used in the models and the models used to perform the fair value calculations in order to determine, 1) the values attributed to each component of a transaction at the time of their issuance, 2) the fair value measurements for certain instruments that require subsequent measurement at fair value on a recurring basis and 3) for disclosing the fair value of financial instruments subsequently carried at amortized cost. When the determination of the fair value of a new loan is required, discounted cash flow techniques which includes inputs that are not based on observable market data and inputs that are derived from observable market data are used. When determining the appropriate discount rates to use, we seek comparable interest rates where available. If unavailable, we use those considered appropriate for the risk profile of a company in the industry.

The fair value estimates could be significantly different because of the use of judgment and the inherent uncertainty in estimating the fair value of these instruments that are not quoted in an active market.

Leases - We determine the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain that this option will not be exercised.

We have the option, under some of its leases to lease the assets for additional terms of up to fifteen years. Judgement is applied in evaluating whether it is reasonably certain to exercise the option to renew. That is, all relevant factors that create an economic incentive for it to exercise the renewal are considered. After the commencement date, the lease term is reassessed if there is a significant event or change in circumstances that is within its control and affects its ability to exercise (or not to exercise) the option to renew.

The renewal period is included as part of the lease term for a manufacturing plant lease since we estimated it is reasonably certain to exercise due to the importance of this asset to its operations, the limited availability on the market of a similar asset with similar rental terms and the related cost of moving the production equipment to another facility.

Uncertainty over income tax treatments - R&D tax credits for the current period and prior periods are measured at the amount we expects to recover, based on its best estimate and judgment, of the amounts it expects to receive from the tax authorities as at the reporting date, either in the form of income tax refunds or refundable grants. However, there are uncertainties as to the interpretation of the tax legislation and regulations, in particular regarding what constitutes eligible R&D activities and expenditures, as well the amount and timing of recovery of these tax credits. In order to determine whether the expenses it incurs are eligible for R&D tax credits, we must use judgment and may resort to complex techniques, which makes the recovery of tax credits uncertain. As a result, there may be a significant difference between the estimated timing and amount recognized in the consolidated financial statements in respect of tax credits receivable and the actual amount of tax credits received as a result of the tax administrations' review of matters that were subject to interpretation. The amounts recognized in the consolidated financial statements are based on our best estimates and in our best possible judgment, as noted above.

Assessing the recoverable amount of long-lived assets - We evaluate the recoverable value of long-lived assets when indicators of impairment arise or as part of the annual impairment test, if they are intangible assets not yet available for use. The recoverable value is the higher of the value in use and the fair value less cost to sell.

Long-lived assets include capital assets and intangible assets such as licenses and other rights and some of these rights are considered not available for use.

When calculating the value in use, we must make estimates and assumptions regarding the estimated future cash flows and their timing including the amount and timing of the capital expenditure investments necessary to increase manufacturing capacities, to bring the facilities to Good Manufacturing Practices standards, timing of production capacities coming on-line, production costs, ongoing research and clinical trial expenses, market penetration and selling prices for our product candidates and, the date of approval of the product candidates for commercial sale, if ever. The future cash flows are estimated using a five-year projection of cash flows before taxes which are based on the most recent budgets and forecasts available. If the projections include revenues in the fifth year, then that year is extrapolated, using an expected annual growth rate. The estimated cash flows are then discounted to their net present value using a pre-tax discount rate that includes a risk premium specific to the line of business.

When calculating the fair value less cost to sell of an asset or a group of assets for which selling price information for comparable assets are not readily available, we also must make assumptions regarding the value it may recuperate from its sale.

During the year ended December 31, 2019 and 2018, as a result of strategic decisions made on the areas where we would focus our resources, several impairments recorded on intangible assets (see section impairment losses in the operations results).

Expense recognition of restricted share units – The RSU expense recognized for RSU in which the performance conditions have not yet been met, is based on an estimation of the probability of successful achievement of a number of performance conditions, many of which depend on research, regulatory process and business development outcomes which are difficult to predict, as well as the timing of their achievement. The final expense is only determinable when the outcome is known.

Valuation of deferred income tax assets – To determine the extent to which deferred income tax assets can be recognized, we estimate the amount of probable future taxable profits that will be available against which deductible temporary differences and unused tax losses can be utilized. We exercise judgment to determine the extent to which realization of future taxable benefits is probable, considering the history of taxable profits, budgets and forecasts and availability of tax strategies.

Financial instruments

Use of financial instruments

The financial instruments that we used result from our operating and investing activities, namely in the form of accounts receivables and payables, and from our financing activities resulting usually in the issuance of long-term debt. We do not use financial instruments for speculative purposes and have not issued or acquired derivative financial instruments for hedging purposes. The following table presents the carrying amounts of our financial instruments at December 31, 2019 and 2018.

	2019	2018
Financial assets		
Cash and cash equivalents	$ 61,285	$ 7,389
Trade receivables	1,677	7,371
Restricted cash	169	245
Long-term deposits	143	142
Other	-	24
Financial liabilities		
Trade payables	$ 10,496	$ 21,097
Wages and benefits payable	5,593	1,975
Settlement fee payable	-	102
Royalty payment obligations	3,148	3,077
License acquisition payment obligation	1,302	2,726
Warrant liability	-	157
Long-term debt	8,834	125,804

Impact of financial instruments in the consolidated statements of operations

The following line items in the consolidated statement of operations for the quarter and the year ended December 31, 2019 include income, expense, gains and losses relating to financial instruments:

- loss on extinguishments of liabilities
- change in fair value of financial instruments measured at fair value through profit or loss
- finance costs; and
- foreign exchange gains and losses.

Subsequent events

Consistent with our strategy to limit our involvement in the plasma-derived therapeutics segment to the commercialization of Ryplazim®, we decided to close our Rockville, Maryland R&D facility by the end of the 2020 and made an announcement to the employees during the first quarter of 2020. As a result of this decision, we will be recognizing, during the service period in 2020, an expense of approximately $2.0 million (US$1.5 million) in the consolidated statement of operations representing the maximum termination benefits we have committed to pay the employees. In connection with this closure, we also recognized impairments on our capital related to this facility in 2019.

On January 29, 2020, we issued 96,833 common shares as a consideration for the final payment for the licence acquired on January 29, 2018.

JOBS Act Exemptions and Foreign Private Issuer Status

We qualify as an "emerging growth company" as defined in the JOBS Act. An emerging growth company may take advantage of specified reduced reporting and other burdens that are otherwise applicable generally to public companies. This includes an exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act. We may take advantage of this exemption for up to five years or such earlier time that we are no longer an emerging growth company. We will cease to be an emerging growth company if we have more than $1.07 billion in total annual gross revenue, have more than $700.0 million in market value of our common shares held by non-affiliates or issue more than $1.0 billion of non-convertible debt over a three-year period. We may choose to take advantage of some but not all of these reduced burdens.

We will not take advantage of the extended transition period provided under Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. Since IFRS makes no distinction between public and private companies for purposes of compliance with new or revised accounting standards, the requirements for our compliance as a private company and as a public company are the same.

Additionally, we report under the Exchange Act as a non-U.S. company with foreign private issuer status. Even after we no longer qualify as an emerging growth company, as long as we qualify as a foreign private issuer under the Exchange Act, we will be exempt from certain provisions of the Exchange Act that are applicable to U.S. domestic public companies, including:

- the sections of the Exchange Act regulating the solicitation of proxies, consents or authorizations in respect of a security registered under the Exchange Act;
- the sections of the Exchange Act requiring insiders to file public reports of their stock ownership and trading activities and liability for insiders who profit from trades made in a short period of time;
- the rules under the Exchange Act requiring the filing with the SEC of quarterly reports on Form 10-Q containing unaudited financial and other specified information, or current reports on Form 8-K, upon the occurrence of specified significant events; and
- Regulation FD, which regulates selective disclosures of material information by issuers.

Liquidity and Capital Resources

Overview

Our primary uses of cash are to fund our ongoing research and development activities. We expect our expenses to increase in connection with our ongoing activities, particularly as we continue the research and development of, continue or initiate clinical trials of, and seek marketing approval for, our product candidates. In addition, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to program sales, marketing, manufacturing and distribution to the extent that such sales, marketing and distribution are not the responsibility of potential collaborators as a result of licensing or partnering deals. Furthermore, we expect to continue to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or eliminate our research and development programs or future commercialization efforts.

Identifying potential product candidates and conducting nonclinical studies and clinical trials is a time-consuming, expensive and uncertain process that takes many years to complete. Success in the generation of the necessary data or results required to obtain marketing approval and achieve product sales cannot be certain. In addition, successful commercialisation of our product candidates cannot be certain and any resulting revenue derived from product sales would not arise for many years, if at all.

Until such time that we can generate substantial product revenue, if ever, we will need to finance our cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances and licensing arrangements.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, shareholder ownership interest may be diluted, and the terms of any additional securities may include liquidation or other preferences that adversely affect the rights of shareholders. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we raise funds through additional collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates, or to grant licenses on terms that may not be favorable to us.

If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts, or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Liquidity position at December 31, 2019 and analysis of going concern

At December 31, 2019, we had a positive working capital position of $63.6 million. This financial position combined with the remaining amount available to draw on the line of credit from SALP of $29.1 million at the date of this MD&A, should we decide to use it, would provide us sufficient cash runway to fund our operating activities and meet our contractual and financial obligations for a period of at least 12 months from December 31, 2019. The terms of the line of credit from SALP are provided in the related party section of the MD&A.

We believe this working capital position gives us the latitude to continue maintaining our operating activities at a low spending level while we continue taking steps to further transition our company to focus on the development of our small molecule product candidates.

We intend to pursue a number of financing initiatives that could potentially extend our cash runway, if completed. Potential sources of funding include the key ones identified below:

- We are continuing our ongoing discussions with potential licensees for our drug pipeline;
- We are continuing to evaluate avenues to monetize non-core assets; and
- We will consider raising funds through the issuance of equity instruments.

Although we made use of our at-the-market, or ATM facility in the first two months of 2019, the use of this facility was suspended concurrently with the debt restructuring in April 2019 and will not be used as a source of financing.

Despite our improved liquidity situation since April 2019, we are an R&D stage enterprise and until we can generate a sufficient amount of product revenue to finance our cash requirements, management expects to finance future cash needs primarily through a combination of public or private equity offerings, debt financings, strategic collaborations, business and asset divestitures, and grant funding.

Debt Facility

Prior Indebtedness

On April 27, 2017, we entered into a third loan agreement with SALP, or the Third Loan Agreement, which provides for an OID loan in the principal amount of $25.0 million. This loan has been amended. We subsequently entered into a fourth loan agreement with SALP, or the Fourth Loan Agreement, on November 30, 2017, and providing for a delayed-draw term loan of up to US$80.0 million, as amended.

On November 14, 2018, we entered into an omnibus amendment agreement with SALP, extending the maturity dates of all loan agreements with SALP outstanding as of such date. As part of the consideration for the extension of the maturity dates of the indebtedness under these agreements, we cancelled 100,117 existing warrants and granted 128,056 warrants to SALP, bearing a term of eight years and exercisable at a per share price equal to $1,000.00.

We also entered into an amendment agreement to the Fourth Loan Agreement on February 22, 2019 securing an additional amount of up to US$15.0 million from SALP under the Fourth Loan Agreement.

Restructuring Transactions

On April 23, 2019, we completed transactions pursuant to a debt restructuring agreement we entered into on April 15, 2019 with SALP and certain of our subsidiaries, or the Restructuring Agreement. In accordance with the Restructuring Agreement, (i) SALP acquired 15,050,312 of our common shares, or the New Common Shares, at a price per common share of $15.21, or the Transaction Price, for a total purchase price of $228.9 million, which was satisfied by the cancellation of outstanding indebtedness owed by us, and (ii) certain Warrants to purchase our common shares held by SALP were amended, with new warrants being issued, or the New Warrants, exercisable for 168,735 common shares at a per-share exercise price equal to the Transaction Price. Under the Restructuring Agreement, all but $10.0 million of the outstanding debt we owed to SALP in the

aggregate amount of $238.9 million was converted into common shares. We also entered into a consolidated loan agreement with SALP on April 23, 2019, relating to future indebtedness.

Line of Credit

On November 11, 2019, we entered into an amendment to our April 23, 2019 consolidated loan agreement with SALP to include a non-revolving $75.0 million secured line of credit, or the LOC. The LOC limit available to draw upon will be automatically reduced by the amounts of net proceeds generated, upon the occurrence of all or any of the following transactions; the sale of the bioseparations operations, a licensing transaction for our Ryplazim® or equity raises. As a result of the closing of the sale of our bioseparation business to KKR, the principal amount available under the LOC was automatically reduced by an amount equal to the net proceeds we received for such sale, which was $44.7 million. Our ability to draw on the LOC expires on May 11, 2021. As of the date of this MD&A, we have not drawn any amount on the LOC and $30.3 million was available to be drawn as at December 31, 2019 and $29.1 million was available to be drawn as at March 19, 2020.

Cash flow analysis

The following major cash flow components are presented on a total company basis, inclusive of continuing and discontinued operations.

The summarized consolidated statements of cash flows for the year ended December 31, 2019 and the corresponding period in 2018 and 2017 are presented below.

	Year ended December 31			Change	
	2019	2018	2017	2019 vs 2018	2018 vs 2017
Cash flows used in operating activities	$ (99,390)	$ (82,454)	$ (122,573)	$ (16,936)	$ 40,119
Cash flows from financing activities	117,919	72,158	117,452	45,761	(45,294)
Cash flows used in investing activities	36,096	(5,859)	1,119	41,955	(6,978)
Net change in cash and cash equivalents during the year	54,625	(16,155)	(4,002)	70,780	(12,153)
Net effect of currency exchange rate on cash and cash equivalents	(729)	378	(638)	(1,107)	1,016
Cash and cash equivalents, beginning of the year	7,389	23,166	27,806	(15,777)	(4,640)
Cash and cash equivalents, end of the year	$ 61,285	$ 7,389	$ 23,166	$ 53,896	$ (15,777)

Cash flows used in operating activities increased by $16.9 million during the year ended December 31, 2019 compared to the same period in 2018. The cash flows used in operating activities before change in non-working capital decreased by $8.9 million while the change in non-cash working capital spending increased by $25.9 million. The increase was mainly due to a significant increase in payments to suppliers as we paid our past due invoices following the receipt of funding during the quarter ended June 30, 2019. This was partially offset by lower operating expenses and by the fact that under IFRS 16, the cash disbursements pertaining to leases are now part of cash flows from financing activities whereas in 2018 and 2017, these payments were mostly part of cash flows from operating activities.

Cash flow used in operating activities decreased by $40.1 million during the year ended December 31, 2018 compared to the same period in 2017. The decrease was mainly a result of inflows from the sale of normal source plasma in 2018, the reduced spending in clinical and pre-clinical studies and marketing, and a reduction in plasminogen inventory build that occurred in 2017 in preparation for expected commercialization.

Cash flows from financing activities increased by $45.8 million during the year ended December 31, 2019 compared to the same period in 2018. This increase was mainly due to the April 23, 2019 equity financings that raised gross proceeds of $75.0 million and the rights offering in June 2019 that raised $39.4 million. This increase was partially offset by the decrease in proceeds from debt and warrant issuances on the credit facility during the year ended December 31, 2019 by $59.2 million compared to the same period in 2018. This increase was also offset by the fact that all lease payments, interest and principal, are now included as part of cash flows from financing activities whereas in 2018, only payments on leases classified as finance leases under the

previous standard, which is a small portion our leases, were presented under this caption, increasing the disbursements by $9.3 million.

Cash flows from financing activities decreased by $45.3 million during the year ended December 31, 2018 compared to the same period in 2017. This decrease was mainly due to a decrease in proceeds being received from common shares issued under our existing ATM facility and no proceeds from the exercise of future investment rights in 2018, whereas future investment rights and proceeds from common share issuances contributed $74.2 million in financing activities in 2017. This decrease was partially offset by the receipt of proceeds from the issuance of debt and warrants under the then-existing credit facility during 2018 being higher by $28.4 million than in 2017.

Cash flows from investing activities increased by $42.0 million during the year ended December 31, 2019 compared to the same period in 2018 mainly due to the proceeds from the sales of the bioseparations operations, net of cash divested and transaction cost, of $39.7 million. Cash flows from investing activities decreased by $7.0 million during the year ended December 31, 2018 compared to the same period in 2017 mainly due to the proceeds from the sale of marketable securities and short-term investments.

In November 2018, we entered into an ATM equity distribution agreement or EDA under which we were able, at our discretion and from time to time, subject to conditions in the EDA, to offer common shares through ATM issuances on the TSX or any other marketplace for aggregate proceeds not exceeding $31 million. This agreement provided that common shares were to be sold at market prices prevailing at the time of sale. For the year ended December 31, 2018, a total of 1,945 common shares were issued under the ATM, at an average price of $386.12 per share, for aggregate gross proceeds of $0.8 million and total net proceeds of $0.7 million. For the year ended December 31, 2019, a total of 12,865 common shares were issued under the ATM at an average price of $327.55 per share, for aggregate gross proceeds of $4.2 million and total net proceeds of $4.0 million. The ATM facility was suspended concurrently with the debt restructuring in April 2019.

Research and Development, Patents and Licences

For a discussion of our research and development activities, see "Item 4.B—Business Overview" and "Item 5.A—Operating Results." of the AIF.

Trend Information

Other than as disclosed elsewhere in MD&A, we are not aware of any trends, uncertainties, demands, commitments or events for the period from January 1, 2019 to December 31, 2019 that are reasonably likely to have a material adverse effect on our net revenues, income, profitability, liquidity or capital resources, or that caused the disclosed financial information to be not necessarily indicative of future operating results or financial conditions. For a discussion of trends, see "Item 4.B.—Business overview," "Item 5.A.—Operating results," and "Item 5.B.—Liquidity and capital resources." of the AIF.

Off-balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet financing arrangements or any relationships with unconsolidated entities or financial partnerships, including entities sometimes referred to as structured finance or special purpose entities, that were established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Tabular Disclosure of Contractual Obligations

The timing and expected contractual outflows required to settle our financial obligations recognized in the consolidated statement of financial position at December 31, 2019 and unrecognized purchase obligations are presented in the table below:

		Contractual Cash flows				
	Carrying amount	**Less than 1 year**	**1-3 years**	**3 - 5 years**	**More than 5 years**	**Total**
Accounts payable and accrued liabilities [1)]	$ 22,808	$ 22,808	$ -	$ -	$ -	$ 22,808
Long-term portion of royalty payment obligations	105	-	52	52	254	358
Lease liabilities	38,237	8,901	16,824	13,529	37,658	76,912
Long-term portion of other employee benefit liabilities	180	-	180		-	180
Long-term debt	8,834	1,176	2,017	11,322	-	14,515
Purchase obligations	n/a	4,816	19,524	-	-	24,340
	$ 70,164	$ 37,701	$ 38,597	$ 24,903	$ 37,912	$ 139,113

[1)]Short term portions of the royalty payment obligations and of other employee benefit liabilities are included in the account payable and accrued liabilities.

Commitments

The minimum lease payments under lease agreements are now included on the statement of financial position under lease liabilities following the adoption of IFRS 16. As of December 31, 2018, we had $75.0 million of lease commitments compared to contractual cash flows of $76.9 million relating to lease liabilities included in the financial obligations as at December 31, 2019 following the adoption of IFRS 16. The increase is mainly due to the inclusion of lease payments beyond minimum commitments when we believe it is reasonably certain we will exercise our options to extend the lease period for certain leases even though we have not yet exercised the renewal option. The increase is also due to the new lease commenced during the year for the new plasma collection center in Amherst, New York and the Liminal Biosciences Limited office in Cambridge, UK.

Royalties

SALP has a right to receive a 2% royalty on future revenues relating to patents of a specified small molecule product candidate and analogues, existing as of the date of the agreement was signed. The obligation under this royalty agreement is secured by all of our assets until the expiry of the last patent anticipated in 2033.

In the normal course of business, we enter into license agreements for the market launching or commercialization of product candidates, if approved. Under these licenses, including the ones mentioned above, we have committed to pay royalties ranging generally between 0.5% and 12.0% of net sales from products we may commercialize, if approved, and 3% of license revenues in regard to certain small molecule product candidates.

Other commitments

We signed a long-term manufacturing contract with a third party which provides us with additional manufacturing capacity, or the CMO contract. In connection with this CMO contract, we have committed to a minimum annual spending of $7.0 million for 2020 and $9.0 million for 2021 to 2030 (the end of the initial term) which includes all expenditures under the contract. As of December 31, 2019, the remaining payment under the CMO contract was $98.9 million or $48.7 million after deduction of the minimum lease payments under the CMO contract recognized in the consolidated financial statements as a lease liability following the

adoption of IFRS 16.

As at December 31, 2019, total commitment remaining under the CMO agreement that are not recognized in the lease liability are as follows:

	Within 1 year	2 - 5 years	Later than 5 years	Total
CMO operating expense commitment	$ 3,464	$ 20,761	$ 24,509	$ 48,734

Quantitative and Qualitative Disclosures about Market Risk

We have exposure to credit risk, liquidity risk and market risk. Our Board of Directors has the overall responsibility for the oversight of these risks and reviews our policies on an ongoing basis to ensure that these risks are appropriately managed.

i) Credit risk:

Credit risk is the risk of financial loss to our company if a customer, partner or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Company's cash, investments, receivables and share purchase loan to a former officer. The carrying amount of the financial assets represents the maximum credit exposure.

We mitigate credit risk through its reviews of new customer's credit history before extending credit and conducts regular reviews of its existing customers' credit performance. We evaluate at each reporting period, the lifetime expected credit losses on our accounts receivable balances based on the age of the receivable, credit history of the customers and past collection experience.

In 2017, we recorded bad debt expense of $20.5 million in regard to the JRP license agreement during the fourth quarter and the year ended December 31, 2017. In 2018 and 2019, there was no bad debt expense.

ii) Liquidity risk:

Liquidity risk is the risk that we will not be able to meet financial obligations as they come due. We manage our liquidity risk by continuously monitoring forecasts and actual cash flows. Our current liquidity situation is discussed in the liquidity and contractual obligation section of this MD&A.

iii) Market risk:

Market risk is the risk that changes in market prices, such as interest rates and foreign exchange rates, will affect our income or the value of its financial instruments.

a) Interest risk:

Our interest-bearing financial liabilities have fixed rates and as such there is limited exposure to changes in interest payments as a result of interest rate risk.

b) Foreign exchange risk:

We are exposed to the financial risk related to the fluctuation of foreign exchange rates. We operate in the U.S. and the U.K., and previously had operations in the Isle of Man (discontinued operations) and a portion of our expenses incurred are in U.S. dollars and in pounds sterling (£). Historically, the majority of our revenues have been in U.S. dollars and in £, continuing operations revenues are in U.S. dollars, which serve to mitigate a portion of the foreign exchange risk relating to the expenditures. Financial instruments that have exposed us to foreign exchange risk have been cash and cash equivalents, short-term investments, receivables, trade and other payables, lease liabilities, licence payment obligations and the amounts drawn on the credit facility. We manage foreign exchange risk by holding foreign currencies we received to support forecasted cash outflows in foreign currencies.

Safe Harbor

This MD&A contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act and as defined in the Private Securities Litigation Reform Act of 1995. See "Forward-Looking Statements."

Risk factors

For a detailed discussion of risk factors which could impact the our results of operations and financial position, other than those risks pertaining to the financial instruments, please refer to our AIF filed on www.sedar.com or our 20-F filed on www.sec.gov/edgar.

Disclosure controls and procedures and internal controls over financial reporting

Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to provide reasonable assurance that information required to be disclosed in our reports filed under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation.

The CEO and CFO have evaluated, or caused the evaluation of, under their supervision, the design and operating effectiveness of our disclosure controls and procedures. Based upon the evaluation, the CEO and CFO have concluded that the disclosure controls and procedures were effective as of December 31, 2019.

Internal control over Financial Reporting

Internal controls over financial reporting (ICFR) are designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with IFRS.

Due to its inherent limitation, there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions, regardless of how remote.

The CEO and CFO are responsible for establishing and maintaining adequate ICFR. They have evaluated, or caused the evaluation of, under their supervision, the design and operating effectiveness of the Company's ICFR as of December 31, 2019 based on the framework established in Internal Control – Integrated Framework (2013) by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, the CEO and CFO concluded that the ICFR were effective as of December 31, 2019.

Change in Internal Controls over Financial Reporting

In accordance with the National Instrument 52-109, we have filed certificates signed by the CEO and CFO that, among other things, report on the design of disclosure controls and procedures and the design of ICFR as at December 31, 2019.

There have been no changes in the Company's ICFR that occurred during the quarter ended December 31, 2019 that have materially affected or are reasonably likely to materially affect its ICFR.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and the Shareholders of Liminal BioSciences Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of Liminal BioSciences Inc. and its subsidiaries (together, the Company) as of December 31, 2019 and 2018, and the related consolidated statements of operations, comprehensive loss, changes in equity and cash flows for the years then ended, including 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 of December 31, 2019 and 2018, and its financial performance and its cash flows for the years then ended in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited the adjustments to retrospectively present the weighted average number of shares outstanding used in the calculation of basic and diluted EPS, the basic and diluted EPS as at December 31, 2017 following the share consolidation that occurred on July 5, 2019 as described in Note 1 and the adjustments to reflect the discontinued operations described in Note 5. In our opinion, such adjustments are appropriate and have been properly applied. We were not engaged to audit, review, or apply any procedures to the 2017 consolidated financial statements of the Company other than with respect to the adjustments and, accordingly, we do not express an opinion or any other form of assurance on the 2017 consolidated financial statements taken as a whole.

Change in Accounting Principle

As discussed in Note 4 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019.

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 Public Company Accounting Oversight Board (United States) (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 of these consolidated financial statements 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.

PricewaterhouseCoopers LLP
1250 René-Lévesque Boulevard West, Suite 2500, Montréal, Quebec, Canada H3B 4Y1
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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.

/s/ PricewaterhouseCoopers LLP[1]

Montreal, Canada
March 20, 2020

We have served as the Company's auditor since 2019.

[1] CPA auditor, CA, public accountancy permit No. A123642

INDEPENDENT AUDITORS' REPORT

To the Shareholders of Prometic Life Sciences Inc.

We have audited, before the effects of the adjustments to retrospectively present the weighted average number of shares outstanding used in the calculation of basic and diluted EPS, the basic and diluted EPS as at December 31, 2017 following the share consolidation that occurred on July 5, 2019, as described in Note 1, and the adjustments to reflect the discontinued operations described in Note 5 to the 2019 consolidated financial statements, the accompanying consolidated financial statements of Prometic Life Sciences Inc. (the "Corporation"), which comprise the consolidated statements of operations, comprehensive loss, changes in equity and cash flows for the year ended December 31, 2017, and a summary of significant accounting policies and other explanatory information.

Management's responsibility for the consolidated financial statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the 2017 consolidated financial statements, before the effects of adjustments to retrospectively present the weighted average number of shares outstanding used in the calculation of basic and diluted EPS, the basic and diluted EPS as at December 31, 2017 following the share consolidation that occurred on July 5, 2019, as described in Note 1, and the adjustments to reflect the discontinued operations described in Note 5 to the 2019 consolidated financial statements, present fairly, in all material respects, the financial performance and cash flows of Prometic Life Sciences Inc. for the year ended December 31, 2017 in accordance with International Financial Reporting Standards, as issued by the International Accounting Standards Board.

/s/ Ernst & Young LLP[1]

Montreal, Canada

March 27, 2018

[1] CPA auditor, CA, public accountancy permit no. A123806

LIMINAL BIOSCIENCES INC.
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
(In thousands of Canadian dollars)

At December 31		**2019**		2018
ASSETS (note 16)				
Current assets				
Cash and cash equivalents	**$**	**61,285**	$	7,389
Accounts receivable (note 6)		**4,086**		11,882
Income tax receivable		**9,214**		8,091
Inventories (note 7)		**7,532**		12,028
Prepaids		**12,733**		1,452
Total current assets		**94,850**		40,842
Long-term income tax receivable		**-**		117
Other long-term assets (note 8)		**1,170**		411
Capital assets (note 9)		**21,471**		41,113
Right-of-use assets (note 10)		**33,254**		-
Intangible assets (note 11)		**13,846**		19,803
Deferred tax assets (note 26)		**507**		606
Total assets	**$**	**165,098**	$	102,892
LIABILITIES				
Current liabilities				
Accounts payable and accrued liabilities (note 13)	**$**	**22,808**	$	31,855
Deferred revenues		**-**		507
Current portion of lease liabilities (note 14)		**8,290**		-
Warrant liability (note 15)		**-**		157
Current portion of long-term debt (note 16)		**165**		3,211
Total current liabilities		**31,263**		35,730
Long-term portion of deferred revenues		**-**		170
Long-term portion of lease liabilities (note 14)		**29,947**		-
Long-term portion of operating and finance lease inducements and obligations (note 17)		**-**		1,850
Other long-term liabilities (note 18)		**285**		5,695
Long-term debt (note 16)		**8,669**		122,593
Total liabilities	**$**	**70,164**	$	166,038
EQUITY				
Share capital (note 19a)	**$**	**932,951**	$	583,117
Contributed surplus (note 19b)		**43,532**		21,923
Warrants (note 19c)		**95,856**		95,296
Accumulated other comprehensive loss		**(3,099)**		(1,252)
Deficit		**(967,051)**		(755,688)
Equity (deficiency) attributable to owners of the parent		**102,189**		(56,604)
Non-controlling interests (note 20)		**(7,255)**		(6,542)
Total equity (deficiency)		**94,934**		(63,146)
Total liabilities and equity	**$**	**165,098**	$	102,892

Commitments (note 31), Subsequent events (note 33)
The accompanying notes are an integral part of the consolidated financial statements.

LIMINAL BIOSCIENCES INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands of Canadian dollars except for per share amounts)

Years ended December 31		2019		2018		2017
Revenues (note 22)	**$**	**4,904**	$	24,633	$	22,313
Expenses						
Cost of sales and other production expenses (note 7)		**2,763**		25,707		3,689
Research and development expenses (note 23a)		**75,114**		84,858		93,523
Administration, selling and marketing expenses		**45,283**		29,448		29,563
Bad debt expense (note 22)		**-**		-		20,491
Loss (gain) on foreign exchange		**(1,451)**		4,696		(781)
Finance costs (note 23b)		**14,056**		22,041		7,889
Loss (gain) on extinguishments of liabilities (notes 16,19)		**92,374**		(33,626)		4,191
Change in fair value of financial instruments measured at fair value through profit or loss (note 15)		**(1,140)**		1,000		-
Impairment losses (note 25)		**12,366**		149,952		-
Share of losses of an associate (note 12)		**-**		22		-
Net loss from continuing operations before taxes	**$**	**(234,461)**	$	(259,465)	$	(136,252)
Income tax recovery on continuing operations (note 26)		**(237)**		(19,637)		(14,302)
Net loss from continuing operations	**$**	**(234,224)**	$	(239,828)	$	(121,950)
Discontinued operations, net of taxes						
Gain on sale of subsidiaries (note 5)		**26,346**		-		-
Net income from discontinued operations (note 5)		**1,125**		1,932		1,914
Net loss	**$**	**(206,753)**	$	(237,896)	$	(120,036)
Net income (loss) attributable to:						
Non-controlling interests - continuing operations (note 20)	**$**	**(1,044)**	$	(42,530)	$	(10,305)
Owners of the parent						
- Continuing operations		**(233,180)**		(197,298)		(111,645)
- Discontinued operations		**27,471**		1,932		1,914
	$	**(205,709)**	$	(195,366)	$	(109,731)
Net loss	**$**	**(206,753)**	$	(237,896)	$	(120,036)
Income (loss) per share						
Attributable to the owners of the parent basic and diluted (note 27):						
From continuing operations	**$**	**(14.52)**	$	(238.28)	$	(140.26)
From discontinued operations		**1.71**		2.33		2.40
Total loss per share	**$**	**(12.81)**	$	(235.95)	$	(137.85)
Weighted average number of outstanding shares (in thousands) (note 27)		**16,062**		828		796

The accompanying notes are an integral part of the consolidated financial statements.

LIMINAL BIOSCIENCES INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(In thousands of Canadian dollars)

Years ended December 31	**2019**	2018	2017
Net Loss	**$ (206,753)**	$ (237,896)	$ (120,036)
Other comprehensive income (loss)			
Items that may be subsequently reclassified to profit and loss:			
Exchange differences on translation of foreign operations from continuing operations	**294**	(462)	(344)
Exchange differences on translation of foreign operations from discontinued operations (note 5)	**(692)**	832	686
Reclassification of exchange differences on translation of foreign operations sold to consolidated statement of operations (note 5)	**(1,449)**	-	-
Total other comprehensive income (loss)	**$ (1,847)**	$ 370	$ 342
Total comprehensive loss	**$ (208,600)**	$ (237,526)	$ (119,694)
Total comprehensive income (loss) attributable to:			
Non-controlling interests	**$ (1,044)**	$ (42,530)	$ (10,305)
Owners of the parent			
- Continuing operations	**(232,886)**	(197,760)	(111,989)
- Discontinued operations	**25,330**	2,764	2,600
Total comprehensive loss	**$ (208,600)**	$ (237,526)	$ (119,694)

The accompanying notes are an integral part of the consolidated financial statements.

LIMINAL BIOSCIENCES INC.
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(In thousands of Canadian dollars)

	Equity (deficiency) attributable to owners of the parent							
	Share capital $	Contributed surplus $	Warrants $	Foreign currency translation reserve $	Deficit $	Total $	Non-controlling interests $	Total equity (deficiency) $
Balance at January 1, 2017	480,237	12,919	64,201	(1,964)	(423,026)	132,367	26,976	159,343
Net loss	-	-	-	-	(109,731)	(109,731)	(10,305)	(120,036)
Foreign currency translation reserve	-	-	-	342	-	342	-	342
Issuance of shares (note 19a)	61,450	-	-	-	-	61,450	-	61,450
Share-based payments expense (note 19b)	-	8,662	-	-	-	8,662	-	8,662
Exercise of stock options (note 19b)	811	(330)	-	-	-	481	-	481
Shares issued pursuant to restricted share unit plan (note 19b)	5,058	(5,058)	-	-	-	-	-	-
Exercise of future investment rights	27,594	-	(6,542)	-	-	21,052	-	21,052
Issuance of warrants (note 19c)	-	-	16,285	-	-	16,285	-	16,285
Share and warrant issuance cost (note 19a,c)	-	-	-	-	(4,148)	(4,148)	-	(4,148)
Effect of funding arrangements on non-controlling interest (note 20)	-	-	-	-	(4,776)	(4,776)	4,776	-
Balance at December 31, 2017	575,150	16,193	73,944	(1,622)	(541,681)	121,984	21,447	143,431
Impact of adopting IFRS 9 (note 4a)	-	-	-	-	110	110	-	110
Balance at January 1, 2018 - restated	575,150	16,193	73,944	(1,622)	(541,571)	122,094	21,447	143,541
Net loss	-	-	-	-	(195,366)	(195,366)	(42,530)	(237,896)
Foreign currency translation reserve	-	-	-	370	-	370	-	370
Issuance of shares (note 19a)	6,340	-	-	-	-	6,340	-	6,340
Share-based payments expense (note 19b)	-	6,722	-	-	-	6,722	-	6,722
Exercise of stock options (note 19b)	1,073	(438)	-	-	-	635	-	635
Shares issued pursuant to restricted share unit plan (note 19b)	554	(554)	-	-	-	-	-	-
Issuance of warrants (note 19c)	-	-	21,352	-	-	21,352	-	21,352
Share and warrant issuance cost	-	-	-	-	(581)	(581)	-	(581)
Effect of changes in the ownership of a subsidiary and funding arrangements on non-controlling interests (note 20)	-	-	-	-	(18,170)	(18,170)	14,541	(3,629)
Balance at December 31, 2018	**583,117**	**21,923**	**95,296**	**(1,252)**	**(755,688)**	**(56,604)**	**(6,542)**	**(63,146)**
Net loss	**-**	**-**	**-**	**-**	**(205,709)**	**(205,709)**	**(1,044)**	**(206,753)**
Foreign currency translation reserve	**-**	**-**	**-**	**(398)**	**-**	**(398)**	**-**	**(398)**
Reclassification of exchange differences on translation of foreign operations to consolidated statement of operations (note 5)	**-**	**-**	**-**	**(1,449)**	**-**	**(1,449)**	**-**	**(1,449)**
Issuance of shares (note 19a)	**349,834**	**-**	**-**	**-**	**-**	**349,834**	**-**	**349,834**
Share-based payments expense (note 19b)	**-**	**22,030**	**-**	**-**	**-**	**22,030**	**-**	**22,030**
Share-based compensation paid in cash (note 19b)	**-**	**(421)**	**-**	**-**	**-**	**(421)**	**-**	**(421)**
Issuance of warrants (note 19c)	**-**	**-**	**560**	**-**	**-**	**560**	**-**	**560**
Share issuance cost (note 19a)	**-**	**-**	**-**	**-**	**(5,323)**	**(5,323)**	**-**	**(5,323)**
Effect of funding arrangements on non-controlling interests (note 20)	**-**	**-**	**-**	**-**	**(331)**	**(331)**	**331**	**-**
Balance at December 31, 2019	**932,951**	**43,532**	**95,856**	**(3,099)**	**(967,051)**	**102,189**	**(7,255)**	**94,934**

The accompanying notes are an integral part of the consolidated financial statements

LIMINAL BIOSCIENCES INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands of Canadian dollars)

Years ended December 31	2019	2018	2017
Cash flows used in operating activities			
Net loss from continuing operations for the year	**$ (234,224)**	$ (239,828)	$ (121,950)
Net income from discontinued operations for the year	**27,471**	1,932	1,914
Adjustments to reconcile net loss to cash flows used in operating activities:			
Finance costs and foreign exchange	**12,809**	25,282	8,787
Change in operating and finance lease inducements and obligations	**-**	2,565	2,391
Carrying value of capital and intangible assets disposed	**196**	513	563
Share of losses of an associate (note 12)	**-**	22	-
Gain on sale of subsidiaries (note 5)	**(26,346)**	-	-
Change in fair value of financial instruments measured at fair value through profit or loss (note 15)	**(1,140)**	1,000	-
Impairment losses (note 25)	**12,366**	149,952	-
Loss (gain) on extinguishments of liabilities (notes 16, 19a)	**92,374**	(33,626)	4,191
Deferred income taxes (note 26)	**87**	(13,815)	(11,587)
Share-based payments expense (note 19b)	**21,609**	6,722	8,662
Depreciation of capital assets (note 9)	**3,734**	4,086	3,632
Depreciation of right-of-use assets (note 10)	**4,913**	-	-
Amortization of intangible assets (note 11)	**1,259**	1,372	944
	(84,892)	(93,823)	(102,453)
Change in non-cash working capital items	**(14,498)**	11,369	(20,120)
	$ (99,390)	$ (82,454)	$ (122,573)
Cash flows from financing activities			
Proceeds from share issuances (note 19a)	**118,785**	751	53,125
Proceeds from debt and warrant issuances (notes 16, 19c)	**19,859**	79,105	50,717
Repayment of principal on long-term debt (note 16)	**(988)**	(3,184)	(3,454)
Repayment of interest on long-term debt (note 16)	**(3,540)**	(3,934)	(163)
Exercise of options (note 19b)	**-**	635	481
Exercise of future investment rights	**-**	-	21,052
Payments of principal on lease liabilities (note 14)	**(7,563)**	-	-
Payment of interest on lease liabilities (note 14)	**(1,767)**	-	-
Debt, share and warrants issuance costs	**(6,867)**	(970)	(4,306)
Payments of principal under finance leases	**-**	(245)	-
	$ 117,919	$ 72,158	$ 117,452
Cash flows from (used in) investing activities			
Additions to capital assets	**(2,741)**	(3,786)	(7,688)
Additions to intangible assets	**(1,703)**	(1,342)	(2,395)
Proceeds from sale of discontinued operations business, net of cash divested	**43,958**	-	-
Transaction costs paid relating to the sale of discontinued operations business	**(4,228)**	-	-
Proceeds from the sale of marketable securities and short-term investments		-	11,063
Acquisition of convertible debt	**-**	(955)	-
Additions to other long-term assets		-	(63)
Release of restricted cash	**65**	-	-
Interest received	**745**	224	202
	$ 36,096	$ (5,859)	$ 1,119
Net change in cash and cash equivalents during the year	**54,625**	(16,155)	(4,002)
Net effect of currency exchange rate on cash and cash equivalents	**(729)**	378	(638)
Cash and cash equivalents, beginning of year	**7,389**	23,166	27,806
Cash and cash equivalents, end of year	**$ 61,285**	$ 7,389	$ 23,166
Comprising of:			
Cash	**41,761**	7,389	23,166
Cash equivalents	**19,524**	-	-
	$ 61,285	$ 7,389	$ 23,166

Cash flows from discontinued operations presented in note 5

The accompanying notes are an integral part of the consolidated financial statements.

1. Nature of operations

Liminal BioSciences Inc. ("Liminal" or the "Company") is incorporated under the Canada Business Corporations Act and is a publicly traded clinical stage biotechnology company (NASDAQ & TSX symbol: LMNL) focused on discovering, developing and commercializing novel treatments for patients suffering from diseases related to fibrosis, including respiratory, liver and kidney diseases that have high unmet medical need. Liminal has a deep understanding of certain biological targets and pathways that have been implicated in the fibrotic process, including fatty acid receptors such as G-protein-coupled receptor 40, or GPR40, and G-protein-coupled receptor 84, or GPR84, and peroxisome proliferator-activated receptors, or PPARs.

Liminal's lead small molecule segment product candidate, fezagepras (PBI 4050), is currently being developed for the treatment of respiratory diseases and for the treatment of Alström Syndrome. The plasma-derived therapeutics segment leverages Liminal's experience in bioseparation technologies used to isolate and purify biopharmaceuticals from human plasma. With respect to this second platform, the Company is focused on the development of its plasma-derived product candidate Ryplazim® (plasminogen) ("Ryplazim®").

On July 5, 2019, the Company performed a one thousand-to-one share consolidation of the its common shares, stock options, restricted share units and warrants. The quantities and per unit prices presented in these audited annual consolidated financial statements have been retroactively adjusted to give effect to the share consolidation.

On October 7, 2019, the Company formerly named Prometic Life Sciences Inc. changed its name to Liminal BioSciences Inc. and the Company's TSX stock symbol changed from PLI to LMNL.

On November 24, 2019 the Company sold the majority of its bioseparations business to a third party. These activities are presented as discontinued operations in the annual consolidated financial statements. Details on this transaction and the results from discontinued operations are disclosed in note 5. The prior period results from discontinued operations have been reclassified and presented in the consolidated statements of operations.

The Company's head office is located at 440, Boul. Armand-Frappier, suite 300, Laval, Québec, Canada, H7V 4B4. Liminal has Research and Development ("R&D") facilities in Canada, the U.K. and the U.S. and manufacturing facilities in Canada.

Structured Alpha LP ("SALP") has been Liminal's majority and controlling shareholder since the debt restructuring on April 23, 2019 (note 13) and is considered Liminal's parent entity for accounting purposes. Thomvest Asset Management Ltd. is the general partner of SALP and the ultimate controlling parent, for accounting purposes, of Liminal is The 2003 TIL Settlement. Prior to this date, Liminal did not have a controlling parent.

The consolidated financial statements for the year ended December 31, 2019 have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB") on a going concern basis, which presumes the Company will continue its operations for the foreseeable future and will be able to realize its assets and discharge its liabilities and commitments in the ordinary course of business.

The financial condition of the Company improved significantly since April 2019 following the completion of several transactions including the debt restructuring, and the proceeds from the sale of the bioseparations operations, resulting in a cash and cash equivalent position of $61,285 at December 31, 2019. The Company has a positive working capital position, i.e. the current assets net of current liabilities, of $63,587 at December 31, 2019. The Company also has access to a line of credit of up to $30,298 (note 29) as at December 31, 2019, as a result of a loan agreement with SALP signed November 11, 2019. As at March 20, 2020, following the receipt of additional payment for the sales of the bioseparations operations, the amount available to be drawn was reduced to $29,123.

Despite the improved liquidity situation, Liminal is an R&D stage enterprise and until the Company can generate a sufficient amount of product revenue to finance its cash requirements, management expects, as required, to finance future cash needs primarily through a combination of public or private equity offerings, debt financings, strategic collaborations, business and asset divestitures, and grant funding.

2. Significant accounting policies

Statement of compliance

These consolidated financial statements have been prepared in accordance with IFRS as issued by the IASB and were approved by the Board of Directors on March 20, 2020.

Basis of measurement

The consolidated financial statements have been prepared on a historical cost basis, except for the convertible debt, equity investments and the warrant liability which have been measured at fair value. Certain assets may be carried at their net realizable value or at their recoverable amount if they have been subject to impairment.

Functional and presentation currency

The consolidated financial statements are presented in Canadian dollars, which is also the Company's functional currency.

Basis of consolidation

The consolidated financial statements include the accounts of Liminal BioSciences Inc., and those of its subsidiaries. The Company's subsidiaries at December 31, 2019, 2018 and 2017 are as follows:

Name of subsidiary	Segment activity	Place of incorporation and operation	Proportion of ownership interest held by group		
			2019	2018	2017
Liminal R&D BioSciences Inc. (formerly Prometic Biosciences Inc.)	Small molecule therapeutics	Quebec, Canada	**100%**	100%	100%
Prometic Bioproduction Inc.	Plasma-derived therapeutics	Quebec, Canada	**100%**	100%	87%
Prometic Bioseparations Ltd	Discontinued operations	Isle of Man, British Isles	**nil**	100%	100%
Prometic Biotherapeutics Inc.	Plasma-derived therapeutics	Delaware, U.S.	**100%**	100%	100%
Prometic Biotherapeutics Ltd	Plasma-derived therapeutics	Cambridge, United Kingdom	**100%**	100%	100%
Prometic Biotherapeutics B.V.	Plasma-derived therapeutics	Amsterdam, Netherlands	**100%**	N/A	N/A
Prometic Manufacturing Inc.	Discontinued operations	Quebec, Canada	**nil**	100%	100%
Pathogen Removal and Diagnostic Technologies Inc.	Corporate	Delaware, U.S.	**77%**	77%	77%
NantPro Biosciences, LLC	Plasma-derived therapeutics	Delaware, U.S.	**73%**	73%	73%
Prometic Plasma Resources Inc.	Plasma-derived therapeutics	Winnipeg, Canada	**100%**	100%	100%
Prometic Plasma Resources USA Inc.	Plasma-derived therapeutics	Delaware, U.S.	**100%**	100%	N/A
Liminal BioSciences Holdings Limited (formerly Prometic Pharma SMT Holdings Limited)	Small molecule therapeutics	Cambridge, United Kingdom	**100%**	100%	100%
Liminal BioSciences Limited (formerly Prometic Pharma SMT Limited)	Small molecule therapeutics	Cambridge, United Kingdom	**100%**	100%	100%
Prometic Pharma SMT B.V	Small molecule therapeutics	Amsterdam, Netherlands	**100%**	N/A	N/A
Telesta Therapeutics Inc.	Plasma-derived therapeutics	Quebec, Canada	**100%**	100%	100%

The Company consolidates investees when, based on the evaluation of the substance of the relationship with the Company, it concludes that it controls the investees. The Company controls an investee when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. The financial statements of the subsidiaries are prepared for the same reporting period as the parent Company, using consistent accounting policies. All intra-group transactions, balances, income and expenses are eliminated in full upon consolidation.

When a subsidiary is not wholly-owned the Company recognizes the non-controlling interests' share of the net assets and results of operations in the subsidiary. When the proportion of the equity held by non-controlling interests' changes without resulting in a change of control, the carrying amount of the controlling and non-controlling interest are adjusted to reflect the changes in their relative interests in the subsidiary. In these situations, the Company recognizes directly in equity the effect of the change in ownership of a subsidiary on the non-controlling interests. Similarly, after recognizing its share of the operating losses, the non-controlling interest is adjusted for its share of the equity contribution made by Liminal that does not modify the interest held by either party. The offset to this adjustment is recorded in the deficit. The effect of these transactions is presented in the consolidated statement of changes in equity.

Financial instruments

Recognition and derecognition

Financial instruments are recognized in the consolidated statement of financial position when the Company becomes a party to the contractual obligations of the instrument. On initial recognition, financial instruments are recognized at their fair value plus, in the case of financial instruments not at fair value through profit or loss ("FVPL"), transaction costs that are directly attributable to the acquisition or issue of financial instruments. Financial assets are subsequently derecognized when payment is received in cash or other financial assets or if the debtor is discharged of its liability.

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing liability is replaced by another from the same creditor on substantially different terms, or the terms of the liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the consolidated statement of operations.

Classification

Subsequent to initial recognition, financial instruments are measured according to the category to which they are classified. Financial instruments are measured at amortized cost unless they are classified as fair value through other comprehensive income ("FVOCI"), classified as FVPL or designated as FVPL, in which case they are subsequently measured at fair value.

The classification of financial asset debt instruments is driven by the Company's business model for managing the financial assets and their contractual cash flow characteristics. Assets that are held to collect contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. Equity instruments that are held for trading (including all equity derivative instruments) are classified as FVPL. For other equity instruments, on the day of acquisition the Company can make an irrevocable election (on an instrument-by-instrument basis) to designate them as at FVOCI instead of FVPL. Financial liabilities are measured at amortized cost, unless they are required to be measured at FVPL (such as instruments held for trading or derivatives) or the Company has opted to measure them at FVPL.

Currently, the Company classifies cash, cash equivalents, trade receivables, other receivables, restricted cash, and long-term deposits as financial assets measured at amortized cost and trade payables, wages and benefits payable, settlement fee payable, royalty payment obligations, license acquisition payment obligations, other employee benefit liabilities, other long-term liabilities and long-term debt as financial liabilities measured at amortized cost.

The Company previously held investments in equity instruments and convertible debt that it classified as financial assets at FVPL and a warrant liability classified as a financial liability at FVPL.

Impairment of financial assets

The expected credit losses associated with its debt instruments carried at amortized cost is assessed on a forward-looking basis. The impairment methodology applied depends on whether there has been a significant increase in credit risk. For trade receivables, the Company applies the simplified approach permitted by IFRS 9, which requires lifetime expected losses to be recognized from initial recognition of the receivables.

Cash equivalents

Cash and cash equivalents comprise deposits in banks and highly liquid investments having an original maturity of 90 days or less when issued.

Financial instrument accounting policy used before the adoption of IFRS 9, Financial instruments ("IFRS 9") on January 1, 2018

Prior to January 1, 2018, the Company applied IAS 39 Financial instruments. The accounting policy and classification of the financial instruments applied under that standard is detailed in the following paragraphs.

i) Financial assets and financial liabilities at fair value through profit and loss

Cash, marketable securities and restricted cash are respectively classified as fair value through profit and loss. They are measured at fair value and changes in fair value are recognized in the consolidated statements of operations. Directly related transaction costs are recognized in the consolidated statements of operations.

ii) Loans and receivables

Cash equivalents, short-term investments, trade receivables, other receivables and long-term receivables are classified as loans and receivables. They are initially recognized at fair value and subsequently carried at amortized cost using the effective interest method.

iii) Available-for-sale financial assets

Investments in common or preferred shares of private companies are classified as available-for-sale and are measured at cost since their fair value cannot be measured reliably.

iv) Financial liabilities

Trade payable, wages and severances payable, other employee benefit liabilities, settlement fee payable, royalty payment obligation, other long-term liabilities, advance on revenues from a supply agreement and long-term debt are classified as other financial liabilities. They are measured at amortized cost using the effective interest method.

Credit facility fees are recorded in deferred financing cost and are amortized into finance cost over the term of the Credit Facility.

Impairment of investments

When there has been a significant or prolonged decline in the value of an investment, the investment is written down to recognize the loss.

Inventories

Inventories of raw materials, work in progress and finished goods are valued at the lower of cost and net realizable value. Cost is determined on a first in, first out basis. The cost of manufactured inventories comprises all costs that are directly attributable to the manufacturing process, such as raw materials, direct labour and manufacturing overhead based on normal operating capacity. Net realizable value is the estimated selling price in the ordinary course of business less the estimated cost of completion and the estimated selling costs except for raw materials for which it is determined using replacement cost.

Capital assets

Capital assets are recorded at cost less any government assistance, accumulated depreciation and accumulated impairment losses, if any. Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets, as described below.

Capital asset	Period
Buildings and improvements	20 years
Leasehold improvements	The lower of the lease term and the useful life
Production and laboratory equipment	5 - 20 years
Furniture	5 - 10 years
Computer equipment	3 - 5 years
Assets held under financing leases *	The lower of the lease term and the useful life

* Assets held under financing leases are presented as part of capital assets prior to the adoption of IFRS 16, Leases and since January 1, 2019 are included under Right-of-use assets (note 10).

The estimated useful lives, residual values and depreciation methods are reviewed annually with the effect of any changes in estimates accounted for on a prospective basis. The gain or loss arising on the disposal or retirement of a capital asset is determined as the difference between the sales proceeds and its carrying amount and is recognized in profit or loss.

Government assistance

Government assistance programs, including investment tax credits on research and development expenses, are reflected as reductions to the cost of the assets or to the expenses to which they relate and are recognized when there is reasonable assurance that the assistance will be received and all attached conditions are complied with.

Right-of-use ("ROU") assets

The Company recognizes a right-of-use asset at the commencement date of a lease which is when the date at which the underlying asset is available for use. Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognized, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Unless the Company is reasonably certain to obtain ownership of the leased asset at the end of the lease term, the recognized right-of-use asset is depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term.

Intangible Assets

Intangible assets include acquired rights such as licenses for product manufacturing and commercialization, donor lists, external patent costs and software costs. They are carried at cost less accumulated amortization. Amortization commences when the intangible asset is available for use and is calculated over the estimated useful lives of the intangible assets acquired using the straight-line method. The maximum period used for each category of intangible asset are presented in the table below. The estimated useful lives and amortization method are reviewed annually, with the effect of any changes in estimates being accounted for on a prospective basis. The amortization expense is recognized in the consolidated statement of operations in the expense category consistent with the function of the intangible assets.

Intangible asset	Period
Licenses and other rights	30 years
Donor lists	10 years
Patents	20 years
Software	5 years

Impairment of tangible and intangible assets

At the end of each reporting period, the Company reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If

impairment indicators exist, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if any. For intangible assets not yet available for use, an impairment test is performed annually at November 30, until amortization commences, whether or not there are impairment indicators. When it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of the cash-generating unit (CGU) which represents the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets, groups of assets or CGUs to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, the corporate assets are also allocated to individual CGUs, or otherwise they are allocated to the smallest group of CGUs for which a reasonable and consistent allocation basis can be identified.

The recoverable amount is the higher of the fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

An impairment loss is recognized when the carrying amount of an asset or a CGU exceeds its recoverable amount by the amount of this excess. An impairment loss is recognized immediately in profit or loss in the period during which the loss is incurred. Where an impairment loss subsequently reverses, the carrying amount of the asset or CGU is increased to the revised estimate of its recoverable amount; on reversal of an impairment loss, the increased carrying amount does not exceed the carrying amount that would have been determined had an impairment loss not been recognized for the asset or CGU in prior periods. A reversal of an impairment loss is recognized immediately in profit or loss.

Investment in an associate

Investments in associates are accounted for using the equity method. An associate is an entity over which the Company has significant influence. Under the equity method, the investment in the associate is carried on the consolidated statement of financial position at cost plus post acquisition changes in the Company's share of net assets of the associate.

The consolidated statement of operations reflects the Company's share of the results of operations of the associate.

If the Company's share of cumulative losses of an associate equal or exceeds its interest in the associate, the Company discontinues recognizing its share of further losses. After the interest in an associate is reduced to zero, additional losses are provided for, and a liability is recognized, only to the extent that the Company has incurred legal or constructive obligations or made payments on behalf of the associate. If the associate subsequently reports profits, the Company resumes recognizing its share of those profits only after its share of the profits equals the share of losses not recognized.

At each balance sheet date, management considers whether there is objective evidence of impairment in associates. If there is such evidence, management determines the amount of impairment to record, if any, in relation to the associate.

When the level of influence over an associate changes either following a loss of significant influence over the associate, or the obtaining of control over the associate or when an investment in a financial asset accounted for under IFRS 9 becomes subject to significant influence, the Company measures and recognizes its investment at its fair value. Any difference between the carrying amount of the associate at the time of the change in influence and the fair value of the investment, and proceeds from disposal if any, is recognized in profit or loss.

Lease liabilities

At the commencement date of a lease, the Company recognizes a lease liability measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Company and payments of penalties for terminating a lease, if the lease term reflects the Company exercising the option to terminate. The variable lease payments that do not depend on an index or a rate are recognized as expense in the period on which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Company uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of a lease liability is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of a lease liability is remeasured if there is a modification, a change in the lease term, a change in the in-substance fixed lease payments or a change in the assessment whether the underlying asset will be purchased.

The Company applies the short-term lease recognition exemption to leases of 12 months or less, as well as the lease of low-value assets recognition exemption i.e. leases with a value below seven dollars. Lease payments on short-term leases and leases of low-value assets are recognized as expense on a straight-line basis over the lease term.

Prior to the adoption of IFRS 16, Leases on January 1, 2019 (note 3), as a lessor, the Company only recognized finance lease obligations while operating leases obligations were only disclosed.

Revenue recognition

To determine revenue recognition for contracts with customers, Liminal performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. The five-step model is only applied to contracts when it is probable that we will collect the consideration we are entitled to in exchange for the goods or services we transfer. At contract inception, the Company assesses the goods or services promised within each contract, determines those that are performance obligations, and assesses whether each promised good or service is distinct. The transaction price that is allocated to the respective performance obligation is recognized as revenue when (or as) the performance obligation is satisfied.

Sale of goods

Revenue from sale of goods is recognized when the terms of a contract with a customer have been satisfied. This occurs when:

- The control over the product has been transferred to the customer; and
- The product is received by the customer or transfer of title to the customer occurs upon shipment.

Following delivery, the customer bears the risks of obsolescence and loss in relation to the goods. Revenue is recognized based on the price specified in the contract, net of estimated sales discounts and returns.

Rendering of services

Revenues from contracted services are generally recognized as the performance obligations are satisfied over time, and the related expenditures are incurred pursuant to the terms of the agreement. Contract revenue is recognized on a percentage of completion basis based on key milestones contained within the contract.

Unbilled revenues and deferred revenues

If the Company has recognized revenues but has not issued an invoice, the entitlement is recognized as a contract asset and is presented in the statement of financial position as unbilled revenues. When the amounts are invoiced, then the amounts are transferred into trade receivables. If the Company has received payments prior to satisfying its performance obligation, the obligation is recognized as a contract liability and is presented in the consolidated statement of financial position as deferred revenues.

Licensing fees and milestone payments

Under IFRS 15, the Company determines whether the Company's promise to grant a license provides its customer with either a right to access the Company's intellectual property ("IP") or a right to use the Company's IP. A license will provide a right to access the intellectual property if there is significant development of the intellectual property expected in the future whereas for a right to use, the intellectual property is to be used in the condition it is at the time the license is signed. Revenue from a license that provides a customer the right to use the Company's IP is recognized at a point in time when the transfers to the licensee is completed and the license period begins. When a license provides access to the Company's IP over a license term, the performance obligation is satisfied over time and, therefore, revenue is recognized over the term of the license arrangement. Milestone payments are immediately recognized as licensing revenue when the condition is met, if the milestone is not a condition to future deliverables and collectability is reasonably assured. Otherwise, they are recognized over the remaining term of the agreement or the performance period.

Rental revenue

The Company accounts for the lease or sub-lease with its tenant as an operating lease when the Company has not transferred substantially all of the risks and benefits of ownership of its property or leased property. Revenue recognition under an operating lease commences when the tenant has a right to use the leased asset, and the total amount of contractual rent to be received from the operating lease is recognized on a straight-line basis over the term of the lease. Rental revenue also includes recoveries of operating expenses and property taxes.

Revenue recognition accounting policy used before the adoption of IFRS 15, Revenue from contracts with customers ("IFRS 15") on January 1, 2018

The Company earns revenues from research and development services, license and milestone fees, sale of goods and leasing arrangements, which may include multiple elements. The individual elements of each agreement are divided into separate units of accounting, if certain criteria are met. The applicable revenue recognition method is then applied to each unit. Otherwise, the applicable revenue recognition criteria are applied to combined elements as a single unit of accounting.

Rendering of services

Revenues from research and development services are recognized using the proportional performance method. Under this method, revenues are recognized proportionally with the degree of completion of the services under the contract when it is probable that the economic benefits will flow to the Company and revenue and costs associated with the transaction can be measured reliably.

Licensing fees and milestone payments

Certain license fees are comprised of up-front fees and milestone payments. Up-front fees are recognized over the estimated term during which the Company maintains substantive obligations. Milestone payments are recognized as revenue when the milestone is achieved, customer acceptance is obtained, and the customer is obligated to make performance payments. Certain license arrangements require no continuing involvement by the Company. Non-refundable license fees are recognized as revenue when the Company has no further involvement or obligation to perform under the arrangement, the fee is fixed or determinable and collection of the amount is reasonably assured.

Sale of goods

Revenue from the sale of goods is recognized when all the following conditions are satisfied:

- the Company has transferred to the customer the significant risks and rewards of ownership of the goods;
- the Company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- the amount of revenue can be measured reliably;
- it is probable that the economic benefits associated with the transaction will flow to the entity; and
- the costs incurred or to be incurred in respect of the transaction can be measured reliably.

Revenue is reduced for estimated customer returns and other similar allowances. Amounts received in advance of meeting the revenue recognition criteria are recorded as deferred revenue on the consolidated statements of financial position.

Rental revenue

The Company accounts for the lease with its tenant as an operating lease when the Company has not transferred substantially all of the risks and benefits of ownership of its property. Revenue recognition under an operating lease commences when the tenant has a right to use the leased asset, and the total amount of contractual rent to be received from the operating lease is recognized on a straight-line basis over the term of the lease. Rental revenue also includes recoveries of operating expenses and property taxes.

Research and development expenses

Expenditure on research activities is recognized as an expense in the period during which it is incurred. An internally generated intangible asset arising from development (or from the development phase of an internal project) is recognized if, and only if, all of the following have been demonstrated:

- the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- the intention to complete the intangible asset and use or sell it;
- the ability to use or sell the intangible asset;
- how the intangible asset will generate probable future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- the ability to measure reliably the expenditures attributable to the intangible asset during its development.

To date, the Company has not capitalized any development costs.

Research and development expenses presented in the consolidated statement of operations comprise the costs to manufacture the plasma-derived product candidates used in pre-clinical tests and clinical trials. It also includes the cost of product candidates used in our small molecule clinical trials such as PBI-4050, external consultants supporting the clinical trials and pre-clinical tests, employee compensation and other operating expenses involved in research and development activities.

Foreign currency translation

Transactions and balances

Transactions in foreign currencies are initially recorded by the Company and its entities at their respective functional currency rates prevailing at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency spot rate of exchange at the reporting date. All differences are taken to the consolidated statement of operations. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates when the initial transactions took place.

Group companies

The assets and liabilities of foreign operations are translated into Canadian dollars at the rate of exchange prevailing at the reporting date and their statements of operations are translated at exchange rates prevailing at the dates of the transactions. The exchange differences arising on the translation are recognized in other comprehensive loss. On disposal of a foreign operation, the component of other comprehensive loss relating to that particular foreign operation is reclassified from the consolidated statement of comprehensive loss to the consolidated statement of operations as part of the gain or loss on the disposal of the foreign operation.

Income taxes

The Company uses the liability method of accounting for income taxes. Deferred income tax assets and liabilities are recognized in the consolidated statement of financial position for the future tax consequences attributable to differences between the consolidated financial statements carrying values of existing assets and liabilities and their respective income tax bases. Deferred income tax assets and liabilities are measured using income tax rates expected to apply when the assets are realized or the liabilities are settled. The effect of a change in

income tax rates is recognized in the year during which these rates change. Deferred income tax assets are recognized to the extent that it is probable that future tax profits will allow the deferred tax assets to be recovered. When uncertainties exist over income tax treatments, the Company applies the guidance in IFRIC 23, Uncertainty over income tax treatments when evaluating its income tax provisions.

Share-based payments

The Company has a stock option plan and a restricted share unit plan. The fair value of stock options granted is determined at the grant date using the Black-Scholes option pricing model and is expensed over the vesting period of the options. Awards with graded vesting are considered to be multiple awards for fair value measurement. The fair value of Restricted Share Units ("RSU") is determined using the market value of the Company's shares on the grant date. The expense associated with RSU awards that vest over time are recognized over the vesting period. When the vesting of RSU is dependent on meeting performance targets as well as a service requirement, the Company will estimate the outcome of the performance targets to determine the expense to recognize over the vesting period, and revise those estimates until the final outcome is determined. An estimate of the number of awards that are expected to be forfeited is also made at the time of grant and revised periodically if actual forfeitures differ from those estimates.

The Company's policy is to issue new shares upon the exercise of stock options and the release of RSU for which conditions have been met.

Assets held for sale and discontinued operations

The Company classifies non-current assets and disposal groups as held for sale if their carrying amounts will be recovered principally through a sale rather than through continuing use. Such non-current assets and disposal groups classified as held for sale are measured at the lower of their carrying amount and their fair value less cost to sell. Costs to sell are the incremental costs directly attributable to the sale, excluding finance costs and income tax expense. Such assets are only presented as held for sale when the sale is highly probable and the assets or disposal group are available for immediate sale in their present condition. Actions required to complete the sale should indicate that it is unlikely that significant changes to the sale will be made or that the sale will be withdrawn. Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

Capital assets included as part of the assets held for sale are not depreciated once classified as held for sale. Assets and liabilities classified as held for sale are presented separately as current items in the consolidated statement of financial position.

The results of discontinued operations are presented net of tax in the consolidated statement of operations. Incremental cost related to the disposition and income taxes are allocated to discontinued operations. The discontinued operations also include the gain or loss on the disposal, which will also include the reclassification of historical exchange differences on translation of foreign operations sold. The results of discontinued operations exclude the allocation of the corporate finance costs and general corporate overheads in the forms of management fees if those costs will continue to be incurred by Liminal following the disposition. The prior period results from discontinued operations have been reclassified and presented in the consolidated statements of operations.

Earnings per share (EPS)

The Company presents basic and diluted earnings per share ("EPS") data for its common shares. Basic EPS is calculated by dividing the profit or loss attributable to common shareholders of the Company by the weighted average number of common shares outstanding during the year adjusted for any bonus element. Diluted EPS is determined by adjusting the weighted average number of common shares outstanding for the effects of all dilutive potential common shares, which comprise warrants, stock options and RSU. For the years ended December 31, 2019, 2018 and 2017, all warrants, stock options and RSU were anti-dilutive since the Company reported net losses.

Share and warrant issue expenses

The Company records share and warrant issue expenses as an increase to the deficit.

3. Significant accounting judgements and estimation uncertainty

The preparation of these consolidated financial statements requires the use of judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities and the accompanying disclosures. The uncertainty that is often inherent in estimates and assumptions could result in material adjustments to assets or liabilities affected in future periods.

Significant judgments

Going concern - In assessing whether the going concern assumption is appropriate and whether there are material uncertainties that may cast significant doubt about the Company's ability to continue as a going concern, management must estimate future cash flows for a period of at least twelve months following the end of the reporting period by considering relevant available information about the future. Management has considered a wide range of factors relating to expected cash inflows such as whether the Company will earn licensing and milestone revenues, obtain regulatory approval for commercialization of product candidates and potential sources of debt and equity financing available to it. Management has also estimated expected cash outflows such as operating and capital expenditures and debt repayment schedules, including the ability to delay uncommitted expenditures. These cash flow estimates are subject to uncertainty.

Accounting for loan modifications – When the terms of a loan are modified, management must evaluate whether the terms of the loan are substantially different in order to determine the accounting treatment. If they are considered to be substantially different, the modification will be accounted for as a derecognition of the carrying value of the pre-modified loan and the recognition of a new loan at its fair value. Otherwise, the changes will be treated as a modification which will result in adjusting the carrying amount to the present value of the modified cash flows using the original effective interest rate of the loan instrument. In assessing whether the terms of a loan are substantially different, management performs a quantitative analysis of the changes in the cash flows under the previous agreement and the new agreement and also considers other modifications that have no cash flow impact. In the context of the simultaneous modification to the terms of several loans with the same lender, management uses judgment to determine if the cash flow analysis should be performed on the loans in aggregate or individually. Judgment is also used to evaluate the relative importance of additional rights given to the lender such as additional Board of Director seats and the extension of the term of the security compared to the quantitative analysis.

Revenue recognition – The Company enters into revenue agreements from time to time which provide, among other payments, up-front and milestone payments in exchange for licenses and other access to intellectual property. It may also enter into several agreements simultaneously that are different in nature such as license agreements, R&D services, supply and manufacturing agreements. In determining the appropriate method for recognizing revenues in a given contract, management may be required to apply significant judgment including the identification of performance obligations.

Determining whether performance obligations are distinct involves evaluating whether the customer can benefit from the good or service on its own or together with other resources that are readily available to the customer. Once the distinct performance obligations are identified, management must then determine if each performance obligation is satisfied at a point in time or over time. For license agreements, this requires management to assess the level of advancement of the intellectual property being licensed.

Functional currency – The functional currency of foreign subsidiaries is reviewed on an ongoing basis to assess if changes in the underlying transactions, events and conditions have resulted in a change. During the years ended December 31, 2019, 2018 and 2017 no changes were deemed necessary. This assessment is also performed for new subsidiaries. When assessing the functional currency of a foreign subsidiary, management's judgment is applied in order to determine, amongst other things, the primary economic environment in which an entity operates, the currency in which the activities are funded and the degree of autonomy of the foreign subsidiary from the reporting entity in its operations and financially. Judgment is also applied in determining whether the inter-company loans denominated in foreign currencies form part of the parent Company's net investment in the foreign subsidiary. Considering such loans as part of the net investment in the foreign subsidiary results in foreign currency translation gains or losses from the translation of these loans being recorded in other comprehensive loss instead of the consolidated statement of operations.

Estimates and assumptions

Fair value of financial instruments – The individual fair values attributed to the different components of a financing transaction, are determined using valuation techniques. Management uses judgment to select the methods used to determine certain inputs/assumptions used in the models and the models used to perform the fair value calculations in order to determine, 1) the values attributed to each component of a transaction at the time of their issuance, 2) the fair value measurements for certain instruments that require subsequent measurement at fair value on a recurring basis and 3) the fair value of financial instruments subsequently carried at amortized cost. When the determination of the fair value of a new loan is required, discounted cash flow techniques which includes inputs that are not based on observable market data and inputs that are derived from observable market data are used. When determining the appropriate discount rates to use, Management seeks comparable interest rates where available. If unavailable, it uses those considered appropriate for the risk profile of a Company in the industry.

The fair value estimates could be significantly different because of the use of judgment and the inherent uncertainty in estimating the fair value of these instruments that are not quoted in an active market.

Leases - The Company determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain that this option will not be exercised.

The Company has the option, under some of its leases to lease the assets for additional terms of up to fifteen years. Judgement is applied in evaluating whether it is reasonably certain that the Company will exercise the option to renew. That is, all relevant factors that create an economic incentive for it to exercise the renewal are considered. After the commencement date, the lease term is reassessed if there is a significant event or change in circumstances that is within the Company's control and affects its ability to exercise (or not to exercise) the option to renew.

The renewal period is included as part of the lease term for a manufacturing plant lease since the Company estimated it is reasonably certain to exercise due to the importance of this asset to its operations, the limited availability on the market of a similar asset with similar rental terms and the related cost of moving the production equipment to another facility.

Uncertainty over income tax treatments - R&D tax credits for the current period and prior periods are measured at the amount the Company expects to recover, based on its best estimate and judgment, of the amounts it expects to receive from the tax authorities as at the reporting date, either in the form of income tax refunds or refundable grants. However, there are uncertainties as to the interpretation of the tax legislation and regulations, in particular regarding what constitutes eligible R&D activities and expenditures, as well the amount and timing of recovery of these tax credits. In order to determine whether the expenses it incurs are eligible for R&D tax credits, the Company must use judgment and apply to complex techniques, which makes the recovery of tax credits uncertain. As a result, there may be a significant difference between the estimated timing and amount recognized in the consolidated financial statements in respect of tax credits receivable and the actual amount of tax credits received as a result of the tax administrations' review of matters that were subject to interpretation. The amounts recognized in the consolidated financial statements are based on the best estimates of the Company and in its best possible judgment, as noted above.

Assessing the recoverable amount of long-lived assets - The Company evaluates the recoverable value of long-lived assets when indicators of impairment arise or as part of the annual impairment test, if they are intangible assets not yet available for use. The recoverable value is the higher of the value in use and the fair value less cost to sell.

Long-lived assets include capital assets and intangible assets such as licenses and other rights and some of these rights are considered not available for use.

When calculating the value in use, Management must make estimates and assumptions regarding the estimated future cash flows and their timing including the amount and timing of the capital expenditure investments necessary to increase manufacturing capacities, to bring the facilities to Good Manufacturing Practices ("GMP") standards, timing of production capacities coming on-line, production costs, ongoing research and clinical trial expenses, market penetration and selling prices for the Company's product candidates, if approved, and, the date of approval of the product candidates for commercial sale, if any. The future cash flows are estimated using a five-year projection of cash flows before taxes which are based on the most recent budgets and forecasts

available to the Company. If the projections include revenues in the fifth year, then this year is extrapolated, using an expected annual growth rate. The estimated cash flows are then discounted to their net present value using a pre-tax discount rate that includes a risk premium specific to the line of business.

When calculating the fair value less cost to sell of an asset or a group of assets for which selling price information for comparable assets are not readily available, Management also must make assumptions regarding the value it may recuperate from its sale.

During the year ended December 31, 2019 and 2018, as a result of strategic decisions made by the Company on the areas where it would focus its resources, several impairments recorded on intangible assets (note 25).

Expense recognition of restricted share units – The RSU expense recognized for RSU in which the performance conditions have not yet been met, is based on an estimation of the probability of successful achievement of a number of performance conditions, many of which depend on research, regulatory process and business development outcomes which are difficult to predict, as well as the timing of their achievement. The final expense is only determinable when the outcome is known.

Valuation of deferred income tax assets – To determine the extent to which deferred income tax assets can be recognized, management estimates the amount of probable future taxable profits that will be available against which deductible temporary differences and unused tax losses can be utilized. Management exercises judgment to determine the extent to which realization of future taxable benefits is probable, considering the history of taxable profits, budgets and forecasts and availability of tax strategies.

4. Change in standards, interpretations and accounting policies

a) Adoption of new accounting standards

The accounting policies used in these annual consolidated financial statements are consistent with those applied by the Company in its December 31, 2018 and 2017 audited annual consolidated financial statements except for the amendments to certain accounting standards which are relevant to the Company and were adopted by the Company as of January 1, 2018 and January 1, 2019 as described below.

IFRS 9, *Financial Instruments*

IFRS 9 replaces the provisions of IAS 39, *Financial Instruments – Recognition and Measurement* and provides guidance on the recognition, classification and measurement of financial assets and financial liabilities, the derecognition of financial instruments, impairment of financial assets and hedge accounting.

The Corporation adopted IFRS 9 as of January 1, 2018 and the new standard has been applied retrospectively in accordance with the transitional provisions of IFRS 9. The following table presents the carrying amount of financial assets held by Liminal at December 31, 2017 and their measurement category under IAS 39 and the new model under IFRS 9.

	IAS 39		**IFRS 9**	
	Measurement category	Carrying amount	Measurement category	Carrying amount
Cash and cash equivalents	FVPL	$ 23,166	Amortized cost	$ 23,166
Trade receivables	Amortized cost	1,796	Amortized cost	1,796
Other receivables	Amortized cost	397	Amortized cost	397
Restricted cash	FVPL	226	Amortized cost	226
Long-term receivables	Amortized cost	1,856	Amortized cost	1,856
Equity investments	Cost	1,228	FVPL	1,228
Convertible debt	Cost	87	FVPL	87

There has been no impact caused by the new classification of financial assets under IFRS 9. The classification of all financial liabilities at amortized cost remains unchanged as well as their measurement resulting from their classification.

Under IFRS 9, modifications to financial assets and financial liabilities, shall be accounted for by recalculating the present value of the modified contractual cashflows at the original effective interest rate and the adjustment shall be recognized as a gain or loss in profit or loss. Under IAS 39, the impact of modifications was recognized prospectively over the remaining term of the debt.

The adoption of the accounting for modifications under the new standard has resulted in the restatement of the opening deficit and the long-term debt at January 1, 2018 as follows:

Deficit	$ 110
Long-term debt	(110)

IFRS 15, *Revenue from contracts with customers*

IFRS 15 replaces IAS 11, *Construction Contracts*, and IAS 18, *Revenue* and related interpretations and represents a new single model for recognition of revenue from contracts with customers. The model features a five-step analysis of transactions to determine the nature of an entity's obligation to perform and whether, how much, and when revenue is recognized.

The Corporation adopted IFRS 15 as of January 1, 2018 and the new standard has been applied retrospectively using the modified retrospective approach, where prior periods are not restated and the cumulative effect of initially applying this standard is recognized in the opening deficit balance on January 1, 2018. The Corporation has also availed itself of the following practical expedients:

- the standard was applied retrospectively only to contracts that were not completed on January 1, 2018; and
- for contracts that were modified before January 1, 2018, the Corporation analyzed the effects of all modifications when identifying whether performance obligations were satisfied, determining the transaction price and allocating the transaction price to the satisfied or unsatisfied performance obligations.

There has been no impact of the adoption of IFRS 15 as at January 1, 2018 and for the year end December 31, 2018.

IFRIC 22, *Foreign Currency Transactions and Advance Consideration* ("IFRIC 22")

IFRIC 22 addresses how to determine the date of the transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it) and on the derecognition of a non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration in a foreign currency. IFRIC 22 is effective for annual periods beginning on or after January 1, 2018. The Corporation adopted IFRIC 22 retrospectively on January 1, 2018. The adoption of the standard did not have a significant impact on the financial statements.

IFRS 16, *Leases* ("IFRS 16")

IFRS 16 replaces IAS 17, *Leases* ("IAS 17"). IFRS 16 provides a single lessee accounting model, requiring the recognition of assets and liabilities for all leases, unless the lease term is less than 12 months, or the underlying asset has a low value. IFRS 16 substantially carries forward the lessor accounting in IAS 17 with the distinction between operating leases and finance leases being retained.

Effective January 1, 2019, the Company adopted IFRS 16 using the modified retrospective approach and accordingly the information presented for 2018 has not been restated. The cumulative effect of initially applying the standard is recognized at the date of initial application. The current and long-term portions of operating and finance lease inducements and obligations presented in the statement of financial position at December 31, 2018, reflect the accounting treatment under IAS 17 and related interpretations.

The Company elected to use the transitional practical expedient allowing the standard to be applied only to contracts that were previously identified as leases under IAS 17 and IFRIC 4, *Determining whether an arrangement contains a lease* at the date of initial application. The Company applied the definition of a lease under IFRS 16 to contracts entered into or changed on or after January 1, 2019.

The Company also elected to record right-of-use assets for leases previously classified as operating leases under IAS 17 based on the corresponding lease liability, adjusted for prepaids or liabilities existing at the date of the transition that relate to the lease. When measuring lease liabilities, the Company discounted lease payments using its incremental borrowing rate at January 1, 2019. The weighted average discount rate applied to the total lease liabilities recognized on transition was 18.54%. For leases that were previously classified as finance leases under IAS 17, the carrying amount of the right-of-use asset and the lease liability at the date of adoption was established as the carrying amount of the lease asset classified in capital assets and the finance lease obligation at December 31, 2018. These assets and liabilities are grouped under right-of-use assets and lease liabilities as of January 1, 2019 and IFRS 16 applies to these leases as of that date.

In addition, the Company elected to apply the practical expedient to account for leases for which the lease term ends within 12 months of the date of initial application as short-term leases for which it is not required to recognize a right-of-use asset and a corresponding lease liability. The Company also elected to not apply IFRS 16 when the underlying asset in a lease is of low value.

The Company has elected, for the class of assets related to the lease of building space, not to separate non-lease components from lease components, and instead account for each lease component and any associated non-lease components as a single lease component.

The table below shows which line items of the consolidated financial statements were affected by the adoption of IFRS 16 and the impact. There was no net impact on the deficit.

	As reported as at December 31, 2018	Adjustments for the transition to IFRS 16	Balance as at January 1, 2019
Assets			
Prepaids	$ 1,452	$ (84)	$ 1,368
Capital assets (note 9)	41,113	(1,043)	40,070
Right-of-use assets (note 10)	-	39,149	39,149
Liabilities			
Accounts payable and accrued liabilities (note 13)	$ 31,855	$ (2,499)	$ 29,356
Current portion of lease liabilities (note 14)	-	8,575	8,575
Long-term portion of lease liabilities (note 14)	-	34,126	34,126
Long-term portion of operating and finance lease inducements and obligations (note 17)	1,850	(1,850)	-
Other long-term liabilities (note 18)	5,695	(330)	5,365

Prior to adopting IFRS 16, the total minimum operating lease commitments as at December 31, 2018 were $74,977. The decrease between the total of the minimum lease payments set out in Note 29 of the audited annual consolidated financial statements for the year ended December 31, 2018 and the total lease liabilities recognized on adoption of $42,701 was principally due to the effect of discounting on the minimum lease payments. The amount also decreased slightly due to the fact that certain costs that are contractually committed under lease contracts, but which do not qualify to be accounted for as a lease liability, such as variable lease payments not tied to an index or rate, were previously included in the lease commitment table whereas they are not included in the calculation of the lease liabilities. These impacts were partially offset by the inclusion of lease payments beyond minimum commitments relating to reasonably certain renewal periods that had not yet been exercised as at December 31, 2018 which effect is to increase the liability. Right-of-use assets at transition have been measured at an amount equal to the corresponding lease liabilities, adjusted for any prepaid or accrued rent relating to that lease.

The consolidated statement of operations for the year ended December 31, 2019 was impacted by the adoption of IFRS 16 as the recording of depreciation of the right-of-use assets continues to be recorded in the same financial statement line items as it was previously while the implicit financing component of leasing agreements is now recorded under finance costs. The impact is not simply in the form of a reclassification but also in terms of measurement, which are very much affected by the discount rates used and whether the Company has included renewal periods when calculating the lease liability.

The consolidated cash flow statement for the year ended December 31, 2019 was also impacted since the cash flows attributable to the lease component of the lease agreements are now shown as payments of principal and interest on lease liabilities which are now part of cash flows from financing activities.

IFRIC 23, *Uncertainty over income tax treatments* ("IFRIC 23")

IFRIC 23 clarifies how the recognition and measurement requirements of IAS 12 – *Income Taxes* are applied where there is uncertainty over income tax treatments. The Interpretation is effective for annual periods beginning on or after January 1, 2019 and was adopted by the Company on that date. The Company assessed the impact of this Interpretation and concluded that it had no impact on the amounts recorded in its consolidated statements of financial position on the date of adoption.

b) New Standards and interpretations not yet adopted

There are currently no new standards or interpretations not yet in effect that the Company reasonably expects would have an impact on its consolidated financial statements.

5. Discontinued operations

On November 25, 2019, the Company sold two subsidiaries in its bioseparations segment, representing the majority of its bioseparations operations and all of the bioseparations revenues. This transaction fits as part of the Company's goal to monetize non-core assets as it focuses its resources on the small molecules segment. This disposal has been presented as discontinued operations with the revenues and costs relating to ceased activities being reclassified and presented retrospectively in the consolidated statements of operations, statements of comprehensive loss, statements of cash flows and notes to the financial statements as discontinued operations.

Gain on the sale of the subsidiaries

Fair value of the consideration received and receivable:	$ 51,927
Less:	
Carrying amount of net assets sold	(22,015)
Transaction costs	(5,015)
Reclassification of foreign currency translation reserve from other comprehensive income into the statement of operations	1,449
Gain on sale of subsidiaries (income tax $nil)	$ 26,346

In the event the operations sold achieve certain performance criteria during the period January 1, 2020 to December 31, 2023 as specified in the sale agreement, cash consideration of up to $22,309 (£13,000,000) may be receivable. An additional amount of $4,290 (£2,500,000) may also become receivable depending on the achievement of certain events. At the time of the sale, the fair value of the contingent consideration was determined to be $nil as its receipt is dependent on future target achievement that is out of the Company's influence and is primarily dependent on the growth of operations. As of December 31, 2019, the Company received $50,752 and the remaining $1,175 was received subsequent to the period end.

Results and cash flows from discontinued operations

The results and the cash flows from discontinued operations for the years ended December 31, 2018 and 2017 and for the period from January 1, 2019 until November 24, 2019, the date of the sale, are presented in the following tables:

Period ended	**November 24, 2019**	December 31, 2018	December 31, 2017
Revenues	**$ 22,499**	$ 22,741	$ 16,802
Expenses			
Cost of sales and other production expenses	**11,347**	12,295	6,460
Research and development expenses	**5,926**	6,808	6,869
Administration, selling and marketing expenses	**3,387**	2,084	1,878
Loss (gain) on foreign exchange	**(64)**	(15)	55
Finance costs	**737**	19	76
Net income before income taxes	**$ 1,166**	$ 1,550	$ 1,464
Income tax expense (recovery):			
Current	**65**	(382)	(474)
Deferred	**(24)**	-	24
Total income tax expense (recovery)	**41**	(382)	(450)
Net income from discontinued operations	**$ 1,125**	$ 1,932	$ 1,914
Gain on sale of discontinued operations net of tax of $nil	**26,346**	-	-
Discontinued operations, net of taxes	**$ 27,471**	$ 1,932	$ 1,914

Years ended	**November 24, 2019**	December 31, 2018	December 31, 2017
Cash flows from operating activities	**$ 6,327**	$ 1,379	$ 2,189
Cash flows used in financing activities	**(866)**	-	-
Cash flows from (used in) investing activities*	**39,690**	(1,752)	(2,115)
Net change in cash during the year	**$ 45,151**	$ (373)	$ 74
Net effect of currency exchange rate on cash	**54**	41	32
Net increase(decrease) in cash generated by discontinued operations	**$ 45,205**	$ (332)	$ 106

*Cash flows from investing activities for the period ended November 24, 2019 include the proceeds from the sale of the discontinued operations business (net of the cash disposed), of $43,958 and transaction costs paid relating to the sale of the discontinued operations business of $4,228.

The carrying amounts of assets and liabilities sold are as follows:

Cash	$ 6,794
Accounts receivable	1,148
Inventories	8,313
Prepaids	236
Other long-term assets	48
Capital assets	8,483
Right-of-use assets	3,300
Intangible assets	370
Deferred tax assets	12
Total assets	$ 28,704
Accounts payable and accrued liabilities	2,163
Deferred revenue	370
Current portion of lease liabilities	809
Long-term portion of deferred revenues	87
Long-term portion of lease liabilities	3,260
Total liabilities	$ 6,689
Net assets sold	$ 22,015

6. Accounts receivable

	December 31, 2019	December 31, 2018
Trade receivables	**$ 44**	$ 7,051
Tax credits and government grants receivable	**1,546**	3,737
Sales taxes receivable	**863**	774
Other receivables	**1,633**	320
	$ 4,086	$ 11,882

7. Inventories

	December 31, 2019	December 31, 2018
Raw materials	**$ 7,175**	$ 5,428
Work in progress	**-**	3,740
Finished goods	**357**	2,860
	$ 7,532	$ 12,028

Inventories sold in the amount of $2,315, $23,136 and $1,353 were recognized as cost of sales and other production expenses from continuing operations, and $10,126, $10,295 and $5,241 from discontinued operations during the years ended December 31, 2019, 2018 and 2017 respectively. Inventory write-downs of $163, $2,028 and $nil, from continuing operations and $642, $981 and $246 from discontinued operations, also included in cost of sales and other production expenses, were recorded during the years ended December 31, 2019, 2018 and 2017 respectively.

8. Other long-term assets

	December 31, 2019	December 31, 2018
Restricted cash (a)	**$ 169**	$ 245
Long-term deposits	**143**	142
Tax credits receivable	**858**	-
Other	**-**	24
	$ 1,170	$ 411

a) Restricted Cash

Restricted cash is composed of a guaranteed investment certificate, bearing interest at 0.35% per annum (at December 31, 2018, bearing interest at 0.35%), pledged as collateral for a letter of credit to a landlord which automatically renews until the end of the lease.

9. Capital assets

	Land and Buildings	Leasehold improvements	Production and laboratory equipment	Furniture and computer equipment	Total
Cost					
Balance at January 1, 2018	$ 4,539	$ 12,824	$ 36,787	$ 3,555	$ 57,705
Additions	28	2,977	2,396	279	5,680
Disposals	-	-	(452)	(58)	(510)
Effect of foreign exchange differences	-	233	154	10	397
Balance at December 31, 2018	$ 4,567	$ 16,034	$ 38,885	$ 3,786	$ 63,272
Impact of adopting IFRS 16 [1)]	-	-	(1,170)	-	(1,170)
Balance at January 1, 2019	4,567	16,034	37,715	3,786	62,102
Additions	-	61	712	202	975
Disposals	-	(5)	(109)	(14)	(128)
Sold - discontinued operations (note 5)	-	(7,307)	(5,774)	(744)	(13,825)
Effect of foreign exchange differences	-	(225)	(127)	(7)	(359)
Balance at December 31, 2019	**$ 4,567**	**$ 8,558**	**$ 32,417**	**$ 3,223**	**$ 48,765**
Accumulated depreciation					
Balance at January 1, 2018	$ 219	$ 3,726	$ 6,962	$ 1,544	$ 12,451
Depreciation expense	195	641	2,511	739	4,086
Disposals	-	-	(146)	(36)	(182)
Impairments (note 25)	-	-	5,689	-	5,689
Effect of foreign exchange differences	-	54	55	6	115
Balance at December 31, 2018	$ 414	$ 4,421	$ 15,071	$ 2,253	$ 22,159
Impact of adopting IFRS 16 [1)]	-	-	(127)	-	(127)
Balance at January 1, 2019	414	4,421	14,944	2,253	22,032
Depreciation expense	195	786	2,136	617	3,734
Disposals	-	(2)	(106)	(14)	(122)
Impairments (note 25)	-	559	6,408	103	7,070
Sold - discontinued operations (note 5)	-	(2,297)	(2,550)	(495)	(5,342)
Effect of foreign exchange differences	-	(38)	(36)	(4)	(78)
Balance at December 31, 2019	**$ 609**	**$ 3,429**	**$ 20,796**	**$ 2,460**	**$ 27,294**
Carrying amounts					
At December 31, 2019	**$ 3,958**	**$ 5,129**	**$ 11,621**	**$ 763**	**$ 21,471**
At January 1, 2019	4,153	11,613	22,771	1,533	40,070
At December 31, 2018	4,153	11,613	23,814	1,533	41,113

[1)] The balance of fixed assets capitalized as finance lease assets under IAS 17 where transferred to right-of-use assets upon adoption of IFRS 16 (note 4).

The depreciation expense for the year ending December 31, 2017 was $3,632.

As at December 31, 2019, there are $2,352 and $nil of production and laboratory equipment and leasehold improvements, respectively, net of government grants, that are not yet available for use and for which depreciation has not started ($8,322 and $6,610 as of December 31, 2018).

Certain investments in equipment are eligible for government grants. The government grants receivable are recorded in the same period as the eligible additions and are credited against the capital asset addition. During the year ended December 31, 2019, the Company recognized $694 ($2 during the year ended December 31, 2018) in government grants.

Impairment losses of $7,070 were recorded on capital assets during the year ended December 31, 2019 ($5,689 during the year ended December 31, 2018, $nil in 2017). Details of these impairments are provided in note 25.

10. Right-of-use assets

	Buildings	Production and laboratory equipment	Other	Total
Cost				
Transfer from capital assets on adoption of IFRS 16 (note 9)	$ -	$ 1,170	$ -	$ 1,170
Initial recognition of assets under operating leases on adoption of IFRS 16	37,552	460	94	38,106
Balance at January 1, 2019	37,552	1,630	94	39,276
Additions	2,331	-	49	2,380
Remeasurement of the lease liability	36	-	-	36
Sold - discontinued operations (note 5)	(3,586)	-	-	(3,586)
Effect of foreign exchange differences	(99)	-	-	(99)
Balance at December 31, 2019	**$ 36,234**	**$ 1,630**	**$ 143**	**$ 38,007**
Accumulated depreciation				
Transfer from capital assets on adoption of IFRS 16 (note 9)	$ -	$ 127	$ -	$ 127
Balance at January 1, 2019	-	127	-	127
Depreciation expense	4,274	592	47	4,913
Sold - discontinued operations (note 5)	(286)	-	-	(286)
Effect of foreign exchange differences	-	(1)	-	(1)
Balance at December 31, 2019	**$ 3,988**	**$ 718**	**$ 47**	**$ 4,753**
Carrying amounts				
At December 31, 2019	**$ 32,246**	**$ 912**	**$ 96**	**$ 33,254**
At January 1, 2019	37,552	1,503	94	39,149

11. Intangible assets

	Licenses and other rights	Patents	Software	Total
Cost				
Balance at January 1, 2018	$ 154,572	$ 6,346	$ 2,213	$ 163,131
Additions	5,512	639	1,145	7,296
Disposals	-	(332)	(68)	(400)
Effect of foreign exchange differences	698	344	(4)	1,038
Balance at December 31, 2018	$ 160,782	$ 6,997	$ 3,286	$ 171,065
Additions	-	728	467	1,195
Sold - discontinued operations (note 5)	(2,505)	(842)	(47)	(3,394)
Disposals	-	(524)	(39)	(563)
Effect of foreign exchange differences	(9)	(50)	(19)	(78)
Balance at December 31, 2019	**$ 158,268**	**$ 6,309**	**$ 3,648**	**$ 168,225**
Accumulated amortization				
Balance at January 1, 2018	$ 3,497	$ 2,250	$ 737	$ 6,484
Amortization expense	556	448	368	1,372
Disposals	-	(177)	(38)	(215)
Impairments	142,609	-	-	142,609
Effect of foreign exchange differences	694	317	1	1,012
Balance at December 31, 2018	$ 147,356	$ 2,838	$ 1,068	$ 151,262
Amortization expense	410	403	446	1,259
Disposals	-	(364)	(9)	(373)
Impairments (note 25)	4,528	761	7	5,296
Sold - discontinued operations (note 5)	(2,418)	(570)	(36)	(3,024)
Effect of foreign exchange differences	(6)	(29)	(6)	(41)
Balance at December 31, 2019	**$ 149,870**	**$ 3,039**	**$ 1,470**	**$ 154,379**
Carrying amounts				
At December 31, 2019	**$ 8,398**	**$ 3,270**	**$ 2,178**	**$ 13,846**
At December 31, 2018	13,426	4,159	2,218	19,803

Intangible assets include $7,106 pertaining to the reacquired right from a licensee; these rights are not yet available for use and consequently their amortization has not commenced (note 18a,ii).

An impairment loss of $5,296 was recorded on certain licenses and patents during the year ended December 31, 2019 ($142,609 during the year ended December 31, 2018, $nil in 2017) (note 25).

The amortization expense for the year ended December 31, 2017 was $944.

On January 29, 2018, the Company acquired two licenses. The first license, valued at $1,743, was paid for by the issuance of warrants (note 19c). The second license was purchased for an equivalent of US$3 million; US$1 million on the date of the transaction, and another US$1 million on both the first and second anniversary of the transaction, to be settled in common shares of the Company (see note 18b for the license acquisition payment obligation and note 19a for the shares issued on the transaction date). The value attributed to the second license, based on the value recorded for the initial equity issued and the value of the payment obligation at the date of the transaction is $3,769. The estimated useful life of the first and second license is 10 years and 20 years, respectively.

12. Investment in an associate

At each reporting period, the Company assesses whether it has significant influence over its investments.

During the quarter ended September 30, 2018, the Company concluded it exerted significant influence over ProThera Biologics, Inc. ("ProThera"), a company headquartered in Rhode Island, U.S.A., since August 15, 2018. As such, ProThera became an associate as well as a related party from that date and consequently, the equity investment in ProThera was accounted for using the equity method (note 2), and the transactions between the Company and its associate were disclosed in the consolidated financial statements as of December 31, 2018.

ProThera is a biotherapeutics company developing methods for using Inter-alpha Inhibitor Proteins ("IaIP") to treat severe inflammation associated with infection, trauma and disease. The Company entered into research and development agreements as well as a license agreement with ProThera in 2015 to develop, manufacture and market IaIP for the treatment of two indications. As of December 31, 2018, Liminal held 15.2% of the outstanding common shares of Prothera having a historical cost of $1,204. It also held an investment in convertible debt of ProThera. At December 31, 2018, the Company had invested $1,181 (US$ 866,000) in convertible debt of Prothera Biologics Inc. The convertible debt was convertible at the option of the issuer or the holder into preferred shares of ProThera, denominated in U.S. dollars and earning interest at 8.0% per annum, to be received at the date of maturity which is January 3, 2020.

As required when significant influence over an investment is obtained, the investment must be measured at fair value as of the date it became an associate. A fair value approach was applied by management in developing preliminary estimates of the identifiable assets and liabilities of ProThera. These fair value assessments require management to make significant estimates and assumptions as well as applying judgment in selecting the appropriate valuation techniques, building valuation models, and compiling, preparing and validating this information. When publishing its third quarter results at September 30, 2018, certain aspects of the valuation were not finalized, namely the valuation of the intangible assets and therefore the amounts recognized were based on the preliminary results.

During the fourth quarter of 2018, following changes to the Company's strategic plans, an impairment of the investment in the associate, in the amount of $1,182 was recognized (note 25).

On January 3, 2019, the principal of the loan and the interest outstanding at December 31, 2018 held by Liminal were converted into preferred shares of ProThera by the issuer.

In February 2019, the Company decided that it was no longer part of its strategy to pursue the development of Inter-alpha Inhibitor proteins and undertook discussions with ProThera Biologics, Inc. ("ProThera") to terminate the various corporate and commercial agreements it had in place with ProThera. The Company determined that, from that point on, it no longer had significant influence over ProThera and therefore changed its accounting for its investment in ProThera's common shares as an investment in an associate to that of a financial asset at fair value through profit and loss. The fair value of such financial asset was evaluated at $nil at that time. Any transactions between the Company and ProThera as of that date are no longer considered as a related party transaction. During December 2019, Liminal transferred the preferred shares it held back to ProThera in consideration for the termination of the agreement.

Changes in the carrying amount of the investment in an associate from the date it was initially recognized as an associate on August 15, 2018 to December 31, 2018 are as follows:

Loss and comprehensive loss of an associate from August 15 to December 31, 2018	$ 144
Share of losses of an associate	22
Historical cost of the investment in an associate	1,204
Less:	
Share of losses of an associate	22
Impairment on investment in an associate (note 25)	1,182
Carrying amount of the investment in an associate as at December 31, 2018	$ -

13. Accounts payable and accrued liabilities

	December 31, 2019	December 31, 2018
Trade payables	**$ 10,496**	$ 21,097
Wages and benefits payable	**5,593**	1,975
Current portion of operating and finance lease inducements and obligations (note 17)	**-**	5,844
Current portion of settlement fee payable	**-**	102
Current portion of royalty payment obligations (note 18)	**3,043**	68
Current portion of license acquisition payment obligation (note 18)	**1,302**	1,363
Current portion of other employee benefit liabilities (note 18)	**2,374**	1,406
	$ 22,808	$ 31,855

14. Lease liabilities

The transactions affecting the lease liabilities during the year ended December 31, 2019 were as follows:

Transfer of finance leases from operating and finance lease inducements and obligations	$ 846
Initial recognition of lease liabilities under operating leases on adoption of IFRS 16	41,855
Balance at January 1, 2019	$ 42,701
Additions	2,823
Interest expense	7,068
Payments	(9,330)
Derecognized - discontinued operations (note 5)	(4,069)
Effect of foreign exchange differences	(956)
Balance at December 31, 2019	$ 38,237
Less current portion of lease liabilities	8,290
Long-term portion of lease liabilities	$ 29,947

Interest expense on lease liabilities for the year ended December 31, 2019 was $7,068 and is included as part of finance costs in the consolidated statement of operations.

15. Warrant liability

As consideration for the modification of the terms of the loan agreements on November 14, 2018, the Company had a commitment to issue warrants ("Warrants #9") to the holder of the long-term debt on or before March 20, 2019. The exact number of warrants to be issued was based on the number of warrants necessary to increase the ownership of the holder of the long-term debt to 19.99% on a fully diluted basis at the date of issuance.

On February 22, 2019, the Company further amended the fourth loan agreement with the addition of two tranches, one of US$10 million and another one of US$5 million, that were drawn on February 22, 2019 and March 22, 2019 respectively. As consideration for the modification to the fourth loan agreement, the Company amended the terms applicable at the time of issuance of Warrants #9 to reduce the originally agreed exercise price from $1,000.00 to $156.36 per preferred share and to issue the Warrants #9 concurrently with the modification. Accordingly, the Company issued 19,402 warrants on February 22, 2019. Each warrant entitles the holder to acquire one preferred share (note 19c) at a price of $156.36 per preferred share and expires on February 22, 2027. The Warrants #9 did not meet the definition of an equity instrument since the underlying preferred shares qualify as a liability instrument, and therefore they were accounted for as a financial instrument carried at fair value through profit or loss.

The change in fair value of the warrant liability between December 31, 2018, when it was valued at $157 and prior to its modification on February 22, 2019, in the amount of $218 was recorded in the consolidated statement of operations. The Company recorded the increase in fair value of the warrants of $1,137 resulting from the reduction of the exercise price of Warrants #9 on February 22, 2019 against the two additional tranches of the credit facility, treating the increase as financing fees. The change in fair value of the warrant liability between February 22, 2019, after the modification, and March 31, 2019 was an increase of $11 and a decrease in fair value of $1,369 (a gain) between March 31, 2019 to April 23, 2019. Both variations were recorded in the consolidated statements of operations. The estimated fair value of these warrants at April 23, 2019 was $153.

As part of the debt restructuring agreement entered into on April 23, 2019 (note 16), all the outstanding warrants belonging to the holder of the debt, including the Warrants #9, were cancelled and replaced by new warrants (note 19c). The cancellation and the issuance of new warrants was treated as a modification. Following this modification, the Warrants #9 no longer meet the definition of a liability instrument and the Company reclassified the fair value of the Warrants #9 as of April 23, 2019 of $153 from warrant liability to warrants classified as equity.

The fair value of Warrants #9 on the various dates was calculated using a Black-Scholes option pricing model with the assumptions provided in the table below. In order to estimate the fair value of the underlying preferred share, the Company used the market price of Liminal's common shares at the measurement date, discounted for the fact that the preferred shares are illiquid. The value of the discount was calculated using a European put option model to sell a common share of Liminal at the price of $1,000.00 or $156.36 per share in 20 years.

	April 23, 2019	February 22, 2019	December 31, 2018
Underlying preferred share fair value	32.43	152.15	130.00
Number of warrants issued	19,402	19,402	14,088
Volatility	55.6%	48.1%	44.5%
Risk-free interest rate	1.66%	1.84%	2.82%
Remaining life until expiry	7.8	8.0	7.9
Expected dividend rate	-	-	-

16. Long-term debt

The transactions during the year ended December 31, 2019 and 2018 and the carrying value of the long-term debt at December 31, 2019 and 2018 were as follows:

	2019	2018
Balance at January 1	**$ 125,804**	$ 87,020
Impact of adoption of IFRS 9	**-**	(110)
Stated and accreted interest	**7,874**	18,856
Drawdown on Credit Facility	**18,677**	71,721
Repayment of principal through share issuance	**(141,536)**	-
Repayment of principal with cash	**(988)**	(3,184)
Repayment of stated interest	**(3,540)**	(3,934)
Foreign exchange revaluation on Credit Facility balance	**(1,311)**	5,425
Reduction of the face value of the second OID loan by $3,917	**-**	(2,639)
Extinguishment of loans following a debt modification	**(4,667)**	(155,055)
Recognition of loans following a debt modification	**8,521**	107,704
Balance at December 31	**$ 8,834**	$ 125,804

At December 31, 2019 and 2018, the carrying amount of the debt comprised the following loans:

	December 31, 2019	December 31, 2018
Loan with the parent (formerly Third OID loan) having a principal of $10,000 maturing on April 23, 2024 with an effective interest rate of 15,05% [1)]	**$ 8,669**	$ -
Non-interest bearing government term loan having a principal amount of $165 repayable in equal monthly installments of $82 until January 31, 2020 with an effective interest rate of 8.8%	**165**	1,111
First OID loan having a face value of 63,273 maturing on September 30, 2024 with an effective interest rate of 20.06%	**-**	27,221
Second OID loan having a face value of $17,694 maturing on September 30, 2024 with an effective interest rate of 20.06%	**-**	7,612
Third OID loan having a face value of $31,370 maturing on September 30, 2024 with an effective interest rate of 20.06%	**-**	13,495
US dollars Credit Facility draws, expiring on September 30, 2024 bearing stated interest of 8.5% per annum (effective interest rate of 18.87%)	**-**	76,365
	$ 8,834	$ 125,804
Less current portion of long-term debt	**(165)**	(3,211)
Long-term portion of long-term debt	**$ 8,669**	$ 122,593

[1)] The Loan with the parent is secured by all the assets of the Company and requires that certain covenants be respected including maintaining an adjusted working capital ratio. The OID loans and US dollars Credit Facility that were extinguished on April 23, 2019 had similar conditions.

On February 22, 2019, the Company amended the fourth loan agreement ("Credit Facility") with the addition of two tranches of US$10 million and US$5 million which the Company drew on February 22 and March 22, 2019 respectively. Those two tranches bear interest at an annual rate of 8.5% payable quarterly. Concurrently with the amendment, the Company agreed to reduce the exercise price of Warrants #9 from $1,000.00 to $156.36 per preferred share and to immediately issue those warrants (note 15). The incremental fair value of the warrant liability of $1,137 due to this change was recognized as deferred financing fees related to the additional two tranches received. The Company recorded the credit facility draws on February 22, 2019 and March 22, 2019 at their fair value at the transaction date less the associated transaction costs and financing fees of $45 and $1,137, respectively, for a net amount of $18,677.

On April 23, 2019, the Company entered into a debt restructuring agreement with the long-term debt holder whereby the entirety of the principal on the Credit Facility plus a portion of the interest due, the entirety of the First and Second Original Issue Discount ("OID") loans and the majority of the Third OID loan would be repaid by Liminal by the issuance of common shares, at a conversion price, rounded to the nearest two decimals, of $15.21 per common share. Consequently, the US$95 million of principal plus interest due on the Credit Facility was reduced to $663 and the aggregate face value of the three OID loans was reduced by $99,552 to $10,000 with the remaining balance of the Third OID loan modified into an interest-bearing loan at a stated interest of 10% payable quarterly. This resulted in the reduction of the long-term debt recorded on the consolidated statement of financial position by $141,536. The Company issued 15,050,312 common shares on that date which were recorded in share capital at a value of $228,915. The difference between the carrying amount of the debt converted into common shares and the increase in the value of the share capital is recognized as a loss on extinguishment of a loan of $87,379. The balance of interest due on the credit facility of $663 was paid in cash.

Since November 14, 2018, all transactions with SALP are considered related party transactions; however, following the issuance of the common shares to SALP as a result of the debt restructuring, SALP obtained control over the Company and since then, is Liminal's controlling parent.

Pursuant to the debt restructuring, the Company cancelled the warrants previously held by SALP and replaced them with new warrants having an exercise price rounded to the nearest two decimals of $15.21 per common share, expiring on April 23, 2027 (note 19c). The incremental fair value of the replacement warrants was recognized in warrants equity and as part of the loss on the debt extinguishment together with the legal fees incurred to finalize all the related legal agreements.

The modification in terms of the remaining balance of the Third OID loan of $10,000 was accounted for as an extinguishment of the long-term debt and the re-issuance of a new interest-bearing loan ("Loan with the parent"). The difference between the carrying amount of the loan extinguished of $4,667 and the $8,521 recognized as the fair value of the new loan with the parent was recorded as a loss on debt extinguishment of $3,854. The fair value of the modified loan was determined using a discounted cash flow model with a market interest rate of 15.1%.

As a result of this transaction and the extinguishments of liabilities that occurred earlier in the beginning of 2019 following payments made to suppliers by the issuance of equity (note 19a), the consolidated statement of operations for the year ended December 31, 2019, includes a loss on extinguishment of liabilities of $92,374 detailed as follows:

Loss on extinguishment of liabilities due to April 23, 2019 loan modification	
Comprising the following elements:	
Debt to equity conversion	$ 87,379
Expensing of financing fees on loan extinguishment	653
Extinguishment of previous loan	(4,667)
Recognition of modified loan	8,521
Expensing of increase in the fair value of the warrants (note 19c)	408
Loss on extinguishment of liabilities due to April 23, 2019 loan modification	$ 92,294
Loss on extinguishment of liabilities to suppliers (note 19a)	80
Loss on extinguishments of liabilities	$ 92,374

As at December 31, 2019, the Company was in compliance with all of its covenants under its long-term debt agreement.

2018

In November 2017, the Company entered into a Credit Facility agreement bearing interest of 8.5% per annum expiring on November 30, 2019. The Credit Facility comprised two US$40 million tranches which became available to draw down once certain conditions were met. The drawdowns on the available tranches were limited to US$10 million per month.

As part of the agreement, the Company issued 54,000 warrants on November 30, 2017 ("Warrants #7") to the holder of the long-term debt in consideration for the Credit Facility. Further details concerning the warrants are provided in note 19c. At each drawdown, the value of the proceeds drawn are allocated to the debt and the warrants classified as equity based on their fair value.

A royalty agreement between the Company and holder of long-term debt became effective upon drawing on the second tranche of the Credit Facility and then was subsequently modified as part of the loan modification discussed below. The proceeds to be received upon the first three draws on the second US$40 million tranche was increased from US$10.0 million to US$11.5 million to include the consideration paid by the holder for the royalty commitment (note 31).

In 2018, the Company drew on the remaining US$60 million available on the Credit Facility throughout the year, bringing the cumulative draws from US$20 million at December 31, 2017 to US$80 million at December 31, 2018.

The table below summarizes by quarter, the impact of the various drawdowns and the royalty proceeds on the consolidated financial statements:

			Allocation of Proceeds		
Quarter	USD proceeds	CAD equivalent*	Debt *	Warrants *	Royalty liability*
Q1 2018	20,000,000	25,155,000	19,585,372	5,569,628	-
Q2 2018	11,500,000	14,768,300	12,881,631	1,886,669	-
Q3 2018	23,000,000	29,808,690	27,144,445	2,531,438	132,807
Q4 2018	10,000,000	13,280,100	12,109,314	1,170,786	-

*Exceptionally for this table Canadian dollars are not rounded to thousands of dollars.

For the August and September 2018 draws, the holder of the long-term debt used the set-off of principal right under the Original Issue Discount ("OID") loan agreements to settle $3,917 (US$3 million) of the amounts due to the Company under the royalty agreement by reducing the face value of the second OID loan from $21,172 to $17,255. As a result, the cash proceeds received for those two draws were $25,892.

These transactions were accounted for as an extinguishment of a portion of the OID loan and the difference between the adjustment to the carrying value of the loan of $2,639 and the reduction in the face value of the OID loan of $3,917, was recorded as a loss on extinguishment of liabilities of $1,278.

On November 14, 2018, the Company and the holder of the debt modified the terms of the four loan agreements to extend the maturity date of the Credit Facility from November 30, 2019 to September 30, 2024 and all three OID loans from July 31, 2022 to September 30, 2024. Interest on amounts outstanding on the Credit Facility will continue to be payable quarterly at an annual rate of 8.5% during the period of the extension. As of July 31, 2022, the OID loans will be restructured into cash paying loans bearing interest at an annual rate of 10%, payable quarterly. The outstanding face values of the OID loans at that date will become the principal amounts of the restructured loans. As additional consideration for the extension of the maturity dates, Liminal agreed to cancel 100,117 existing warrants (Warrants #3 to 7) and issue replacement warrants to the holder of the long-term debt, bearing a term of 8 years and exercisable at a per share price equal to $1,000.00 (note 19c). The exact number of warrants to be granted will be set at a number that will result in the holder of the long-term debt having a 19.99% fully-diluted ownership level in Liminal upon issuance of the warrants, which

are to be issued no later than March 20, 2019. On November 30, 2018, Warrants #3 to 7 were cancelled and 128,057 warrants to purchase common shares ("Warrants #8"), representing a portion of the replacement warrants, were issued. At the end of the agreed upon measurement period for calculating the number of new warrants to be issued, Liminal will issue the remaining replacement warrant under a new series of warrants ("Warrants #9"), which will give the holder the right to acquire preferred shares (notes 15 and 19a). The holder of the long- term debt also obtained the Company's best efforts to support the election of a second representative of the lender to the Board of directors of the Company, and the extension of the security to the royalty agreement.

Management assessed the changes made to the previous agreements and determined that the modification should be accounted for as an extinguishment of the previous loans and the recording of new loans at their fair value determined as of the date of the modification. The fair value of the modified loans, determined using a discounted cash flow model with a market interest rate of 20.1%, was $107,704. Any cost or fees incurred with this transaction were recognized as part of the gain on extinguishment, including legal fees incurred in the amount of $434 and the improvements to the terms of the warrants. To determine this value, the Company estimated the fair value of the vested warrants (Warrants #3 to 7) and the fair value of the new warrants, excluding the 6,000 warrants that were associated with the last draw on the Credit Facility that occurred on November 22, 2018. The incremental fair value was $8,778 of which $338 pertains to Warrants #9 (note 15).

In addition, the fees incurred in regards of the Credit Facility, that were previously recorded in the consolidated statement of financial position as other long-term assets and were being amortized and recognized in the consolidated statement of operations over the original term of the Credit Facility, were recognized as part of the gain on extinguishment for an amount of $3,245.

As a result of this transaction and the extinguishments of debt that occurred earlier in the year following the use of the set-off of principal right by the debt holder, the consolidated statement of operations for the year ended December 31, 2018, includes a gain on extinguishment of liabilities of $33,626 detailed as follows:

Gain on extinguishment of liabilities due to November 14, 2018 debt modification	
Comprising the following elements:	
Extinguishment of previous loans	$(155,055)
Expensing of deferred financing fees on Credit Facility	3,245
Recognition of modified loans	107,704
Expensing of increase in the fair value of the warrants	8,778
Warrants proceeds	(10)
Expensing of legal fees incurred with the debt modification	434
Gain on extinguishment of liabilities due to November 14, 2018 debt modification	$ (34,904)
Loss on extinguishment of liabilities due to set-off of principal	1,278
Gain on extinguishments of liabilities	$ (33,626)

2017

In 2017, the holder of the long-term debt used the set-off of principal right under the loan agreements, to settle the amounts due to the Company, following its participation in a private placement for 5,045 common shares which occurred concurrently with the closing of a public offering of common shares on July 6, 2017.

As a result, the face value of the third OID loan was reduced by $8,577, from $39,170 to $30,593. The reduction of $8,577 is equivalent to the value of the shares issued at the agreed price of $1,700.00 concluded in connection with the private placement. This transaction was accounted for as an extinguishment of a portion of the OID loan and the difference between the adjustment to the carrying value of the loan of $4,134 and the amount recorded for the shares issued of $8,325 was recorded as a loss on extinguishment of a liabilities of $4,191.

17. Operating and finance lease inducements and obligations

	December 31, 2018
Finance lease obligations	$ 818
Deferred operating lease inducements and obligations	6,876
	$ 7,694
Less current portion of operating and finance lease inducements and obligations (note 13)	(5,844)
	$ 1,850

All operating and finance lease inducements and obligations were transferred to right-of-use assets following the adoption of IFRS 16 on January 1, 2019 (note 4a).

18. Other long-term liabilities

	December 31, 2019	December 31, 2018
Royalty payment obligations (a)	**$ 3,148**	$ 3,077
License acquisition payment obligation (b)	**1,302**	2,726
Other employee benefit liabilities	**2,554**	2,399
Other long-term liabilities	**-**	330
	$ 7,004	$ 8,532
Less:		
Current portion of royalty payment obligations (note 13)	**(3,043)**	(68)
Current portion of license acquisition payment obligation (note 13)	**(1,302)**	(1,363)
Current portion of other employee benefit liabilities (note 13)	**(2,374)**	(1,406)
	$ 285	$ 5,695

a) Royalty payment obligations

i) Royalty payment obligations to the holder of the long-term debt

During the second quarter of 2018, the Company signed a royalty agreement with the holder of the long-term debt at the same time as certain conditions pertaining to the second advance of the Credit Facility were modified. As a result of the agreement, the Company obtained the right to receive US$1.5 million milestone payments upon each draw of the second tranche of the Credit Facility in exchange for increasing royalty entitlements on future revenues relating to patents existing as of the date of the agreement of PBI-1402 and analogues, including PBI-4050. The agreement includes a minimum royalty payment of US$5,000 per quarter until approximately 2033 and a liability of $131 was recognized in the consolidated statement of financial position at December 31, 2019 representing the discounted value of the minimum royalty payments to be made until the expiry of the patents covered by the agreement, using a discount rate of 18.57% ($138 at December 31, 2018). In the case where royalties based on revenues became payable, the minimum royalty previously paid would be deducted from future remittances.

On November 14, 2018, as part of the debt modification agreement, the royalty rate was increased from 1.5% to 2% on future revenues relating to the specified patents and the right to receive the final US$1.5 million milestone payment was foregone.

ii) Royalty payment obligation for reacquired rights

As part of the consideration given by the Company in 2016 for the reacquisition of the rights to 50% of the worldwide profits pertaining to the sale of plasminogen for the treatment of plasminogen congenital deficiency which were previously granted to a licensee under a license agreement, the Company agreed to make royalty payments on the sales of plasminogen for congenital deficiency, using a rate of 5% up to a total of US$2.5 million. If by December 2020 the full royalty obligation has not been paid, the unpaid balance will become due. The Company has recognized a royalty payment obligation of $2,978 (US$2.3 million) in the consolidated statement of financial position at December 31, 2019 ($2,898; US$2.3 million at December 31, 2018), representing the discounted value of the expected royalty payments to be made until December 2020, using a discount rate of 9.2%.

b) Licence acquisition payment obligation

In consideration for acquiring a license in January 2018 (note 11), the Company agreed to pay an equivalent of US$3 million; US$1 million on the date of the transaction, and US$1 million on both the first and second anniversary of the transaction, to be settled in common shares of the Company. A $1,302 financial liability has been recognised as at December 31, 2019 for the last payment due in January 2020 ($2,726 at December 31, 2018).

19. Share capital and other equity instruments

On July 5, 2019, the Company performed a one thousand-to-one share consolidation of the its common shares, stock options, restricted share units and warrants. The quantities and per unit prices presented throughout the consolidated financial statements, including this note, have been retroactively adjusted to give effect to the share consolidation.

a) Share capital

Authorized and without par value

Common shares: unlimited number authorized, participating, carrying one vote per share, entitled to dividends.

Preferred shares: unlimited number authorized, issuable in one or more series.

- Series A preferred shares : unlimited number authorized, no par value, non-voting, ranking in priority to the common shares, entitled to the same dividends as the common shares, non-transferable, redeemable at the redemption amount offered for the common shares upon a change in control event.

The share capital issued and outstanding at December 31, 2019 and 2018 is as follows:

	December 31, 2019		December 31, 2018	
	Number	**Amount**	Number	Amount
Issued common shares	**23,313,164**	**$932,951**	720,306	$583,517
Share purchase loan to a former officer	**-**	**-**	-	(400)
Issued and fully paid common shares	**23,313,164**	**$932,951**	720,306	$583,117

Changes in the issued and outstanding common shares during the year ended December 31, 2019 and 2018 were as follows:

	2019		2018	
	Number	**Amount**	Number	Amount
Balance - beginning of year	**720,306**	**$583,117**	710,549	$575,150
Issued to acquire assets	**4,420**	**1,326**	1,113	1,960
Issued to acquire non-controlling interest (note 20)	**-**	**-**	4,712	3,629
Exercise of stock options (note 19b)	**-**	**-**	1,677	1,073
Shares issued pursuant to a restricted share units plan (note 19b)	**-**	**-**	310	554
Shares issued pursuant to debt restructuring	**15,050,312**	**228,915**	-	-
Shares issued for cash	**7,536,654**	**118,648**	1,945	751
Shares released from escrow	**-**	**400**	-	-
Shares issued in payment to suppliers	**1,472**	**545**	-	-
Balance - end of year	**23,313,164**	**$932,951**	720,306	$583,117

2019

In November 2018, the Company entered into an "At-the-Market" ("ATM") Equity Distribution Agreement ("EDA") under which the Company is able, at its discretion and from time to time, subject to conditions in the EDA, to offer common shares through ATM issuances on the TSX or any other marketplace for aggregate proceeds not exceeding $31 million. This agreement provides that common shares are to be sold at market prices prevailing at the time of sale. The Company issued a total of 12,865 common shares at an average price of $327.55 per share under the ATM in January and February 2019, for aggregate gross proceeds of $4,214, less transaction costs of $248 recorded in deficit, for total net proceeds of $3,966. The use of the ATM facility was suspended concurrently with our Nasdaq registration.

On January 29, 2019, the Company issued 4,420 common shares in settlement of second payment due for the license acquisition payment obligation (note 18) and recorded $1,326 in share capital based on the market value of the shares on that date.

On February 25 and 27, 2019, the Company issued a total of 1,472 common shares in payment for amounts due to certain suppliers. This transaction was accounted for as an extinguishment of liabilities and the difference between the carrying value of the accounts payable of $465 and the amount recorded for the shares issued of $545, which were valued at the market price of the shares on their date of issuance, was recorded as a loss on extinguishment of liabilities of $80.

As part of the settlement agreement concluded in April 2019 with the former CEO of the Company, common shares held in escrow as security for a share purchase loan of $400 to the former CEO were released and the loan extinguished in exchange for the receipt of a payment of $137, representing the fair value of the shares at the time of the settlement.

On April 23, 2019, the Company issued 15,050,312 common shares as part of the debt restructuring (note 16). The shares issued in relation with the debt restructuring contained trading restrictions and accordingly, the Company determined that their quoted price did not fairly represent the value of the shares issued. As such, the issued shares were recorded at fair value using a market approach under a level 2 fair value measurement of $15.21 per share, resulting in a value of the shares issued of $228,915. The fair value was based on a share issuance for cash on the same date with a non-related party. The difference between the adjustment to the carrying value of the loan of $141,536 and the amount recorded for the shares issued of $228,915 was recorded as a loss on extinguishment of a loan of $87,379.

Concurrently with the debt restructuring, the Company closed two private placements for 4,931,161 common shares at a subscription price rounded to the nearest two decimals of $15.21 for gross proceeds of $75,000, less transaction costs of $4,802 recorded in deficit, for total net proceeds of $70,198. SALP's participation in the private placement was for gross proceeds to the Company of $25,000.

In May 2019, the Company announced a Rights Offering to the holders of its common shares at the close of business on May 21, 2019 to subscribe for up to 20 additional common shares, for each share they held, for a subscription price rounded to the nearest two decimals of $15.21 per common share. The Right Offering was subject to a proration to ensure that no more than $75,000 was raised. In June 2019, the Company issued 2,592,628 common shares for gross proceeds of $39,434 as part of the Right Offerings less transactions costs of $271 recorded in deficit, for total net proceeds of $39,163.

2018

On January 29, 2018, the Company issued 742 common shares in partial payment for the acquisition of a license (note 11) and 371 common shares to acquire an option to buy production equipment. Based on the $1760 share price on that date, the values attributed to the shares issued were $1,960.

On April 27, 2018, the Company reacquired the non-controlling shareholders' 13% interest in Prometic Bioproduction Inc. in exchange for the issuance of 4,712 common shares of the Company. Based on the $770.00 share price on that date, the value attributed to the shares issued was $3,629 (note 19).

In the year ended December 31, 2018, the Company has issued a total of 1,945 common shares at an average price of $386.12 per share under the ATM for aggregate gross proceeds of $751, less transaction costs of $23 recorded in deficit, for total net proceeds of $728.

b) Contributed surplus (Share-based payments)

Stock options

The Company has established a stock option plan for its directors, officers, employees and service providers. The plan provides that the aggregate number of shares reserved for issuance at any time under the plan may not exceed 3,749,714 common shares and the maximum number of common shares, which may be reserved for issuance to any individual, may not exceed 5% of the outstanding common shares. The stock options issued under the plan may be exercised over a period not exceeding ten years from the date they were granted. All stock options granted since May 2017 have a contractual life of 10 years. Stock options issued prior to May 2017 had a life of five years.

The vesting period of the stock options varies from immediate vesting to vesting over a period not exceeding 6 years. Participants meeting certain service and age requirements may see the vesting of certain awards accelerate upon retirement. The vesting conditions are established by the Board of Directors on the grant date. The exercise price is based on the weighted average share price for the five business days prior to the grant.

Changes in the number of stock options outstanding during the years ended December 31, 2019, 2018 and 2017 were as follows:

	2019		2018		2017	
	Number	**Weighted average exercise price**	Number	Weighted average exercise price	Number	Weighted average exercise price
Balance - beginning of year	**21,625**	**$ 1,464.49**	14,256	$ 1,782.70	14,220	$ 1,406.24
Granted	**2,218,810**	**33.13**	10,837	755.97	3,720	1,993.06
Forfeited	**(16,774)**	**159.61**	(377)	1,933.34	(599)	2,535.18
Exercised	**-**	**-**	(1,681)	376.10	(3,081)	155.03
Cancelled	**(11,713)**	**1,237.94**	-	-	-	-
Expired	**(2,084)**	**1,176.20**	(1,410)	408.43	(4)	127.50
Balance - end of year	**2,209,864**	**$ 38.72**	21,625	$ 1,464.49	14,256	$ 1,782.70

2019

On January 24, 2019, 1,622 stock options were granted at an exercise price of $300.00 and vesting on December 31, 2019. On June 4, 2019, 1,794,224 stock options were granted to management at a strike price of $36.00 of which 248,825 stock options vested immediately and the remaining vest over a period up to six years. On June 19, 2019, 251,714 stock options were issued at a strike price of $27.00 of which 60,717 stock options vested immediately and the remaining vest over a period up to four years. On September 3, 2019, 71,250 stock options were issued at a strike price of $11.99 and on December 3, 2019, 100,000 stock options were issued at a strike price of $7.86, both of these grants having a vesting period of up to four years. The weighted average grant date fair value of the stock options issued in 2019 was $12.74.

In June and August 2019, the Company cancelled the options that were issued prior to June 2019, as the exercise price of these options were so above the market price at the time, that it was highly unlikely that they would ever be exercised. In compensation for their agreement to the cancellation, key management and employees, received the new options granted to them in June 2019 discussed above. Consequently, 11,084 stock options with a weighted average exercise price of $1,256.73 were cancelled. There was no exercise of stock options in 2019.

2018

During the year ended December 31, 2018, 10,837 stock options having a contractual term of 10 years and a vesting period of up to four years were granted.

During the year ended December 31, 2018, 1,681 stock options were exercised resulting in cash proceeds of $635 and a transfer from contributed surplus to share capital of $438. The weighted average share price on the date of exercise of the options during the year ended December 31, 2018 was $1,044.16.

2017

During the year ended December 31, 2017, 175 and 3,545 options having a contractual term of five and ten years, respectively, and a vesting period of up to four years were granted.

During the year ended December 31, 2017, 3,081 stock options were exercised resulting in cash proceeds of $481 and a transfer from contributed surplus to share capital of $330. The weighted average share price on the date of exercise of the stock options during the year ended December 31, 2017 was $1,713.31.

The Company uses the Black-Scholes option pricing model to calculate the fair value of options at the date of grant. The weighted average inputs into the model and the resulting grant date fair values during the years ended December 31, 2019, 2018 and 2017 were as follows:

	2019	2018	2017
Expected dividend rate	**-**	-	-
Expected volatility of share price	**45.0%**	66.1%	61.8%
Risk-free interest rate	**1.4%**	2.1%	1.2%
Expected life in years	**7.2**	7.9	6.7
Weighted average grant date fair value	**$ 12.74**	$ 221.64	$1,181.38

At December 31, 2019, stock options issued and outstanding by range of exercise price are as follows:

Range of exercise price	**Number outstanding**	**Weighted average remaining contractual life (in years)**	**Weighted average exercise price**	**Number exercisable**	**Weighted average exercise price**
$7.86 - $27.00	407,788	9.6	$ 19.68	74,705	$ 27.00
$36.00	1,794,224	9.4	36.00	311,605	36.00
$390.00 - 3,190.00	7,852	5.8	1647.67	6,490	1,758.22
	2,209,864	9.4	$ 38.72	392,800	$ 62.74

A share-based payment compensation expense of $12,212 was recorded for the stock options for the year ended December 31, 2019 ($3,372 and $3,436 for the year ended December 31, 2018 and 2017 respectively).

Restricted share units ("RSU")

The Company has established an equity-settled restricted share units plan for executive officers of the Company, as part of its incentive program designed to align the interests of its executives with those of its shareholders, and in accordance with its Long-Term Incentive Plan. The vesting conditions are established by the Board of Directors on the grant date. Participants meeting certain service and age requirements may see the vesting of certain awards accelerate upon retirement. Each vested RSU gives the right to receive a common share.

Changes in the number of RSU outstanding during the years ended December 31, 2019, 2018 and 2017 were as follows:

	2019	2018	2017
Balance - beginning of year	**18,299**	9,799	9,237
Granted	**12,564**	10,329	7,449
Expired	**-**	(1,578)	(3,157)
Forfeited	**(409)**	(19)	(539)
Released	**-**	(232)	(3,191)
Paid in cash	**(8,396)**	-	-
Cancelled	**(4,493)**	-	-
Balance - end of year	**17,565**	18,299	9,799

2019

On January 31, 2019, the Company granted 12,564 RSU at a grant price of $300.00 and a one-year vesting period. On May 30, 2019, the Company decided to vest the 12,564 RSU and the employees were given the choice to receive the then current value of the shares in cash or to receive the shares at a later date. As a result, 8,396 RSU were released and paid in cash resulting in a reduction to contributed surplus of $421.

On May 7, 2019 the 12,886 performance-based RSU pertaining to the "2017-2019" cycle and the "2018-2020" cycle were modified by removing the performance conditions and converting them into time-vesting RSU. The quantity modified into time-vesting units was equivalent to the 100% achievement range whereby in the past, the outcome of the performance conditions could go from zero to 150%. Historically, the Company has always reported the quantity of RSU outstanding as the maximum number of shares that could be issued under the plan. This change resulted in the cancellation of 4,305 units.

At December 31, 2019, 13,262 vested RSU and 4,303 unvested RSU were outstanding. Share-based payments compensation expense of $9,818 was recorded during the year ended December 31, 2019.

2018

On December 4, 2018, the Company granted 10,329 RSU to management (the "2018-2020 RSU") with a time period to meet the vesting conditions extending to December 31, 2020. The grant included 2,374 units that vest at a rate of 33.3% at the end of each year and become available for release at the time of vesting, and 7,955 units that have performance-based conditions with a scaling payout depending on performance (ranging from 0% to 150%). These 2018-2020 performance-based RSU have since been converted into time-vesting RSU at 100% in 2019 as mentioned above.

Share-based payments compensation expense of $3,350 was recorded during the year ended December 31, 2018.

2017

During 2017, the Board decided to replace 1,221 of the expired RSU with an equivalent number of RSU keeping the same vesting conditions but extending the evaluation period for the attainment of the objectives by one year to December 31, 2017. The replacement RSU were issued on April 11, 2017. This transaction was accounted for as a modification of the existing RSU that did not have an impact on the value of the RSU.

Share-based payments compensation expense of $5,226 was recorded during the year ended December 31, 2017.

On November 24, 2017, the Company granted 6,091 RSU to management (the "2017-2019 RSU"), with a time period to meet the vesting conditions extending to December 31, 2019. The grant included 1,083 units that vest at a rate of 33.3% at the end of each year and become available for release at the time of vesting, and 5,008 units that have performance-based conditions with a scaling payout depending on performance. These 2017-2019 performance based RSU were subsequently converted into time vesting RSU in 2019, at 100% of target as mentioned above.

Share-based payments expense

The total share-based payments expense, comprising the above-mentioned expenses for stock options and RSU, has been included in the consolidated statements of operations for the years ended December 31, 2019, 2018 and 2017 as indicated in the following table:

	2019	2018	2017
Cost of sales and other production expenses	**$ 107**	$ 299	$ 370
Research and development expenses	**7,137**	2,295	4,150
Administration, selling and marketing expenses	**14,786**	4,128	4,142
	$ 22,030	$ 6,722	$ 8,662

c) Warrants

The following table summarizes the changes in the number of warrants outstanding during the years ended December 31, 2019 and 2018:

	2019		2018	
	Number	**Weighted average exercise price**	Number	Weighted average exercise price
Balance of warrants - beginning of year	**153,611**	**$ 1,028.35**	121,671	$ 2,109.21
Issued for cash	**19,402**	**156.36**	-	-
Issued to acquire assets	**-**	**-**	4,000	3,000.00
Cancelled - loan modification	**(168,735)**	**872.51**	(100,117)	2,384.42
Issued - loan modification	**168,735**	**15.21**	128,057	1,000.00
Expired	**(278)**	**6,390.00**	-	-
Balance of warrants - end of year	**172,735**	**$ 84.33**	153,611	$ 1,028.35
Balance of warrants exercisable - end of year	**170,735**	**$ 50.17**	149,611	$ 975.64

2019

On February 22, 2019, pursuant to modifying the fourth loan agreement (note 16), the Company issued 19,402 warrants, Warrants #9, having an exercise price of $156.36. Warrants #9 do not meet the definition of an equity instrument since the underlying preferred shares qualify as a liability instrument, and therefore they must be accounted for as a financial instrument carried at fair value through profit or loss (note 15).

On April 23, 2019, as part of the debt restructuring (note 16), 168,735 warrants (Warrants #1, 2, 8 and 9) were cancelled and replaced with an equivalent number of new warrants, Warrants #10, that will be exercisable at an exercise price of $15.21 per common share and expire on April 23, 2027. The increase in the fair value of the replacement warrants compared to those cancelled was $408 at the date of the modification and was recorded in shareholders' equity – warrants with the corresponding expense recorded as part of the loss on extinguishment of liabilities due to the debt restructuring.

2018

On November 30, 2017, pursuant to entering into a non-revolving credit facility agreement, the Company issued Warrants #7 to the holder of the long-term debt. Further details concerning the credit facility are provided in note 13. Warrants #7 consist of 54,000 warrants from which 10,000 warrants were exercisable as of the date of the agreement and the remaining 44,000 warrants become exercisable as and if the Company draws upon the credit facility in increments of US$10 million; 5,000 warrants become exercisable for each US$10 million drawn on the first US$40 million tranche of the credit facility and 6,000 warrants become exercisable for each US$10 million drawn on the second US$40 million tranche of the credit facility. Each warrant gives the holder the right to acquire one common share at an exercise price of $1,700.00. The warrants expire on June 30, 2026. Although the warrants are presented as issued in the warrant table above as of November 30, 2017, for accounting purposes, these warrants will be recognized and measured at the time they become exercisable.

As the Company drew an amount of US$10 million on the Credit Facility on each of January 22, February 23, April 30, August 2, September 21, and November 22, 2018, the amounts received were allocated to the debt and the Warrants #7 that vested upon the draw, based on their fair value at the time of the drawdown. The aggregate value of the proceeds attributed to the warrants that became exercisable on those dates was $11,159, which was recorded in equity.

On January 29, 2018, the Company issued 4,000 warrants to acquire common shares, as consideration for a license (note 11). The warrants have an exercise price of $3,000.00 per share and expire after five years. The first 2,000 warrants become exercisable after one year while the second 2,000 warrants become exercisable after two years. The fair value of the warrants and consequently the value of the license is $1,743 and was determined using a Black-Scholes option pricing model.

On November 14, 2018, an agreement was signed between the Company and the holder of the long-term debt to extend the maturity of the three OID loans and the Credit Facility (note 13). As part of the cost for the debt modification, the Company proceeded on November 30, 2018 to cancel 100,117 existing warrants (Warrants #3 to 7) and replace them with 128,057 new warrants (Warrants #8), each giving the holder the right to acquire one common share at an exercise price of $1000.00 per share, paid either in cash or in consideration of the lender's cancellation of an equivalent amount of the face value of an OID loan. The warrants expire on November 30, 2026. A payment of $10 was received from the holder of the long-term debt as part of this transaction. The increase in the fair value of the replacement warrants compared to those cancelled was $8,440 at the date of the modification. This value in addition to the payment received was recorded in shareholders' equity – warrants and the corresponding debit was recorded against the gain on extinguishment of liabilities relating to the debt modification.

The warrants outstanding as at December 31, 2019, their exercise price, expiry rate and the overall weighted average exercise price are as follows:

	Number	Expiry date	Exercise price
	4,000	January 2023	3,000.00
	168,735	April 2027	15.21
	172,735		$ 84.33

20. Non-controlling interests

The interests in the subsidiaries for which the Company holds or held less than 100% interest for the three-year period ended December 31, 2019 are as follows:

Name of subsidiary	Segment activity	Place of incorporation and operation	Proportion of ownership interest held by group		
			2019	2018	2017
Prometic Bioproduction Inc.	Plasma-derived therapeutics	Quebec, Canada	**100%**	100%	87%
Pathogen Removal and Diagnostic Technologies Inc.	Corporate	Delaware, U.S.	**77%**	77%	77%
NantPro Biosciences, LLC	Plasma-derived therapeutics	Delaware, U.S.	**73%**	73%	73%

The non-controlling interest ("NCI") in Prometic Bioproduction Inc.'s owned 13% of the common shares until April 2018, when the Company acquired these shares. Until that time, the NCI in Prometic Bioproduction Inc. was attributed its share of the operating results and the financial position of the entity.

Summarized financial information for the entities having a non-controlling interest at December 31, 2019, 2018 and 2017 is provided in the following tables. This information is based on amounts before inter-company eliminations.

2019

Summarized statement of financial position:

	PRDT	NantPro
Receivables (current)	$ 9	$ -
Capital and intangible assets (long-term)	156	-
Trade and other payables (current)	(748)	-
Intercompany loans and lease inducements and obligations (long-term)	(15,956)	-
Total equity (negative equity)	$ (16,539)	$ -
Attributable to non-controlling interests	$ (7,255)	$ -

Summarized statement of operations:

	PRDT	NantPro
Revenues or services rendered to other members of the group	$ 585	$ -
Cost of sales and production	(132)	(1,213)
Research and development expenses	(215)	-
Administration and other expenses	(896)	(13)
Impairment loss	(129)	-
Net loss and comprehensive loss	$ (787)	$ (1,226)
Attributable to non-controlling interests	$ (713)	$ (331)

2018

Summarized statement of financial position:

	PRDT	NantPro
Capital and intangible assets (long-term)	$ 351	$ -
Trade and other payables (current)	(613)	-
Intercompany loans (long-term)	(15,672)	-
Total equity (negative equity)	$ (15,934)	$ -
Attributable to non-controlling interests	$ (6,542)	$ -

Summarized statement of operations:

	PRDT	NantPro
Revenues or services rendered to other members of the group	$ 839	$ -
Cost of sales and production	(190)	(10,526)
Research and development expenses	(179)	(30)
Administration and other expenses	(1,001)	(131)
Impairment loss	-	(141,025)
Net loss and comprehensive loss	$ (531)	$(151,712)
Attributable to non-controlling interests	$ (641)	$ (40,962)

2017

Summarized statement of financial position:

	PBP	PRDT	NantPro
Investment tax credits receivables and other current assets	$ 13,250	$ -	$ -
Capital and intangible assets (long-term)	20,427	398	141,025
Trade and other payables (current)	(6,965)	(417)	-
Intercompany loans (long-term)	(120,789)	(15,003)	-
Total equity (negative equity)	$ (94,077)	$ (15,022)	$ 141,025
Attributable to non-controlling interests	$ (10,722)	$ (5,901)	$ 38,070

Summarized statement of operations:

	PBP	PRDT	NantPro
Revenues or services rendered to other members of the group	$ 3,712	$ 181	$ -
Cost of sales and production	(1,635)	-	-
Research and development expenses	(34,027)	(335)	(17,482)
Administration and other expenses	(4,587)	(957)	(210)
Net loss and comprehensive loss	$ (36,537)	$ (1,111)	$ (17,692)
Attributable to non-controlling interests	$ (4,750)	$ (779)	$ (4,776)

For all years presented, the losses allocated to the NCI in the consolidated statements of operations, per subsidiary are as follows:

	2019	2018	2017
Consolidated statements of operations:			
Prometic Bioproduction Inc.	**$ -**	$ (927)	$ (4,750)
Pathogen Removal and Diagnostic Technologies Inc.	**(713)**	(641)	(778)
NantPro Biosciences, LLC	**(331)**	(40,962)	(4,777)
Total non-controlling interests	**$ (1,044)**	$ (42,530)	$ (10,305)

The NantPro Biosciences, LLC ("NantPro") non-controlling interest's share in the funding of the subsidiary by Liminal was $331 for the year ended December 31, 2019 ($2,892 for the year ended December 31, 2018 and $4,776 for the year ended December 31, 2017) and has been presented in the consolidated statements of changes in equity. The share of the NCI in the NantPro statement of financial position is $nil at December 31, 2019 and 2018.

The share of the NCI in Pathogen Diagnostic Technologies Inc. statement of financial position represents an asset on the Company's consolidated statement of financial position of $7,255 and $6,542 at December 31, 2019 and 2018 respectively.

21. Capital disclosures

	2019	2018
Warrant liability	**$ -**	$ 157
Finance lease obligations	**-**	818
Lease liabilities	**38,237**	-
Long-term debt	**8,834**	125,804
Total equity (deficiency)	**94,934**	(63,146)
Cash and cash equivalents	**(61,285)**	(7,389)
Total capital	**$ 80,720**	$ 56,244

The Company's objective in managing capital is to ensure sufficient liquidity to finance its research and development activities, administration, selling and marketing expenses, working capital and overall expenditures on capital and intangible assets. The Company makes every effort to manage its liquidity to minimize dilution to its shareholders, whenever possible. The Company is subject to one externally imposed capital requirement (note 16) and the Company's overall strategy with respect to capital risk management remains unchanged from the year ended December 31, 2018.

22. Revenues from continuing operations

	2019	2018	2017
Revenues from the sale of goods	**$ 4,734**	$ 23,874	$ 1,469
Milestone and licensing revenues	**-**	-	19,724
Revenues from the rendering of services	**34**	260	120
Rental revenue	**136**	499	1,000
	$ 4,904	$ 24,633	$ 22,313

All the rental revenues are generated from subleasing right-of-use assets.

In August 2017, the Company entered into a licensing agreement with a third-party in China and as a result, milestone and licensing revenues of $19,724 were recorded during the third quarter of 2017. The third party having not remitted funds associated with the license fee and initial milestone payment within the specified payment terms was consequently in breach of the agreement. As a result, the Company was in a position to exercise its contractual rights and opted to terminate the agreement in March 2018 thereby returning all the rights previously conferred under the license agreement back to Liminal. The Company wrote-off the accounts receivable to bad debt expense as at December 31, 2017 (note 32b).

23. Supplemental information regarding the consolidated statements of operations

Year ended December 31	**2019**	2018	2017
a) Government assistance included in research and development			
Gross research and development expenses	**$ 75,686**	$ 94,841	$ 101,946
Research and development tax credits	**(572)**	(3,175)	(1,554)
	$ 75,114	$ 91,666	$ 100,392
b) Finance costs			
Interest accretion on long-term debt	**$ 7,874**	$ 18,856	$ 7,686
Amortization of fees for Credit Facility	**10**	2,625	208
Other interest expense, transaction and bank fees	**594**	886	384
Interest expense on lease liabilities	**7,068**	-	-
Interest income	**(753)**	(307)	(313)
	$ 14,793	$ 22,060	$ 7,965
c) Employee compensation expense			
Wages and salaries	**$ 48,846**	$ 46,775	$ 44,211
Employer's benefits	**8,263**	8,377	8,556
Share-based payments expense	**22,030**	6,722	8,662
	$ 79,139	$ 61,874	$ 61,429

24. Pension Plan

The Company maintains a defined contribution pension plan for its permanent employees. The Company matches the contributions made by employees who elect to participate in the plan up to a maximum percentage of their annual salary. The Company's contributions recognized as an expense for the year ended December 31, 2019 amounted to $1,495 ($1,635 and $1,596 for the years ended December 31, 2018 and 2017 respectively).

25. Impairment losses

	2019	2018
Intangible assets (note 11)	**$ 5,296**	$ 142,609
Capital assets (note 9)	**7,070**	5,689
Option to purchase equipment	**-**	653
Investment in an associate (note 12)	**-**	1,182
Deferred revenue	**-**	(181)
	$ 12,366	$ 149,952

There were no impairment losses in 2017.

2019

During the year, the Company, headed by its new Chief Executive Officer, or CEO, has been evaluating its intellectual property and the related market opportunities in the context of the Company's financial situation and has made further decisions about the areas the Company will or will not pursue.

One of these decisions is to no longer pursue further indications relating to the human-plasma protein plasminogen. As such, the Company decided it would retain sufficient staff to complete and resubmit a Biological License Application ("BLA") for congenital plasminogen deficiency and to build ongoing manufacturing supply, but then it would cease all R&D activities in the plasma-derived therapeutics segment not relating to Ryplazim®. Because of this, the Company's long-term production forecasts for plasminogen were reduced and it was decided that one of its planned manufacturing facilities and a technical transfer facility would no longer be required. The Company also intends to close its R&D facility in Rockville, MD by the end of 2020. Consequently, the capital and intangible assets in the Plasma-derived therapeutics segment that were no longer to be used as originally planned were reviewed for impairment and written-down to their net recoverable value determined as the fair value less cost of disposal using a market approach. The Company assessed the resale value of the property, plant and equipment, the licenses and patents, in their present condition, less cost of disposal and consequently, recorded an impairment of $7,070 and $4,535 on capital assets and intangible assets for the year ended December 31, 2019.

In reviewing its portfolio of compounds in the Small molecule therapeutics segment, the Company identified compounds that where not within the areas of fibrosis on which it intends to focus and evaluated the net recoverable value of those related patents as $nil, determined as the fair value less cost of disposal using a market approach. An impairment on intangible assets of $634 was recognized for the year ended December 31, 2019.

As a result of the bioseparations business sale, some intellectual property including patents retained by the company are no longer expected to be developed. The company evaluated the net recoverable value of those patents is $nil, using a fair value less cost of disposal using a market approach. An impairment on intangible assets of $127 was recognized for the year ended December 31, 2019.

2018

As a result of various events affecting the Company during 2018, including; 1) the delay of the commercial launch of Ryplazim® following the identification by the FDA of a number of changes required in the Chemistry, Manufacturing and Controls ("CMC") section of the BLA submission for congenital plasminogen deficiency, 2) the Company's limited financial resources since the fourth quarter of 2018, which significantly delayed manufacturing expansion plans and resulted in the Company focusing its resources on the resubmission of the Ryplazim® BLA; 3) the recognition of the larger than anticipated commercial opportunities for Ryplazim®, and 4) the change in executive leadership in December 2018, the Company modified its strategic plans during the fourth quarter to focus all available plasma-derived therapeutic segment resources on the manufacturing and development of Ryplazim®, for the treatment of congenital plasminogen deficiency and other indications.

These changes and their various impacts prompted Management to perform an impairment test of the IVIG cash generating unit, which includes assets such as the licenses held by NantPro and Prometic Biotherapeutics inc. amongst others, manufacturing equipment located at its Canadian manufacturing facilities and the CMO facility at December 31, 2018, and to review whether other assets pertaining to follow-on proteins might be impaired.

In regards to the IVIG CGU, the substantial work, time and investment required to complete a robust CMC package for IVIG prior to the BLA filing, the limited resources available to complete the CMC section and the reduction of the forecasted IVIG production capacity at all plants will significantly delay the commercialisation of IVIG compared to previous timelines and as a result, cash inflows beginning beyond 2023 were not considered in the determination of the value in use due to the inherent uncertainty in forecasting cash flows beyond a five year period. As a result, the value in use for the IVIG CGU was $nil. Management also evaluated the fair value less cost to sell and determined that this value would also approximate $nil.

Consequently, impairment losses for the carrying amounts of the NantPro license and a second license acquired in January 2018, giving the rights to use IVIG clinical data and the design plans for a plant with a production capacity in excess of current needs, of $141,025 and $1,584, respectively, were recorded.

The Company acquired an option to purchase equipment located in Europe in January 2018 whose purchase was settled by the issuance of common shares as described in note 19a. An impairment was subsequently recorded on the option to purchase equipment in the amount of $653 since the likelihood of exercising this option is low in view of the current manufacturing and production plans.

Finally, an impairment of $5,689 was recorded on IVIG production equipment, to reduce its value to the fair value less cost to sell. When performing the impairment test in the previous year, a pre-tax discount rate of 17.33% was used to calculate the value in use at November 30, 2017 equivalent to a post-tax discount rate of 11.87%.

Management also reviewed the carrying amount of its investment in ProThera, as this represents an investment in follow-on proteins the Company had acquired, since the resources for further advancement of these assets are currently limited due to the focus on Ryplazim®.

The uncertainty of future cash flows for product candidates that have not yet commenced phase 1 trials was an important consideration is making these estimates. As a result, the Company recorded an impairment on its investment in an associate of $1,182 and the fair value of the investment in convertible debt was also reduced to $nil. The value in use and the fair value less cost to sell of the investment in an associate were estimated to approximate $nil, as was the fair value of the convertible debt.

Of the impairment losses recognized for the year ended December 31, 2018, $148,770 pertain to the plasma-derived therapeutics segment. The remainder of the impairment losses recognized did not belong to any segment.

26. Income taxes

The income tax recovery reported in the consolidated statement of operations for the years ended December 31, 2019, 2018 and 2017 are as follows:

	2019	2018	2017
Current income taxes	**$ (348)**	$ (5,822)	$ (2,691)
Deferred income taxes	**111**	(13,815)	(11,611)
Income tax recovery from continuing operations	**(237)**	(19,637)	(14,302)
Income taxes from discontinued operations (note 5)	**41**	(382)	(450)
Total income tax recovery	**$ (196)**	$ (20,019)	$ (14,752)

The following table provides a reconciliation of the income tax recovery calculated at the combined statutory income tax rate to the income tax recovery for both continuing and discontinued operations, recognized in the consolidated statements of operations:

	2019	2018	2017
Net loss before tax from continuing operations	**$(234,461)**	$(259,465)	$(136,252)
Net income before tax from discontinued operations	**27,512**	1,550	1,464
Combined Canadian statutory income tax rate	**26.6%**	26.7%	26.8%
Income tax at combined income tax rate	**(55,048)**	(68,863)	(36,123)
Increase (decrease) in income taxes resulting from:			
Unrecorded potential tax benefit arising from current-period losses and other deductible temporary differences	**31,962**	29,693	35,568
Effect of tax rate differences in foreign subsidiaries	**4,989**	4,481	(2,513)
Non-deductible or taxable items	**(696)**	6,074	(1,132)
Change in tax rate	**1,609**	242	(6,175)
Write off of previously recognized tax losses	**-**	22,415	-
Non-deductible loss (taxable gain) on debt renegociation	**24,572**	(8,784)	-
Recognition of previous years unrecognized deferred tax assets	**-**	-	(1,221)
Research and development tax credit	**(740)**	(5,072)	(4,193)
Foreign withholding tax	**-**	-	1,039
Non-taxable gain on disposition of subsidiary (note 5)	**(6,903)**	-	-
Other	**59**	(205)	(2)
Income tax recovery	**$ (196)**	$ (20,019)	$ (14,752)

The following table presents the nature of the deferred tax assets and liabilities that make up the deferred tax assets and deferred tax liabilities balance at December 31, 2019 and 2018.

	Intangible assets	**R&D expenses**	**Losses**	**Other**	**Total**
As at January 1, 2018 Deferred tax liabilities	$ 27,481	$ (938)	$ (12,160)	$ 21	$ 14,404
Charged (credited) to profit or loss	(27,481)	320	13,356	(9)	(13,814)
Charged (credited) to profit and loss (foreign exchange)	-	-	(1,196)	-	(1,196)
As at December 31, 2018 Deferred tax assets	**$ -**	**$ (618)**	**$ -**	**$ 12**	**$ (606)**
Charged (credited) to profit and loss	**-**	**111**	**-**	**(24)**	**87**
Derecognized - discontinued operations (note 5)	**-**	**-**	**-**	**12**	**12**
As at December 31, 2019 - Deferred tax assets	**$ -**	**$ (507)**	**$ -**	**-**	**$ (507)**

Available temporary differences not recognized at December 31, 2019 and 2018 are as follows:

	2019	2018
Tax losses (non-capital)	**$416,816**	$ 461,123
Tax losses (capital)	**-**	36,951
Unused research and development expenses	**115,491**	86,255
Undeducted financing expenses	**21,258**	19,007
Interest expenses carried forward	**5,358**	7,433
Trade and other payable	**4,022**	1,579
Capital assets	**4,673**	1,753
Intangible assets	**81,899**	88,980
Start-up expense	**4,569**	4,290
Unrealized loss on exchange rate	**6,612**	-
Other	**938**	1,252
	$661,636	$ 708,623

At December 31, 2019, the Company has non-capital losses of $425,592 of which $416,816 are available to reduce future taxable income for which the benefits have not been recognized. These losses expire at various dates from 2027 to 2039 (except for the non-capital losses in the U.K. and U.S. losses that arose after 2017 which do not expire). The Company had capital losses of $36,951 which are no longer available since the refinancing transaction of April 23, 2019. At December 31, 2019, the Company also has unused research and development expenses of $117,403 of which $115,491 are available to reduce future taxable income for which the benefits have not been recognized. These deductible expenses can be carried forward indefinitely.

At December 31, 2019, the Company also had unused federal tax credits available to reduce future income tax in the amount of $10,800 expiring between 2023 and 2039. Those credits have not been recorded and no deferred income tax assets have been recognized in respect to those tax credits. Credits in an amount of $1,268 was recorded in the current taxation year to shelter an income tax expense for prior taxation years as well as the current year.

The unused non-capital losses expire as indicated in the table below:

	Canada		Foreign
At December 31, 2019	Federal	Provincial	Countries
Losses carried forward expiring in:			
2027	$ 3,510	$ 3,495	$ 4,877
2028	-	-	5,645
2029	76	76	2,716
2030	977	977	5,487
2031	855	855	6,518
2032	4,215	3,975	-
2033	8,761	8,261	-
2034	9,156	10,667	2,592
2035	30,273	22,668	13,368
2036	25,800	25,695	23,799
2037	36,165	36,156	32,763
2038	24,109	24,128	-
2039	38,591	38,589	-
	$ 182,488	$ 175,542	$ 97,765
Not expiring - UK	-	-	94,805
Not expiring - US (post 2017)	-	-	50,538
	$ 182,488	$ 175,542	$ 243,108

As a result of the discontinued operations, UK tax losses in an amount of $28,427 are no longer available to the Company.

As a result of the conversion of the parent's debt into Liminal shares on April 23, 2019, more than 50% of the issued shares of Liminal were owned by a single shareholder at December 31, 2019. US tax rules impose restrictions that will impact how $246,708 of losses are available to shelter income in future taxation years. As a result of the US restrictions, approximately $114,283 of losses will no longer be available to the Company and are not presented in the available tax loss table presented above. The utilization of the remainder of the Company's available U.S. tax losses included under foreign tax loss carryforwards above are subject to restrictions, and management is evaluating strategies to be able to benefit from them. The Company has $15,820 of U.S. tax loss carryforwards which arose after April 23, 2019 not subject to these limitations. A deferred tax asset has not been recognized for any loss carryforwards at December 31, 2019.

27. Basic and diluted earnings per share

The Company presents basic and diluted earnings per share ("EPS") data for its common shares. Basic EPS is calculated by dividing the profit or loss attributable to common shareholders of the Company by the weighted average number of common shares outstanding during the period, adjusted for any bonus element.

The numbers for the average basic and diluted shares outstanding for all the periods presented in the consolidated statements of operations have been adjusted in order to reflect the effect of the bonus element of the Rights Offering that occurred in June 2019 and the share consolidation that took place on July 5, 2019 (note 19).

28. Segmented information

The Company has two operating segments at December 31, 2019 which are the small molecule therapeutics segment, and the plasma-derived therapeutics segment. In previous financial statements, the Company also presented results for the bioseparations segment but since the sale of the bioseparation business on November 25, 2019 (note 5), those operations are presented as discontinued operations in the consolidated statements of operations. Prior periods have been restated to present the existing segments at the reporting date.

Small molecule therapeutics: The segment is a small molecule drug discovery platform focused on discovering, developing and commercializing novel treatments for patients suffering from diseases related to fibrosis, including conditions of the lung, liver and kidney that have high unmet medical need. Our lead small product candidate, fezagepras (PBI 4050), is currently being developed for the treatment of respiratory diseases and for the treatment of Alström Syndrome.

Plasma-derived therapeutics: The segment develops manufacturing processes, based on Liminal's own affinity chromatography technology, to provide efficient extraction and purification of therapeutic proteins from human plasma, the Plasma Protein Purification System (PPPSTM), a multi-product sequential purification process. With respect to this second platform, the Company is focused on the development of its plasma-derived product candidate Ryplazim® (plasminogen) ("Ryplazim®").

The reconciliation to the consolidated statement of operations column includes the elimination of intercompany transactions between the segments and the remaining activities not included in the above segments. These expenses generally pertain to public entity reporting obligations, investor relations, financing and other corporate office activities.

The accounting policies of the segments are the same as the accounting policies of the Company. The operating segments results include intercompany transactions between the segments which are done in a manner similar to transactions with third parties.

a) Revenues and expenses by operating segments:

For the year ended December 31, 2019	Small molecule therapeutics	Plasma-derived therapeutics	Reconciliation to statement of operations	Total
Revenues	$ 34	$ 4,736	$ 134	$ 4,904
Cost of sales and other production expenses	-	2,633	130	2,763
Manufacturing and purchase cost of product candidates used for R&D activities	132	37,107	(195)	37,044
R&D - Other expenses	15,419	22,366	285	38,070
Administration, selling and marketing expenses	4,709	8,368	32,206	45,283
Segment loss	$ (20,226)	$ (65,738)	$ (32,292)	$ (118,256)
Gain on foreign exchange				(1,451)
Finance costs				14,056
Loss on extinguishments of liabilities				92,374
Change in fair value of financial instruments measured at fair value through profit or loss				(1,140)
Impairment loss				12,366
Net loss before income taxes from continuing operations				$ (234,461)
Other information				
Depreciation and amortization	$ 779	$ 7,400	$ 679	$ 8,858
Share-based payment expense	4,782	4,390	12,369	21,541

For the year ended December 31, 2018	Small molecule therapeutics	Plasma-derived therapeutics	Reconciliation to statement of operations	Total
Revenues	$ -	$ 24,521	$ 112	$ 24,633
Cost of sales and other production expenses	-	25,297	410	25,707
Manufacturing and purchase cost of product candidates used for R&D activities	1,692	37,107	(132)	38,667
R&D - Other expenses	14,234	31,727	230	46,191
Administration, selling and marketing expenses	3,522	10,393	15,533	29,448
Segment loss	$ (19,448)	$ (80,003)	$ (15,929)	$ (115,380)
Loss on foreign exchange				4,696
Finance costs				22,041
Gain on extinguishments of liabilities				(33,626)
Share of losses of an associate				22
Impairment losses				149,952
Change in fair value of financial instruments measured at fair value through profit or loss				1,000
Net loss before income taxes from continuing operations				$ (259,465)
Other information				
Depreciation and amortization	$ 480	$ 3,644	$ 415	$ 4,539
Share-based payment expense	1,270	1,524	3,606	6,400

For the year ended December 31, 2017	Small molecule therapeutics	Plasma-derived therapeutics	Reconciliation to statement of operations	Total
Revenues	$ 19,724	$ 2,529	$ 60	$ 22,313
Cost of sales and other production expenses	-	4,014	(325)	3,689
Manufacturing and purchase cost of product candidates used for R&D activities	1,755	32,764	184	34,703
R&D - Other expenses	17,426	40,963	431	58,820
Administration, selling and marketing expenses	3,669	13,488	12,406	29,563
Bad debt expense	20,491	-	-	20,491
Segment loss	$ (23,617)	$ (88,700)	$ (12,636)	$ (124,953)
Loss (gain) on foreign exchange				(781)
Finance costs				7,889
Loss (gain) on extinguishments of liabilities				4,191
Net loss before income taxes from continuing operations				$ (136,252)
Other information				
Depreciation and amortization	$ 428	$ 2,880	$ 361	$ 3,669
Share-based payment expense	1,509	2,269	4,490	8,268

Information by geographic area

b) Capital, intangible and right-of-use assets by geographic area

	2019	2018
Canada	**$ 48,309**	$ 27,647
United States	**3,141**	19,287
United Kingdom	**17,121**	13,982
	$ 68,571	$ 60,916

c) Revenues by location from continuing operations

	2019	2018	2017
United States	**$ 3,023**	$ 22,854	$ 120
Canada	**1,881**	1,519	2,469
China	**-**	-	19,724
Norway	**-**	260	-
	$ 4,904	$ 24,633	$ 22,313

Revenues are attributed to countries based on the location of customers.

The Company derives significant revenues from certain customers. During the year ended December 31, 2019, there were two customers in the Plasma-derived therapeutics segment who accounted for 97% (62% and 35% respectively) of total revenue from continuing operations. For the year ended December 31, 2018, there were two customers in the Plasma-derived therapeutics segment who accounted for 93% (57% and 36% respectively) of total revenues for continuing operations. For the year ended December 31, 2017, there was one customer in the Small molecule therapeutics segment that accounted for 88% of total revenues from continuing operations.

29. Related party transactions

Balances and transactions between the Company and its subsidiaries, which are related parties of the Company, have been eliminated on consolidation and are not disclosed in this note. Details of transactions between the Company and other related parties are disclosed below and in other notes accordingly to the nature of the transactions. These transactions have been recorded at the exchange amount, meaning the amount agreed to between the parties.

Following the debt modification on November 14, 2018, the Company assessed whether SALP, the holder of the debt, had gained significant influence for accounting purposes, despite holding less than 20% of voting rights. The Company deemed that qualitative factors were significant enough to conclude that the holder of the debt had gained significant influence over the Company and had become a related party. SALP subsequently became Liminal's parent Company following the debt restructuring completed on April 23, 2019.

All material transactions with SALP are disclosed in notes 15, 16, and 18a where the transactions are disclosed and otherwise in this note.

2019

The former CEO had a share purchase loan outstanding in the amount of $400 at December 31, 2018. The loan bore interest at prime plus 1% and had a maturity date of the earlier of (i) March 31, 2019 or (ii) 30 days preceding a targeted Nasdaq or New York Stock Exchange listing date of Liminal's shares. As part of the settlement agreement concluded in April 2019 with the former CEO of the Company, common shares held in escrow as security for a share purchase loan of $400 to the former CEO were released and the loan extinguished in exchange for the receipt of a payment of $137, representing the fair value of the shares at the time of the settlement.

During the year ended December 31, 2019 the Company paid interest on the loan with its parent, SALP, in the amount of $7,831. The Company also recorded professional fee expenses, incurred by the parent and recharged to the Company, during the year ended December 31, 3019 of $469, all of which were paid as of December 31, 2019.

On November 11, 2019, the Company and SALP amended the April 23, 2019 loan agreement to include a non-revolving line of credit ("LOC") with a limit of up to $75.0 million, bearing a stated interest of 10%, payable quarterly, and maturing on April 23, 2024. The LOC limit available to draw upon will be automatically reduced by the amounts of net proceeds generated, upon the occurrence of all or any of the following transactions; the sale of the bioseparations operations, a licensing transaction for its product candidate Ryplazim® or equity raises. The Company's ability to draw on the LOC expires May 11, 2021. As at December 31, 2019 following the sale of the bioseparations operations, the amount available to be drawn on the LOC is $30,298, of which $nil has been drawn as at December 31, 2019. As at March 19, 2020, following the receipt of additional payment for the sales of the bioseparations operations, the amount available to be drawn was reduced to $29,123.

During the year ended December 31, 2019 the Company recorded $47 of research and development expenses, relating to a consulting service agreement signed with one of its directors in 2019 of which $37 remains payable as at December 31, 2019.

2018

During the year ended December 31, 2018, the Company earned interest revenues on the share purchase loan in the amount of $19 and at December 31, 2018, the unpaid interest was $31.

30. Compensation of key management personnel

The Company's key management personnel comprise the external directors, officers and executives which included 28 individuals in 2019, 25 individuals in 2018 and 24 individuals in 2017. The remuneration of the key management personnel during the years ended December 31, 2019, 2018 and 2017 was as follows:

	2019	2018	2017
Current employee benefits[1)]	**$ 10,083**	$ 5,953	$ 7,750
Pension costs	**267**	268	293
Share-based payments	**16,842**	3,685	6,515
Termination benefits	**2,919**	3,651	-
	$ 30,111	$ 13,557	$ 14,558

[1)] Current employee benefits include salaries, bonuses, other employee benefits other than those listed in the table and director fees paid in cash.

31. Commitments

Royalties

SALP has a right to receive a 2% royalty on future revenues relating to patents existing as of the date of the agreement of PBI-1402 and analogues, including PBI-4050. The obligation under this royalty agreement is secured by all the assets of the Company until the expiry of the last patent anticipated in 2033.

In the normal course of business, the Company enters into license agreements for the market launching or commercialization of products. Under these licenses, including the ones mentioned above, the Company has committed to pay royalties ranging generally between 0.5% and 12.0% of net sales from products it commercializes and 3% of license revenues in regard to certain small molecule product candidates.

Other commitments

The Company signed a long-term manufacturing contract with a third party which provides the Company with additional manufacturing capacity (the "CMO contract"). In connection with this CMO contract, the Company has committed to a minimum annual spending of $7,000 for 2020 and $9,000 for 2021 to 2030 (the end of the initial term) which includes all expenditures under the contract. As of December 31, 2019, the remaining payment under the CMO contract was $98,921 or $48,734 after deduction of the minimum lease payments under the CMO contract recognized in the consolidated financial statements as a lease liability following the adoption of IFRS 16 (note 14). As at December 31, 2019, total commitment remaining under the CMO agreement that are not recognized in the lease liability are as follows:

	Within 1 year	**2 - 5 years**	**Later than 5 years**	**Total**
CMO operating expense commitment	$ 3,464	$ 20,761	$ 24,509	$ 48,734

The Company has entered into multiple plasma purchase agreements whereby it has committed to purchase varying volumes of plasma until December 31, 2022. As at December 31, 2019, the future purchase commitments are as follows:

2020	$ 4,816
2021	14,604
2022	4,920
	$ 24,340

32. Financial instruments and financial risk management

a) Fair value

The fair values of financial assets and financial liabilities for which fair value disclosure is required, together with the carrying amounts included in the statement of financial position, are as follows:

	2019		2018	
	Carrying amount	**Fair value**	Carrying amount	Fair value
Financial liabilities				
Royalty payment obligation	**$ 3,148**	**$ 3,148**	$ 3,077	$ 2,685
License acquisition payment obligations	**1,302**	**1,302**	2,726	2,492
Long-term debt	**8,834**	**8,834**	125,804	112,914

The fair value of financial liabilities at December 31, 2019 was calculated using a discounted cash flow model via the market interest rate specific to the term of the debt instruments ranging from 8.83% to 15.05% (14.43% to 21.94% at December 31, 2018).

The fair value on the tax credits receivable approximated the carrying amount since the amounts recoverable are re-assessed each reporting period, with any variations recognized in the consolidated statement of operations.

Fair value hierarchy

Financial instruments recorded at fair value on the consolidated statements of financial position are classified using a fair value hierarchy that reflects the significance of the inputs used in making the measurements. The fair value hierarchy has the following levels:

Level 1 – valuation based on quoted prices observed in active markets for identical assets or liabilities.

Level 2 – valuation techniques based on inputs that are quoted prices of similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; inputs other than quoted prices used in a valuation model that are observable for that instrument; and inputs that are derived principally from or corroborated by observable market data by correlation or other means.

Level 3 – valuation techniques with significant unobservable market inputs.

A financial instrument is classified to the lowest level of the hierarchy for which a significant input has been considered in measuring fair value.

Cash, cash equivalents, and restricted cash are considered to be level 1 fair value measurements.

The long-term receivables, royalty payment obligation, license acquisition payment obligations, and long-term debt are level 2 measurements.

The investment in convertible debt and the warrant liability are considered to be a level 3 measurements. Further discussion regarding assumptions used in determining their fair values are discussed in notes 15 and 25 respectively.

b) Financial risk management

The Company has exposure to credit risk, liquidity risk and market risk. The Company's Board of Directors has the overall responsibility for the oversight of these risks and reviews the Company's policies on an ongoing basis to ensure that these risks are appropriately managed.

Credit risk:

Credit risk is the risk of financial loss to the Company if a customer, partner or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Company's cash, investments, receivables and share purchase loan to a former officer. The carrying amount of the financial assets represents the maximum credit exposure.

The Company mitigates credit risk through its reviews of new customer's credit history before extending credit and conducts regular reviews of its existing customers' credit performance. We evaluate at each reporting period, the lifetime expected credit losses on our accounts receivable balances based on the age of the receivable, credit history of the customers and past collection experience.

Following the sale of its bioseparations business, the Company has limited product sales from its plasma-derived therapeutics segment and has such the Company's exposure to customer credit risk is limited.

In August 2017, the Company entered into a licensing agreement with a third-party in China and as a result, milestone and licensing revenues of $19,724 were recorded during the third quarter. The third party having not remitted funds associated with the license fee and initial milestone payment within the specified payment terms was consequently in breach of the agreement. As a result, the Company was in a position to exercise its contractual rights and opted to terminate the agreement in March 2018 thereby returning all the rights previously conferred under the license agreement back to Liminal. The Company wrote-off the accounts receivable of $18,518 to bad debt expense and reversed the withholding taxes of $1,972 that was expected to be paid on this transaction as at December 31, 2017. The difference between the amount of revenue recognized and the bad debt amount is the withholding taxes that were recorded in deduction of the accounts receivable and the effect of the change in the CAD/£ exchange rate on the accounts receivable.

Liquidity risk:

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they come due. The Company manages its liquidity risk by continuously monitoring forecasts and actual cash flows. The Company's current liquidity situation is discussed in note 1.

The following table presents the contractual maturities of the financial liabilities as of December 31, 2019:

		Contractual Cash flows				
	Carrying amount	**Payable within 1 year**	**1 - 4 years**	**5 years**	**Later than 5 years**	**Total**
Accounts payable and accrued liabilities [1)]	$ 22,808	$ 22,808	$ -	$ -	$ -	$ 22,808
Long-term portion of royalty payment obligations	105	-	78	26	254	358
Lease liabilities	38,237	8,901	23,630	6,723	37,658	76,912
Long-term portion of other employee benefit liabilities	180	-	180	-	-	180
Long-term debt [2)]	8,834	1,176	3,025	10,314	-	14,515
	$ 70,164	$ 32,885	$ 26,913	$ 17,063	$37,912	$114,773

[1)] Short term portions of the royalty payment obligations and of other employee benefit liabilities are included in the account payable and accrued liabilities.

[2)] Under the terms of the Loan with the parent (note 16), the holder of Warrants #10 may decide to cancel a portion of the principal value of the loan as payment upon the exercise of these warrants. The maximum repayment due on the loan has been included in the above table.

Market risk:

Market risk is the risk that changes in market prices, such as interest rates and foreign exchange rates, will affect the Company's income or the value of its financial instruments.

i) Interest risk

The Company's interest-bearing financial liabilities have fixed rates and as such, there is limited exposure to changes in interest payments as a result of interest rate risk.

ii) Foreign exchange risk:

The Company is exposed to the financial risk related to the fluctuation of foreign exchange rates. The Company has operations in the U.S. and the U.K., and previously had operations in the Isle of Man (discontinued operations) and a portion of its expenses incurred are in U.S. dollars and in pounds sterling (£). Historically, the majority of the Company's revenues have been in U.S. dollars and in £, continuing operations revenues are in U.S. dollars, which serve to mitigate a portion of the foreign exchange risk relating to the expenditures. Financial instruments that have exposed the Company to foreign exchange risk have been cash and cash equivalents, short-term investments, receivables, trade and other payables, lease liabilities, licence payment obligations and the amounts drawn on the credit facility. The Company manages foreign exchange risk by holding foreign currencies it received to support forecasted cash outflows in foreign currencies.

As at December 31, 2019 and 2018, the Company's net exposure to currency risk through assets and liabilities denominated respectively in U.S. dollars and £ was as follows:

	2019		2018	
Exposure in US dollars	**Amount in U.S. dollar**	**Equivalent in full CDN dollar**	Amount in U.S, dollar	Equivalent in full CDN dollar
Cash and cash equivalents	**26,032,017**	**33,883,273**	2,600,253	3,544,145
Accounts receivable	**159,604**	**207,741**	2,718,508	3,705,326
Other long-term assets	**45,428**	**59,129**	51,127	69,686
Accounts payable and accrued liabilities	**(7,209,564)**	**(9,383,969)**	(9,006,635)	(12,276,044)
Lease liabilities	**(22,426,384)**	**(29,140,152)**	-	-
Other long-term liabilities	**-**	**-**	(3,126,476)	(4,261,387)
Finance lease obligations	**-**	**-**	(600,674)	(818,719)
Long-term debt	**-**	**-**	(81,601,614)	(111,223,000)
Net exposure	**(3,398,899)**	**(4,373,978)**	(88,965,511)	(121,259,993)

	2019		2018	
Exposure in pounds (£)	**Amount in £**	**Equivalent in full CDN dollar**	Amount in £	Equivalent in full CDN dollar
Cash and cash equivalents	**279,840**	**480,233**	729,732	1,266,596
Accounts receivable	**713,078**	**1,223,713**	6,837,168	11,867,272
Income tax receivable	**5,369,467**	**9,214,542**	-	-
Accounts payable and accrued liabilities	**(971,763)**	**(1,667,642)**	(1,535,107)	(2,664,485)
Lease liabilities	**(350,783)**	**(601,979)**	-	-
Net exposure	**5,039,839**	**8,648,867**	6,031,793	10,469,383

Based on the above net exposures as at December 31, 2019, and assuming that all other variables remain constant, a 10 % depreciation or appreciation of the Canadian dollar against the U.S. dollar would result in a decrease or an increase of the consolidated net loss of approximately $437 while a 10 % depreciation or appreciation of the Canadian dollar against the £ would result in a decrease or an increase of the total comprehensive loss of approximately $865. The Company has not hedged its exposure to currency fluctuations.

33. Subsequent events

Consistent with its strategy to limit its involvement in the plasma-derived therapeutics segment to the development of Ryplazim®, the Company decided to close its R&D facility in Rockville, MD by the end of the year and made the announcement to the employees during the first quarter of 2020. As a result of this decision, the Company will be recognizing, during the service period in 2020, an expense of approximately $1,952 (US$1.5 million) in the consolidated statement of operations representing the maximum termination benefits it has committed to pay the employees. In connection with this closure, the Company also recognized impairments on its capital assets related to this facility in 2019 (note 25).

On January 29, 2020, the Company issued 96,833 common shares as a consideration for the final payment for the licence acquired on January 29, 2018 (note 11).