Consolidated Financial Statements
(Expressed in Canadian Dollars)

KANE BIOTECH INC.

Years ended December 31, 2021 and 2020

MNP LLP

To the Shareholders of Kane Biotech Inc.:

Opinion

We have audited the consolidated financial statements of Kane Biotech Inc. and its subsidiary (the "Company"), which comprise the consolidated statements of financial position as at December 31, 2021 and December 31, 2020, and the consolidated statements of loss and other comprehensive loss, changes in equity (deficit) and cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as at December 31, 2021 and December 31, 2020, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with International Financial Reporting Standards.

Basis for Opinion

We conducted our audits in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditor’s Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audits of the consolidated financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Material Uncertainty Related to Going Concern

We draw attention to Note 2(c) in the consolidated financial statements, which indicates that the Company incurred operating losses and cash outflows from operations during the year ended December 31, 2021. As stated in Note 2(c), these events or conditions, along with other matters as set forth in Note 2(c), indicate that a material uncertainty exists that may cast significant doubt on the Company’s ability to continue as a going concern. Our opinion is not modified in respect of this matter.

Other Information

Management is responsible for the other information. The other information comprises Management’s Discussion and Analysis.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audits of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audits or otherwise appears to be materially misstated. We obtained Management’s Discussion and Analysis prior to the date of this auditor’s report. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards, 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.

In preparing the consolidated financial statements, management is responsible for assessing the Company’s ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company’s financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit 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 Company’s internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company’s ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audits and significant audit findings, including any significant deficiencies in internal control that we identify during our audits.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

The engagement partner on the audit resulting in this independent auditor's report is Matt Pilloud.

Winnipeg, Manitoba

MNP LLP

March 23, 2022

Chartered Professional Accountants

KANE BIOTECH INC.

Consolidated Statement of Financial Position

	Note	December 31, 2021	December 31, 2020
Assets			
Current assets:			
Cash and cash equivalents		**$ 1,153,090**	$ 1,007,923
Trade and other receivables	**6,17**	**595,608**	640,008
Inventory	**7**	**519,228**	471,934
Capital contributions receivable - current	**4**	**475,261**	475,261
Other current assets		**137,223**	143,484
Total current assets		**2,880,410**	2,738,610
Non-current assets:			
Property and equipment	**8**	**1,435,959**	162,849
Intangible assets	**9**	**828,643**	776,925
Capital contributions receivable	**4**	**859,281**	1,247,235
Loan receivable	**18(b)**	**130,000**	110,000
Total non-current assets		**3,253,883**	2,297,009
Total assets		**$ 6,134,293**	$ 5,035,619
Liabilities and Shareholders' Equity (Deficit)			
Current liabilities:			
Accounts payable and accrued liabilities	**10**	**$ 2,057,774**	$ 1,275,506
Deferred license revenue - current	**5**	**143,488**	67,073
Due to related party	**11**	**8,066**	21,841
Loan payable	**12(a)**	**2,379,040**	1,512,533
Lease liability - current	**13**	**132,641**	47,221
Total current liabilities		**4,721,009**	2,924,174
Non-current liabilities:			
Deferred license revenue	**5**	**777,028**	346,539
Long-term government loans	**12(b)**	**1,115,635**	656,690
Lease liability	**13**	**1,087,635**	33,480
Total non-current liabilities		**2,980,298**	1,036,709
Shareholders' Equity (Deficit)			
Share capital	**15(b)**	**22,156,228**	20,858,419
Contributed surplus		**5,505,684**	4,412,956
Warrants	**15(e)**	**1,662,385**	1,844,760
Minority interest in Stem Animal Health Inc.		**2,318,970**	2,564,316
Deficit		**(33,210,281)**	(28,605,715)
Total		**(1,567,014)**	1,074,736
Going concern	**2(c)**		
Commitments and contingencies	**16**		
Subsequent events	**24**		
Total liabilities and shareholders' equity (deficit)		**$ 6,134,293**	$ 5,035,619

The notes on pages 5 to 34 are an integral part of these consolidated financial statements.

KANE BIOTECH INC.
Consolidated Statement of Loss and Comprehensive Loss

	Note	Year ended December 31, 2021	Year ended December 31, 2020
Revenue			
License	**4,5**	**$ 136,884**	$ 79,573
Royalty		**146,178**	132,840
Sales of goods and services		**1,324,713**	1,129,161
Total Revenue		**1,607,775**	1,341,574
Cost of sales-sales of goods and services		**1,039,334**	814,715
Gross Profit		**568,441**	526,859
Expenses			
General and administration	**17,19**	**4,074,748**	3,425,105
Research (including intangible assets impairment expenses of $66,172 - (2020 - $39,617))	**17,19**	**1,377,250**	1,326,127
		5,451,998	4,751,232
Loss from operations		**(4,883,557)**	(4,224,373)
Other expenses (income):			
Finance income		**(121,929)**	(38,300)
Finance costs		**416,057**	121,556
Fair value adjustment - government loans		**(323,798)**	(460,053)
Foreign exchange gain		**(3,975)**	(1,600)
Net other expenses (income)		**(33,645)**	(378,397)
Loss and comprehensive loss for the period		**$ (4,849,912)**	$ (3,845,976)
Loss and comprehensive loss attributable to:			
Shareholders		**(4,604,566)**	(3,716,686)
Minority interest		**(245,346)**	(129,290)
Loss and comprehensive loss for the period		**(4,849,912)**	(3,845,976)
Basic and diluted loss per share for the period	**15(f)**	**$ (0.04)**	$ (0.03)

The notes on pages 5 to 34 are an integral part of these consolidated financial statements.

KANE BIOTECH INC.
Consolidated Statement of Changes in Equity (Deficit)

	Note	Share Capital	Contributed Surplus	Warrants	Minority Interest	Deficit	Total
Balance as of January 1, 2020		$ 20,162,950	$ 3,948,002	$ 1,614,884	$ -	$ (24,889,029)	$ 836,807
Loss and comprehensive loss for the period					(129,290)	(3,716,686)	(3,845,976)
Transactions with owners, recorded directly in equity							
Sale of minority interest in Stem Animal Health Inc.	4	-	-	-	2,693,606	-	2,693,606
Issue of common shares	15(b)	695,469	-	-	-	-	695,469
Share based payments	15(c)	-	464,954	-	-	-	464,954
Warrants granted	15(e)	-	-	229,876	-	-	229,876
Total transactions with owners		695,469	464,954	229,876	2,693,606	-	4,083,905
Balance as of December 31, 2020		$ 20,858,419	$ 4,412,956	$ 1,844,760	$ 2,564,316	$ (28,605,715)	$ 1,074,736
Loss and comprehensive loss for the period					(245,346)	(4,604,566)	(4,849,912)
Transactions with owners, recorded directly in equity							
Share based payments	15(c,d)	-	1,092,162	-	-	-	1,092,162
Warrants exercised	15(e)	1,297,809	(50,232)	(131,577)	-	-	1,116,000
Warrants expired	15(e)	-	50,798	(50,798)		-	-
Total transactions with owners		1,297,809	1,092,728	(182,375)	-	-	2,208,162
Balance as of December 31, 2021		$ 22,156,228	5,505,684	$ 1,662,385	$ 2,318,970	$ (33,210,281)	$ (1,567,014)

The notes on pages 5 to 34 are an integral part of these consolidated financial statements.

KANE BIOTECH INC.
Consolidated Statement of Cash Flows

	Note		Year ended December 31, 2021		Year ended December 31, 2020
Cash provided by (used in):					
Operating activities:					
Loss and comprehensive loss for the period		$	**(4,849,912)**	$	(3,845,976)
Adjustments for:					
Depreciation of property and equipment	8		**138,988**		29,280
Amortization of intangible assets	9		**48,982**		48,829
Derecognition of intangible assets	9		**66,172**		39,617
Accretion income	4		**(112,046)**		(28,890)
Interest on loans and finance leases	13		**357,723**		81,509
Fair value adjustment - government loan	12(b)		**(323,798)**		(460,053)
Share based compensation	15(c,d)		**1,092,162**		464,954
Change in the following:					
Trade and other receivables			**44,400**		(278,494)
Inventory			**(47,294)**		115,105
Other current assets			**6,261**		(86,740)
Accounts payable and accrued liabilities			**782,268**		48,962
Deferred license revenue	5		**506,904**		(67,073)
Cash used in operating activities			**(2,289,190)**		(3,938,970)
Financing activities:					
Capital contributions received for minority interest	4		**500,000**		1,000,000
Issuance of common shares	15(b)		**-**		695,469
Interest paid on loans and finance leases	13		**(54,664)**		
Warrants granted	15(e)		**-**		229,876
Warrants exercised	15(e)		**1,116,000**		-
Repayment of due to related party	11		**(13,775)**		(20,000)
Proceeds from loan payable	12(a)		**1,104,087**		1,480,000
Repayment of loan payable	12(a)		**(450,000)**		-
Proceeds from long-term government loans	12(b)		**692,105**		914,803
Repayment of lease liability	13		**(85,851)**		(21,271)
Cash provided by financing acivities			**2,807,902**		4,278,877
Investing activities:					
Purchase of property and equipment	8		**(186,673)**		(27,229)
Advances of loan receivable	12(b)		**(20,000)**		(40,000)
Additions to intangible assets	9		**(166,872)**		(98,883)
Cash used in investing activities			**(373,545)**		(166,112)
Increase in cash			**145,167**		173,795
Cash, beginning of period			**1,007,923**		834,128
Cash, end of period		$	**1,153,090**	$	1,007,923

The notes on pages 5 to 34 are an integral part of these consolidated financial statements.

1. Reporting entity:

Kane Biotech Inc. (the "Company") is a biotechnology company engaged in the research, development and commercialization of technologies and products that prevent and remove microbial biofilms. The Company is domiciled and incorporated in Canada. Its registered office is 290-100 Innovation Drive, Winnipeg, Manitoba, Canada, R3T 6G2.

2. Basis of preparation of consolidated financial statements:

(a) Statement of compliance

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

The consolidated financial statements were authorized for issue by the Board of Directors on March 23, 2022.

(b) Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis except for the following items:

- financial instruments at fair value at the issue date
- equity settled share-based payment awards are measured at fair value at the grant date

(c) Going concern

These consolidated financial statements have been prepared using IFRSs that are applicable to a going concern, which contemplates that the Company will continue in operation for the foreseeable future and will be able to realize its assets and discharge its liabilities and commitments in the normal course of business. There is material uncertainty about the appropriateness of the use of the going concern assumption because the Company has experienced operating losses and cash outflows from operations since inception and has not yet achieved profitability from the commercialization of its products which casts significant doubt on the Company’s ability to continue as a going concern. For the year ended December 31, 2021, the Company had a loss and comprehensive loss of $4,849,912 and negative cash flow from operating activities of $2,289,190, and as of that date had a working capital deficit of $1,840,599 and deficit of $1,567,014.

The Company's future operations are completely dependent upon its ability to negotiate collaboration or licence agreements with upfront and milestone payments as well as royalties, generate product and services revenue, obtain grant funding and/or secure additional funds. While the Company is striving to achieve this, there is no assurance that such sources of funds will be available or obtained on favourable terms. If the Company cannot negotiate collaboration or licence agreements, generate product and services revenue, obtain grant funding, or if it cannot secure additional financing on acceptable terms, the Company will have to consider additional strategic alternatives. These may include, among other strategies, exploring the monetization of certain tangible and intangible assets as well as seeking to license assets, potential asset divestitures, winding up, dissolution or liquidation of the Company.

The ability of the Company to continue as a going concern and to realize the carrying value of its assets and discharge its liabilities and commitments when due is dependent on the successful completion of the actions taken or planned, some of which are described above, which management believes will mitigate the adverse conditions and events which raise doubt about the validity of the going concern assumption used in preparing these financial statements. There is no certainty that these and other strategies will be sufficient to permit the Company to continue as a going concern.

These consolidated financial statements do not reflect adjustments in the carrying values of the Company’s assets and liabilities, revenue and expenses, and the statement of financial position classifications used, that would be necessary if the going concern assumption were not appropriate. Such adjustments could be material.

(d) Functional and presentation currency

The consolidated financial statements are presented in Canadian dollars, which is the Company's functional currency. All financial information presented has been rounded to the nearest dollar except where indicated otherwise.

2. Basis of preparation of consolidated financial statements (continued):

(e) Use of estimates and judgments

The preparation of these financial statements in conformity with IFRSs requires management to make significant judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, revenue and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Information about critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the financial statements and information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next financial years are included in the following notes:

- Note 2(c) Going concern. The determination that the Company will continue as a going concern.
- Note 3(a) Revenue recognition. The determination of the exclusive right to access a license representing the primary performance obligation in the Company's license and distribution agreements as well as when milestone revenue becomes highly probable. The determination of the duration of a contract where renewal terms may exist.
- Note 3(c) Fair value of long-term government loans. The determination of the effective interest rate for measuring the fair value of loan advances when received and the estimated repayment term.
- Note (3d) Inventory. The determination of net realizable value for the purpose of assessing inventory impairment.
- Note 3(f)(i) Research and development costs. The determination of research and development expenditures that meet the criteria for capitalization.
- Note 3(g)(i) Impairment of financial assets. The calculation of expected credit losses related to trade and other receivables and loan receivable.
- Note 3(g)(ii) Impairment of non-financial assets. The determination that the Company has a single cash generating unit as the Company cannot clearly distinguish cash inflows that are largely independent of other cash flows specific to certain assets or technologies. The determination that the fair value of future net cash flows related to the Company's non-financial assets exceeds their carrying value per the financial statements.
- Note 3(h) Employee benefits. The estimated fair value of variable compensation for a key employee of STEM.
- Note 3(h)(ii) and Note 15(c) and (d) Share-based payment transactions. The determination of the risk-free interest rate and expected volatility with respect to the assumptions used in the Black-Scholes option pricing model or Barrier option pricing model for the purpose of determining stock options expense for employee share-based compensation. The determination that the fair value of restricted share units is the closing price of the Company’s stock on the grant date.
- Note 3(m) Leases. The determination of the incremental borrowing rate where there is no rate implicit in the lease, by way of reference to the Company's incremental borrowing rate for a loan of similar security and term. The determination of the lease term when optional renewal periods exist and the determination of variable lease payments that should be excluded from the calculation of the right of use asset and lease liability.
- Note 4 Basis of consolidation. The determination of control of Stem Animal Health Inc.
- Note 12(b) Long-term government loans. The determination of fair value at initial recognition.

(f) Basis of consolidation

Subsidiaries are entities controlled by the Company. The financial statements of subsidiaries are included in these financial statements from the date that control commences until the date that control ceases. Where necessary, adjustments are made to the financial statements of acquired subsidiaries to conform their accounting polices to those of the Company.

2. Basis of preparation of consolidated financial statements (continued):

Intercompany balances and transactions, and any realized or unrealized revenue and expenses arising from intercompany transactions, are eliminated in preparing these consolidated financial statements.

The Company has one subsidiary, STEM Animal Health Inc., which is 66.66% owned by the Company. The principal place of business is Winnipeg, Manitoba, Canada, and its functional currency is Canadian dollars.

(g) COVID-19 Pandemic

The outbreak of COVID-19, the disease caused by the novel SARS-CoV-2 strain of coronavirus was declared a global pandemic by the World Health Organization on March 11, 2020 and has resulted in a widespread health crisis that has affected economies and financial markets around the world, resulting in an economic downturn. The effects of this pandemic on the Company may include decreased customer demand, interruptions to supply chains, manufacturing activities and research and development programs and increased government regulations or interventions.

During the year ended December 31, 2021, the Company experienced sales and supply chain channel irregularities as a result of the COVID-19 pandemic that have impacted revenues, gross profits and inventories.

The duration and full impact of the COVID-19 outbreak is unknown at this time and it is not possible to reliably estimate the length and severity of these developments nor the impact of these developments on the financial results and condition of the Company in future periods. The Company has reviewed the estimates, judgments and assumptions used in the preparation of its financial statements to determine whether indicators of impairment exist for tangible and intangible assets and the credit risk of its counterparties.

Although the Company has determined that no significant revisions to such estimates, judgments or assumptions were required for the ended December 31, 2021, revisions may be required in future periods. Any such revision could have a material impact on the Company's results of operations and financial condition.

The effects of the COVID-19 pandemic on the Company are dynamic and the duration of the COVID-19 pandemic and the resulting impact on the Company's ongoing results of operations and financial condition cannot be reasonably estimated at this time. The Company continues to evaluate the situation and monitor any impacts or potential impacts on its business.

3. Significant accounting policies:

The accounting policies set out below have been applied consistently to all periods presented in these consolidated financial statements.

(a) Revenue recognition

The Company has consistently applied accounting policies in accordance with IFRS 15 *Revenue from Contracts with Customers ("IFRS 15")* to all periods presented in these consolidated financial statements. These policies are as follows:

(i) License and distribution agreement revenue

The Company has entered into exclusive license and distribution agreements for specific territories for which there may be non-refundable upfront payments, milestone payments based on achievement of certain milestones and royalties on related sales. Under the terms of these agreements in addition to the exclusive license rights, the Company may provide support, transfer of knowhow, marketing materials and efforts to increase the value of the license through introduction of new products or industry certifications. As these additional activities are not distinct and separable from the exclusive license rights, the primary performance obligation under the agreements has been determined to be a right to access the exclusive license. As a result, where non-refundable upfront payments are received or receivable, they are recognized over time on a straight-line basis over the contractual life of the agreement. Where milestone payments represent variable consideration, they are recognized as an adjustment to the transaction price of the contract when it is highly probable that a significant reversal of cumulative revenue recognized will not occur.

Royalties not subject to guaranteed minimum royalties are recognized as the related sales occur. Where guaranteed minimum annual royalties apply, the Company recognizes the minimum guaranteed royalty revenue over time and recognizes excess sales royalties as the related sales occur.

3. Significant accounting policies (continued):

Sales based milestone payments are recognized as revenue only when the applicable sales target has been met.

(ii) Sales of goods and services

Revenue from the sales of goods and services, net of discounts, is recognized when control of those goods has been transferred to the customer or the related services have been rendered.

(b) Foreign currency transactions

Transactions in foreign currencies are translated at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are re-translated at the exchange rate at that date. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction.

(c) Financial instruments

IFRS 9 Financial instruments contains three principal classification categories for financial instruments: measured at amortized cost, fair value through other comprehensive income (“FVOCI”) and fair value through profit or loss (“FVTPL”). IFRS 9 bases the classification of financial instruments on the contractual cash flow characteristics and the company’s business model for managing the financial asset.

Cash and cash equivalents, trade and other receivables, loan receivable, accounts payable and accrued liabilities, and interest and non-interest-bearing debt are all classified as amortized cost under this standard.

The long-term government loans are initially measured at fair value based on management’s best estimate of the effective interest rate at initial recognition. The fair value of the Prairies Economic Development Canada (“PrairiesCan”) loan is also based on the Company’s estimate that the amount will be repayable over five years starting April 2023. The loans are subsequently measured at amortized cost.

The Company does not adjust for modifications to share purchase warrants classified as equity instruments that are not share based payments.

(d) Inventory

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the weighted average method. The cost of finished goods and work in progress comprises raw materials, direct labour, and other direct costs. Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and selling expenses. Obsolete, redundant, and slow-moving inventories are identified and written down to net realizable values.

(e) Property and equipment

(i) Recognition and measurement

Items of property and equipment are measured at cost less accumulated depreciation and accumulated impairment losses. When parts of an item of property and equipment have different useful lives, they are accounted for as separate items (major components) of property and equipment. The costs of the day-to-day servicing of property and equipment are recognized in the consolidated statement of loss and comprehensive loss in the period in which they are incurred.

(ii) Depreciation

Depreciation is recognized in profit or loss over the estimated useful lives of each part of an item of property and equipment in a manner which most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset. The estimated useful lives and depreciation method for the current and comparative periods are as follows:

3. Significant accounting policies (continued):

Asset	Basis	Rate
Computer and office equipment	Diminishing balance	20-30%
Scientific and manufacturing equipment	Diminishing balance	20%
Right-of-use assets	Straight-line	Over the term of the lease

Depreciation methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate.

(f) Intangible assets

(i) Research and development

Expenditures on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, are recognized in the consolidated statement of loss and comprehensive loss as incurred.

Development activities involve a plan or design to produce new or substantially improved products and processes. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Company intends to and has sufficient resources to complete development and to use or sell the asset. No development costs have been capitalized to date.

(ii) Patents and trademarks

Costs incurred in obtaining a patent are capitalized and are amortized on a straight-line basis over the legal life of the respective patent once the patent has been issued. Trademarks have an indefinite life and are not amortized. Costs incurred in successfully obtaining a patent or trademark are measured at cost less accumulated amortization and accumulated impairment losses. The cost of servicing the Company's patents and trademarks is expensed as incurred.

(iii) Subsequent expenditures

Subsequent expenditures are capitalized only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditures are recognized in the consolidated statement of loss and comprehensive loss as incurred.

(g) Impairment

(i) Financial assets

At each reporting date, the Company assesses whether there is objective evidence that a financial asset is impaired.

If such evidence exists, the Company recognizes an impairment loss for financial assets. The carrying amount of the asset is reduced by this amount either directly or indirectly using an allowance account.

(ii) Non-financial assets

The carrying amount of long-lived non-financial assets, including intangible assets and property and equipment, is reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset’s recoverable amount is estimated. Intangible assets with indefinite lives and intangible assets not yet put into use are evaluated for impairment at least annually.

3. Significant accounting policies (continued):

An impairment exists when the carrying value of an asset exceeds its recoverable amount, which is the higher of its fair value less costs to sell and its value in use. The fair value less costs to sell calculation is based on available data from observable market prices less incremental costs. The value in use calculation is based on a discounted cash flow model. These calculations require the use of estimates and forecasts of future cash flows. Qualitative factors, including market size and market growth trends, strength of customer demand and degree of variability in cash flows, as well as other factors, are considered when making assumptions about future cash flows and the appropriate discount rate. A change in any of the significant assumptions of estimates used to evaluate the underlying assets could result in a material change to the results of operations.

Impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed, to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of amortization, if no impairment had been recognized. Write-downs because of impairment are recognized in research expense in the consolidated statement of loss and comprehensive loss.

(h) Employee benefits

(i) Short-term employee benefits

Short-term employee benefit obligations are expensed as the related services are provided.

(ii) Share-based payment transactions

The grant date fair value of share-based payment awards granted to employees is recognized as a personnel expense, with a corresponding increase in equity, over the period that the employees unconditionally become entitled to the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the related service and non-market vesting conditions are expected to be met, such that the amount ultimately recognized as an expense is based on the number of awards that meet the related service and non-market performance conditions at the vesting date. For share-based payment awards with non-vesting conditions, the grant date fair value of the share-based payment is measured to reflect such conditions and there is no true-up for differences between expected and actual outcomes.

Share-based payment arrangements in which the Company receives goods or services as consideration for its own equity instruments are accounted for as equity-settled share-based payment transactions. In situations where equity instruments are issued and some or all of the goods or services received by the entity as consideration cannot be specifically identified, they are measured at the fair value of the share-based payment.

(i) Government grants

Grants are recognized in the consolidated statement of loss and comprehensive loss as deductions from the related expenditures when the grants become receivable based on the related conditions on criteria being met.

Grants that compensate the Company for the cost of an asset are recognized in the consolidated statement of loss and comprehensive loss as a reduction of expenses on a systematic basis over the useful life of the asset.

(j) Finance income and finance costs

Finance income comprises interest income on funds invested which is recognized as it accrues in profit or loss using the effective interest method. Finance costs are comprised of accretion expense on long-term borrowings, which are recognized in profit or loss using the effective interest method, as well as other costs incurred to secure loan financing. Foreign currency gains and losses are reported on a net basis.

(k) Income tax

Income tax expense comprises current and deferred tax. Current tax and deferred tax are recognized in net loss except to the extent that it relates to items recognized directly in equity or in other comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

3. Significant accounting policies (continued):

Deferred tax is recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognized for the following temporary differences: the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realized simultaneously.

A deferred tax asset is recognized for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable profits will be available against which they can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized. No deferred tax assets have been recognized to date.

Refundable scientific research and development tax credits, which are earned as a result of incurring qualifying research and development expenditures, are recorded as a reduction of the related expense when there is reasonable assurance that they will be realized. Non-refundable scientific research and development tax credits, which are also earned on qualifying research and development expenditures, are not recorded in the financial statements.

(l) Earnings (loss) per share

The Company presents basic earnings per share (EPS) data for its common voting shares. Basic EPS is calculated by dividing the profit or loss attributable to common voting shareholders of the Company by the weighted average number of common voting shares outstanding during the period, adjusted for own shares held. Common voting share equivalents have been excluded from the calculation of diluted loss per share as their effect is anti-dilutive.

(m) Leases

The Company assesses whether a contract is, or contains, a lease by determining whether the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. A right-of-use asset and lease liability are recognized at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and estimated restoration costs, less any lease incentives received. The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date. The lease payments are discounted using the implicit interest rate in the lease. If the rate cannot be readily determined, the Company's incremental rate of borrowing is used.

The lease liability is measured at amortized cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Company's estimate or the amount expected to be payable under a residual value guarantee, or if the Company changes its assessment of whether it will exercise a purchase, extension, or termination option.

The Company has elected not to recognize right-of-use assets and lease liabilities for short-term leases that have a lease term of twelve months or less and leases of low-value assets. The Company recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

(n) New standards and interpretations, adopted and not yet adopted

Standards and interpretations adopted

No new International Financial Reporting Standards were adopted during the year ended December 31, 2021.

3. Significant accounting policies (continued):

Standards and interpretations not yet adopted

Certain new standards, interpretations and amendments to existing standards issued by the IASB or the International Financial Reporting Interpretations Committee (IFRIC) that are not yet effective up to the date of issuance of the Company's financial statements are listed below.

IAS 1 Presentation of Financial Statements has been amended for annual reporting periods beginning on or after January 1, 2023 with earlier application permitted. The update sets out the overall requirements for financial statements, including how they should be structured, the minimum requirements for their content and overriding concepts such as going concern, the accrual basis of accounting and the current/non-current distinction. The standard requires a complete set of financial statements to comprise a statement of financial position, a statement of profit or loss and other comprehensive income, a statement of changes in equity and a statement of cash flows. The Company is assessing the impact of adopting this amendment on its consolidated financial statements.

IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors has been amended for annual reporting periods on or after January 1, 2023 with earlier application permitted. The update is applied in selecting and applying accounting policies, accounting for changes in estimates and reflecting corrections of prior period errors. The standard requires compliance with any specific IFRS applying to a transaction, event or condition, and provides guidance on developing accounting policies for other items that result in relevant and reliable information. Changes in accounting policies and corrections of errors are generally retrospectively accounted for, whereas changes in accounting estimates are generally accounted for on a prospective basis. The Company is assessing the impact of adopting this amendment on its consolidated financial statements.

IAS 16 Property, Plant and Equipment has been amended for annual reporting periods beginning on or after January 1, 2022 with early application permitted. The update outlines the accounting treatment for most types of property, plant and equipment. Property, plant and equipment is initially measured at its cost, subsequently measured either using a cost or revaluation model, and depreciated so that its depreciable amount is allocated on a systematic basis over its useful life. Currently, the Company does not expect the amendment to IAS 16 to have a significant impact on its consolidated financial statements.

IAS 37 Provisions, Contingent Liabilities and Contingent Assets has been amended for annual reporting periods beginning on after January 1, 2022 with early application permitted. The update outlines the accounting for provisions (liabilities of uncertain timing or amount), together with contingent assets (possible assets) and contingent liabilities (possible obligations and present obligations that are not probable or not reliably measurable). The Company is assessing the impact of adopting this amendment on its consolidated financial statements.

IFRS 3 Business Combinations has been amended for annual reporting periods beginning on or after January 1, 2022 with earlier application permitted. The update outlines the accounting when an acquirer obtains control of a business. Such business combinations are accounted for using the 'acquisition method', which generally requires assets acquired and liabilities assumed to be measured at their fair values at the acquisition date. The Company is assessing the impact of adopting this amendment on its consolidated financial statements.

4. Minority interest:

Effective September 28, 2020, the Company entered into subscription and license and distribution agreements with Animalcare Group PLC ("Animalcare") under which the parties formed STEM Animal Health Inc. ("STEM"), a company dedicated to treating biofilm-related ailments in animals.

Under the terms of the agreements, the Company created a new subsidiary, STEM, in which Animalcare will invest $3 million in installments payable to STEM over a period of 48 months, to acquire a 33.34% equity interest. STEM was established with a global license over the Company's existing range of animal health oral care products and in collaboration with Animalcare will also focus on the research and development of novel animal treatments based on biofilm targeting technology. Animalcare will have licensing rights over future STEM products in Europe and Asia and the option, for a period of six years, to acquire an additional 16.67% interest in the subsidiary for $4 million, payable to the Company.

4. Sale of minority interest (continued):

Additionally, in exchange for Animalcare receiving the right to commercialize the Company's coactiv+™ and DispersinB® products in global veterinary markets outside the Americas, Animalcare will provide an initial payment to STEM of $500,000, which is due within 30 days of the anniversary of the effective date of the agreement, along with a series of potential payments payable to STEM linked to various commercial milestones to a combined maximum of $2 million along with ongoing royalties. STEM is recognizing the initial license fee on a straight-line basis over the 10-year life of the agreement.

Effective September 28, 2020, the Company transferred to STEM all of the required assets to operate its animal health business, in exchange for its 66.66% interest. The Company and STEM accounted for the transferred assets at book value. Animalcare has provided an initial capital contribution of $1 million to STEM with the remaining $2 million payable to STEM in instalments of $500,000 on each of the first four anniversary dates of the agreement. At initial recognition, using a discount rate of 7%, the Company determined the fair value of the future capital contributions receivable to be $1,693,606.

On July 13, 2021, STEM received a payment of $500,000 from Animalcare towards the capital contribution receivable. As of December 31, 2021, the carrying value of capital contributions receivable is $1,334,542 (2020 - $1,722,496).

The Company, which holds a 66.66% interest in STEM, along with other contributing factors, such as the Company retaining three of five Board positions of STEM, providing extensive services to STEM, and having a significant ability to affect the returns of STEM, has concluded that it controls STEM. Accordingly, all of STEM's assets, liabilities, equity, income, expense, and cash flows are included with Kane Biotech's in the Company's consolidated financial statements. Animalcare's investment was recorded as a minority interest in the Consolidated Statement of Financial Position at its initial fair value of $2,693,606.

STEM's principal place of business is in Winnipeg, Manitoba, Canada.

Summarized financial information, before inter-company eliminations, for STEM is as follows:

		December 31, 2021		December 31, 2020
Current assets	**$**	**1,614,549**	$	1,590,424
Non-Current assets		**937,308**		1,321,490
Current liabilities		**(507,644)**		(519,307)
Non-Current liabilities		**(387,500)**		-
Net assets	**$**	**1,656,713**	$	2,392,607

		Year ended December 31, 2021		September 28 - December 31, 2020
Revenue	**$**	**1,475,192**	$	241,849
Loss and comprehensive loss	**$**	**(735,893)**	$	(387,792)

5. License and distribution agreements:

The Company has an exclusive license and distribution agreement with Dechra Veterinary Products LLC ("Dechra") that provides for an initial payment of $500,000 USD along with a series of potential payments linked to various commercial milestones to a combined maximum of $2.0 million USD. In addition, the Company receives ongoing royalty payments on net sales of products by Dechra in North America, subject to certain minimum annual royalty payments from Dechra to the Company.

The Company also has an exclusive license and distribution agreement with Animalcare Group PLC ("Animalcare") that provides for an initial payment of $500,000 along with a series of potential payments linked to various commercial milestones to a combined maximum of $2.0 million.

5. License and distribution agreement (continued):

IFRS 15 requires the Company to use a five-step model to determine when the recognition of revenue with respect to payments received from Dechra and Animalcare will be recorded. Under the five-step approach, the Company exercised judgement in determining revenue recognition specifically related to the initial and milestone payments received in 2017 and 2021 respectively and concluded that the initial payments should be recognized over the current term of the agreements.

In April 2021, the Company received a $ 125,000 USD ($156,288 CDN) milestone payment from Dechra related to the successful production of a pilot batch of a product by a manufacturer in South America.

Summarized milestone payments received in 2021 and related revenue recognized in 2021 are as following:

	Dechra Initial Payment $500,000 USD	Dechra SA Initial Payment $125,000 USD	Animalcare Initial Payment $500,000 CAD	Total
Balance as of January 1, 2020	$ 480,685	$ -	$ -	$ 480,685
Payment received	-	-	-	-
Revenue recognized	(67,073)	-	(12,500)	(79,573)
Balance as of December 31, 2020	$ 413,612	$ -	$ (12,500)	$ 401,112
Payment received		156,288	500,000	656,288
Revenue recognized	(67,073)	(19,811)	(50,000)	(136,884)
Balance as of December 31, 2021	**$ 346,539**	**$ 136,477**	**$ 437,500**	**$ 920,516**
Years Left on agreement	**5.2**	**5.2**	**8.75**	

6. Trade and other receivables:

	December 31, 2021	December 31, 2020
Trade receivables	**$ 184,159**	$ 294,720
Other receivables	**411,449**	345,288
	$ 595,608	$ 640,008

7. Inventory:

	December 31, 2021	December 31, 2020
Raw materials	**$ 211,865**	$ 210,185
Work-in-progress	**10,993**	37,207
Finished goods	**360,430**	245,907
Allowance for inventory obsolescence	**(64,060)**	(21,365)
	$ 519,228	$ 471,934

The cost of inventories recognized as an expense and included in cost of sales for 2021 was $473,674 (2020 - $482,733). In the year ending December 31, 2021, the Company has written down $106,842 (2020 - $46,929), as a result of discontinued and expired products, which is included in cost of sales.

8. Property and equipment:

The following is a summary of property and equipment as of December 31, 2021:

Cost	**Computer and Office Equipment**	**Scientific and Manufacturing Equipment**	**Right-of-use Assets**	**Total**
Balance as of January 1, 2020	$ 55,241	$ 197,817	$ 17,311	$ 270,369
Additions - 2020	4,662	22,567	85,121	112,350
Balance as of December 31, 2020	$ 59,903	$ 220,384	$ 102,432	$ 382,719
Additions - 2021	75,651	111,022	1,225,425	1,412,098
Balance as of December 31, 2021	**$ 135,554**	**$ 331,406**	**$ 1,327,857**	**$ 1,794,817**

Depreciation	**Computer and Office Equipment**	**Scientific and Manufacturing Equipment**	**Right-of-use Assets**	**Total**
Balance as of January 1, 2020	$ 33,139	$ 157,018	$ 433	$ 190,590
Additions - 2020	7,168	9,254	12,858	29,280
Balance as of December 31, 2020	$ 40,307	$ 166,272	$ 13,291	$ 219,870
Additions - 2021	13,782	21,925	103,281	138,988
Balance as of December 31, 2021	**54,089**	**$ 188,197**	**$ 116,572**	**$ 358,858**

Carrying amounts	**Computer and Office Equipment**	**Scientific and Manufacturing Equipment**	**Right-of-use Assets**	**Total**
Balance as of December 31, 2020	19,596	54,112	89,141	162,849
Balance as of December 31, 2021	**81,465**	**143,209**	**1,211,285**	**1,435,959**

9. Intangible assets:

The following is a summary of intangible assets as of December 31, 2021:

Cost		Patents		Trademarks		Total
Balance as of January 1, 2020	$	919,962	$	75,616	$	995,578
Additions - 2020		85,866		13,017		98,883
Change due to derecognition 2020		(98,912)		-		(98,912)
Balance as of December 31, 2020	$	906,916	$	88,633	$	995,549
Additions - 2021		147,794		19,078		166,872
Change due to derecognition 2021		(100,541)		-		(100,541)
Balance as of December 31, 2021	**$**	**954,169**	**$**	**107,711**	**$**	**1,061,880**

Accumulated amortization and derecognition		Patents		Trademarks		Total
Balance as of January 1, 2020	$	229,090	$	-	$	229,090
Amortization - 2020	$	48,829	$	-		48,829
Change due to derecognition 2020		(59,295)		-		(59,295)
Balance as of December 31, 2020	$	218,624	$	-	$	218,624
Amortization - 2021	$	48,982	$	-		48,982
Change due to derecognition 2021		(34,369)		-		(34,369)
Balance as of December 31, 2021	**$**	**233,237**	**$**	**-**	**$**	**233,237**

Carrying amounts	Patents	Trademarks	Total
Balance as of December 31, 2020	688,292	88,633	776,925
Balance as of December 31, 2021	**720,932**	**107,711**	**828,643**

As of December 31, 2021, the Company has considered indicators of impairment and has determined that it was not feasible to pursue certain patents and accordingly has derecognized patents in the amount of $66,172 (2020 - $39,617). To December 31, 2021, the Company has recorded aggregate impairment (derecognition) losses of $1,481,911 (2020 - $1,415,739), primarily resulting from patent applications that were abandoned.

Amortization and derecognition expenses are recognized in research expense.

10. Accounts payable and accrued liabilities:

		December 31, 2021		December 31, 2020
Trade payables	**$**	**626,210**	$	662,230
Non-trade payables and accrued expenses		**1,431,564**		613,276
	$	**2,057,774**	$	1,275,506

11. Due to related party:

The due to related party balance of $8,066 as of December 31, 2021 (December 31, 2020 - $21,841) is accumulated interest pertaining to prior years related party cash advances which bore interest at 8% per annum as of January 1, 2019 and were repayable upon demand by the lender.

12. Loans payable:

(a) Loans payable - current

During the year ended December 31, 2020, the Company entered into a credit agreement (the "Credit Agreement") with Pivot Financial Inc. ("Pivot") for a non-revolving term loan in the aggregate amount of $1,480,000 (the "Credit Facility"). The credit facility bore an interest rate of 14% per annum. In connection with the Credit Agreement, Kane entered into a general security agreement in favour of Pivot creating a first-priority security interest in all of its present and after-acquired personal property of Kane, as well as an intellectual property security agreement. Pursuant to the Credit Agreement, Kane was obligated to make quarterly principal payments in the amount of $125,000 on each of February 28, 2021, May 31, 2021, and August 31, 2021.

During the year ended December 31, 2021, the Company entered into an amended and restated credit agreement with Pivot, increasing the aggregate amount of the non-revolving loan to $2,500,000. The amended and restated credit facility bears an interest rate of 12.75% per annum and Kane is obligated to make quarterly principal payments in the amount of $200,000 starting on November 30, 2021.

All obligations under the amended and restated credit facility which remain unpaid by August 31, 2022 (the "Maturity Date") shall be paid in full on the Maturity Date. The balance owing as of December 31, 2021, including accrued interest, is $2,406,378 (December 31, 2020 - $1,512,533). The balance per the statement of financial position of $2,379,040 is net of $27,338 of unamortized transaction costs.

During the year ended December 31, 2021, STEM entered into a loan agreement with National Bank of Canada ("National Bank") for a revolving operating line of credit in the amount of $500,000 (the "Credit Facility). The Credit Facility bears interest at National Bank's prime rate plus 1.75%. In connection with the Credit Facility, STEM has entered into a general security agreement in favour of National Bank creating a first-priority security interest in all its present and after-acquired property. There is no balance owing on the Credit Facility as of December 31, 2021. The facility is subject to a working capital covenant for Stem. Stem was in compliance with the covenant as of December 31, 2021. The Company also has access to commercial credit and debt with an aggregate credit limit of $90,000. Related balances outstanding are recorded in accounts payable and accrued liabilities.

(b) Long-term government loans

During the year ended December 31, 2019, the Company signed a funding agreement with Prairies Economic Development Canada (PrairiesCan), previously known as Western Economic Diversification Canada ("WD"). The Company will be entitled to receive up to $3.793 million from PrairiesCan in the form of interest-free repayable contributions which will be provided to the Company over three years on an expense-incurred basis retroactive to April 1, 2019. Repayment of these contributions will take place over five years starting in April 2023. Up to December 31, 2021, repayable contributions advanced to the Company were $1,804,107 (December 31, 2020 - $1,132,001). As of December 31, 2021, the balance recorded in the Consolidated Statement of Financial Position was $1,084,966 (December 31, 2020 - $633,563)

During the year ended December 31, 2021, the Company recorded a fair value adjustment of $308,518 (2020 - $ 443,180) on repayable contributions of $672,105 (2020 - $ 874,803) received during the period. This amount has been offset with an accretion expense of $87,815 (2020 - $ 48,976) that was recorded as a finance cost during the period.

During the year ended December 31, 2021, the Company received a $20,000 (2020 - $40,000) loan advance from the Canada Emergency Business Account (CEBA) program. This loan advance is interest-free up to the amended term date ending December 31, 2023 and is 50% forgivable if the other 50% of the loan advance and 75% of the loan advance received in 2020 is repaid prior to the amended date. The Company recorded the loan at fair value at the initial recognition assuming forgiveness of $10,000 and an effective interest rate of 14%.

12. Loans payable (continued):

The following is a summary of proceeds received, fair value adjustment recorded, and accretion expense recorded in each of 2021 and 2020:

	PrairieCans Loan	CEBA Loan	Total
Balance as of January 1, 2020	$ 152,964	$ -	$ 152,964
Proceeds - 2020	874,803	40,000	914,803
Fair value adjutment on loans - 2020	(443,180)	(17,826)	(461,006)
Accretion expense - 2020	48,976	953	49,929
Balance as of December 31, 2020	$ 633,563	$ 23,127	$ 656,690
Proceeds - 2021	672,105	20,000	692,105
Fair value adjutment on loans - 2021	(308,518)	(15,280)	(323,798)
Accretion expense - 2021	87,815	2,823	90,638
Balance as of December 31, 2021	**$ 1,084,965**	**$ 30,670**	**$ 1,115,635**

13. Lease liabilities:

Effective May 1, 2021, the Company signed a 10-year facility lease for both its laboratory and office premises. The terms of the lease require fixed monthly rent payments of $13,889 over 10 years. At initial recognition, using a discount rate of 6%, the Company determined the fair value lease of the lease liability to be $1,225,425.

As of December 31, 2021, the carrying amount of lease liabilities was $1,220,276 (December 31, 2020 - $80,701). The breakdown of contractual undiscounted cash flows for lease liabilities as of December 31, 2021 and December 31, 2020 is presented as below:

	December 31, 2021	December 31, 2020
Less than one year	**$ 202,394**	$ 52,492
One to five years	**666,674**	36,134
Over five years	**550,213**	-
Discounting	**(199,005)**	(7,925)
	$ 1,220,276	$ 80,701

13. Lease liabilities (continued):

Additions, payments, and interests related to lease liabilities are as following:

	Facility Lease	Equipment & Other Leases	Total
Balance as of January 1, 2020	$ -	$ 16,850	$ 16,850
Additions - 2020	-	85,121	85,121
Payments - 2020	-	(25,390)	(25,390)
Interest paid - 2020	-	4,120	4,120
Balance as of December 31, 2020	$ -	$ 80,701	$ 80,701
Additions - 2021	1,225,425		1,225,425
Payments - 2021	(88,183)	(51,991)	(140,175)
Interest paid - 2021	48,576	5,748	54,324
Balance as of December 31, 2021	**$ 1,185,818**	**$ 34,458**	**$ 1,220,276**

Following is the summary of expenses recognized in Consolidated Statement of Loss and Comprehensive Loss related to lease liabilities and short-term leases:

	2021	2020
Interest on lease liabilities	**$ 54,324**	$ 4,120
Expenses related to variable lease payments	**$ 8,769**	$ -
Expenses related to short-term leases	**$ 131,388**	$ 211,250

For the year ended December 31, 2021, the total cash outflow for leases was $271,563 (2020 - $232,521).

14. Income tax

(a) Income tax provision

The reconciliation of the income tax provision using statutory income tax rates prevailing in Canada with the income tax expense reported in the financial statements is as follows:

	2021	2020
Canadian federal and provincial income tax rates at 27% (2020 - 27%)	**$ (1,309,476)**	$ (1,038,413)
Change in unrecognized deductible temporary differences and unused tax losses	**1,305,934**	815,300
Permanent differences and other	**3,542**	223,113
	$ -	$ -

The Company recognized no income taxes in the statement of comprehensive loss as it has been incurring losses since inception.

14. Income tax (continued):

(b) Unrecognized deferred tax assets:

Deferred tax asset based on temporary differences not recognized were as follows:

	2021	2020
Tax losses	**$ 7,132,683**	$ 6,105,142
Scientific research and experimental development costs	**881,717**	858,543
Financing costs	**43,035**	56,004
Accounts payable and accrued liabilites	**(79,640)**	21,600
Deferred revenue	**248,539**	111,676
Shared based compensation	**256,092**	-
	$ 8,482,426	$ 7,152,965

Given the Company's past losses, management does not believe that it is more probable than not that the Company can utilize its deferred tax assets and therefore it has not recognized any amount in the statement of financial position.

(c) Deferred tax liabilities:

Deferred tax liabilities were as follows:

	2021	2020
Intangible assets	**$ 109,017**	$ 85,270
Property and equipment	**1,465**	10,773
Other	**-**	48,465
Long-term government loan	**196,687**	139,134
	$ 307,169	**$ 283,642**

The deferred tax liability for temporary differences of $1,137,663 (2020 - $1,050,527) have been offset by sufficient deductible temporary differences (SR&ED costs) from (b) above which are available to reverse in the same period as the taxable temporary differences.

14. Income tax (continued):

(d) The Company has the following available for application in future years:

	2021	2020
Unutilized scientific research and development expenditures		
without time limitation	**$ 3,265,617**	$ 3,179,789
Unutilized non-capital loss carried forward balances		
2026	**$ 767,228**	$ 767,228
2027	**846,139**	846,139
2028	**851,022**	851,022
2029	**843,989**	843,989
2030	**810,574**	810,574
2031	**975,188**	975,188
2032	**1,222,411**	1,222,411
2033	**1,062,842**	1,062,842
2034	**1,295,259**	1,295,259
2035	**1,573,353**	1,573,354
2036	**2,384,174**	2,384,174
2037	**2,518,425**	2,518,425
2038	**2,558,003**	2,558,000
2039	**1,055,593**	1,055,593
2040	**3,847,435**	3,847,435
2041	**3,805,710**	-
	$ 26,417,345	$ 22,611,633

14. Income tax (continue):

	2021	2020
Unutilized scientific research and development tax credits		
2021	**$ 339**	$ 339
2022	**958**	958
2023	**4,105**	4,105
2024	**47,104**	47,104
2025	**71,115**	71,115
2026	**154,908**	154,908
2027	**91,412**	91,412
2028	**180,498**	180,498
2029	**116,161**	116,161
2030	**134,256**	134,256
2031	**105,143**	105,143
2032	**118,519**	118,519
2033	**115,359**	115,359
2034	**48,373**	48,373
2035	**33,789**	33,789
2036	**49,400**	49,400
2037	**70,292**	70,292
2038	**77,915**	77,915
2039	**36,541**	36,541
2040	**43,378**	45,231
2041	**52,414**	-
	$ 1,551,979	$ 1,501,418

15. Share capital:

(a) Authorized

The Company has authorized share capital of an unlimited number of common voting shares.

(b) Shares issued and outstanding

Shares issued and outstanding are as follows:

	Number of Common Voting Shares	Amount
Balance at January 1, 2020	101,531,673	$ 20,162,950
Issued in Private Placement Offerings, net of issue costs of $66,117	7,081,862	695,469
Balance as of December 31, 2020	108,613,535	$ 20,858,419
Warrants exercised	6,200,000	1,297,809
Balance as of December 31, 2021	114,813,535	$ 22,156,228

15. Share capital (continued):

During the year ended December 31, 2020, the Company closed its second and final tranche of an aggregate private placement offering. At the closing, 7,081,862 shares at $0.14 per share were issued for gross proceeds of $991,461. Issue costs associated with the common shares was $66,117. Each unit is comprised of one common share of the Company and one-half a share purchase warrant. Each warrant will expire two years from the date the warrant was issued and will entitle the holder to purchase one common share at a price of $0.18 up to the expiry date. Each warrant issued under the offering has a call right allowing the Company to call the warrants from the holders upon 30 days notice following the price of shares closing at $0.25 for five consecutive trading days. The fair value of the warrants issued was $229,875. The shares and warrants were restricted from transfer for a period of four months from the issue date in accordance with applicable securities laws and the policies of the TSX Venture Exchange.

(c) Stock option plan

The Company has an equity-settled Stock Option Plan ("Plan") in place for employees, directors, officers, and consultants of the Company which is administered by the Board of Directors. The number of common shares reserved for issuance of stock options is limited to a maximum of 10% of the issued and outstanding shares of the Company at any one time. As of December 31, 2021, an aggregate maximum of 11,481,354 (December 31, 2020 – 10,861,354) common share options are reserved for issuance under the Plan with 11,145,459 (December 31, 2020 – 1,461,799) of those common share options remaining available.

Share options issued to employees, directors and officers of the Company under the Plan expire five years from the grant date. The attributed exercise price of the grant per the Plan cannot be less than the closing price per common share on the date of the grant.

Effective on all stock options issued after April 21, 2021:

i) The exercise price shall, at a minimum, be equal to the fair market value of the Company's common stock on the grant date (TSXV share price).

ii) Each stock option shall vest in three equal annual installments, beginning on the grant date unless the participant is employed in investor relation activities for the Company. In such case each stock option shall vest in four equal quarterly installments beginning three months after the grant date

iii) The options shall expire five years from the date of issue.

iv) Grants to executive officers shall be made by the Compensation Committee of the Company's Board of Directors. Grants to staff shall be made by authorized officers (the CEO and CFO). The authorized officers may not approve any stock option awards exceeding 500,000 shares to any staff member.

v) All exceptions must be approved by the Compensation Committee.

15. Share capital (continued):

Changes in the number of options outstanding during the year ended December 31, 2021 and 2020 are as follows:

	December 31, 2021		December 31, 2020	
	Options	**Weighted average exercise price**	Options	Weighted average exercise price
Balance as of January 1, 2021	**9,399,555**	**$ 0.18**	3,949,000	$ 0.21
Granted	**335,895**	**$ 0.17**	5,960,555	$ 0.17
Forfeited, cancelled or expired	**(9,399,555)**	**$ 0.18**	(510,000)	$ 0.27
Balance, end of period	**335,895**	**$ 0.17**	9,399,555	$ 0.18
Options exercisable, end of period	**70,585**	**$ 0.20**	5,492,518	$ 0.19
Weighted average fair value per unit of option granted during the period		**$ 0.17**		$ 0.17

Options outstanding at December 31, 2021 consist of the following:

Range of exercise prices	Outstanding number	Weighted average remaining contractual life	Weighted average exercise price	Exercisable number
$0.20	141,170	4.34	$0.20	70,585
$0.15	194,725	4.84	$0.15	-

During the year ended December 31, 2020, the Company issued 5,960,555 stock options in two separate tranches to certain directors, officers, employees, and consultants of the Company. Each option was exercisable into one common share of the Company at prices of either $0.16 or $0.18 per share for a period of five years from the date of grant. The options vested over 24 months with one third vesting immediately, one third vesting 12 months from the date of grant and one third vesting 24 months from the date of grant.

During the year ended December 31, 2021, the Company cancelled 8,470,555 stock options held by various directors, officers, employees, and consultants of the Company and issued 6,156,203 restricted share units (“RSUs”) of the Company to replace the cancelled 8,470,555 stock options pursuant to the restricted share unit plan of the Company dated April 21, 2021. Each exchanged RSU is exercisable into one common share of the Company. The expiry date and vesting periods of the RSUs vary depending upon the participant.

The cancelled stock options were revalued as of the grant date of the RSUs using the Black-Scholes option pricing model with weighted average assumptions that correspond to their times to maturity. RSUs were measured at the Company’s stock market price of $0.18 on July 20, 2021. The incremental fair value increase for the year ended December 31, 2021 resulting from the revaluation of cancelled stock options and the replacement RSU’s was $336,048, which was recognised as RSU compensation expense.

During the year ended December 31, 2021, the Company issued 335,895 stock options to an employee of the Company. Each option is exercisable into one common share of the Company at prices of either $0.20 or $0.15 per share for a period of five years from the date of grant. The options vest in four equal quarterly installments over one year.

For the year ended December 31, 2021, the Company recorded stock option compensation expense of $143,672 (2020 – $ 464,954) with a corresponding credit to contributed surplus.

15. Share capital (continued):

Stock option compensation expense was based on the fair value of the options at the date of measurement using the Black-Scholes option pricing model with the following weighted average assumptions:

	2021	2020
Expected option life	**5 years**	5 years
Risk free interest rate	**1.24%**	0.73%
Expected volatility	**96.83%**	105.22%
Grant-date share price	**$0.17**	$0.16
Option exercise price	**$0.17**	$0.17

For awards that vest at the end of a vesting period, compensation cost is recognized on a straight-line basis over the period of service. For awards subject to graded vesting, each instalment is treated as a separate award with separate fair value and a separate vesting period.

(d) Restricted share unit plan

During the year ended December 31, 2021, the Company implemented a new equity-settled Restricted Share Unit Plan ("RSU Plan") for employees, directors, officers, and consultants of the Company which is administered by the Board of Directors. The number of common shares reserved for issuance of RSUs is limited to a maximum of 10% of the issued and outstanding shares of the Company as of the date of approval of the RSU Plan by the Shareholders. As of December 31, 2021, an aggregate maximum of 10,961,354 restricted share units are reserved for issuance under the RSU Plan with 221,866 of those restricted share units remaining available.

During the year ended December 31, 2021, the Company issued 4,583,285 RSUs to various directors, officers, employees, and consultants of the Company in addition to the 6,156,203 RSUs that replaced the 8,470,555 cancelled stock options (Note 15(c)). Each exchanged RSU is exercisable into one common share of the Company. Expiry dates and vesting periods of the RSUs vary depending upon the participant.

Restricted share units outstanding as of December 31, 2021 consist of the following:

	December 31, 2021	**December 31, 2020**
	Restricted share units	Restricted share units
Balance as of January 1, 2021	**-**	-
Granted	**10,739,488**	-
Balance, end of period	**10,739,488**	-
Restricted share units exercisable, end of period	**7,153,573**	-

During the year ended December 31, 2021, the Company recorded RSU compensation expense of $948,490 (2020 – nil) with a corresponding credit to contributed surplus. RSU compensation expense is based on the fair value of the RSUs as determined by the Company’s closing share price on the TSX Venture Exchange on the date of issuance.

For awards that vest at the end of a vesting period, compensation cost is recognized on a straight-line basis over the period of service. For awards subject to graded vesting, each instalment is treated as a separate award with separate fair value and a separate vesting period.

15. Share capital (continued):

(e) Warrants

During the year ended December 31, 2020, the Company issued 3,674,576 warrants as part of the second and final tranche of its aggregate private placement offering. Each warrant expires two years from the date the warrant was issued and entitles the holder to purchase one common share at a price of $0.18 up to the expiry date. Each warrant issued under the offering has a call right allowing the Company to call the warrants from the holders upon 30 days notice following the price of shares closing at $0.25 for five consecutive trading days.

During the year ended December 31, 2021, 6,200,000 warrants (2020 – Nil) at a price of $0.18 per common share were exercised.

Changes in the number of warrants outstanding during the year ended December 31, 2021 and 2020 are as follows:

	December 31, 2021			December 31, 2020		
	Warrants	**Amount**	**Weighted average exercise price**	Warrants	Amount	Weighted average exercise price
Balance as of January 1, 2021	**47,174,389**	**$ 1,844,760**	**$ 0.18**	43,499,813	$ 1,614,884	$ 0.18
Granted				3,674,576	$ 229,876	$ 0.18
Exercised	**(6,200,000)**	**$ (131,577)**	**$ 0.18**	-	$ -	$ -
Expired	**(5,305,197)**	**$ (50,798)**	**$ 0.18**	-	$ -	$ -
Balance as of December 31, 2021	**35,669,192**	**$ 1,662,385**	**$ 0.18**	47,174,389	$ 1,844,760	$ 0.18
Weighted average remaining contractual life		**0.10 years**			1.04 years	

During 2020, 34,507,997 warrants issued as part of a private placement offering completed in 2017 were extended until 2022. No adjustments were made to the fair value of these warrants in accordance with the Company's accounting policy.

The relative fair value of warrants was determined at the date of issue using the Barrier option pricing model with the following weighted average assumptions:

	December 31, 2021	December 31, 2020
Expected option life	-	2 years
Risk free interest rate	-	1.32%
Expected volatility	-	76.18%
Grant-date share price	-	$0.23
Warrant exercise price	-	$0.18
Price barrier	-	$0.25

(f) Per share amounts

The weighted average number of common voting shares outstanding for the year ended December 31, 2021 and 2020 was 112,600,420 and 108,613,535 respectively.

The dilution created by restricted share units, options and warrants has not been reflected in the per share amounts as the effect would be anti-dilutive since the diluted (loss) earnings per share calculation were nil for the year ended December 31, 2021 (December 31, 2020 – nil).

16. Commitments and contingencies:

(a) Commitments

As of December 31, 2021 and in the normal course of business, the Company has obligations to make future payments, representing contracts and other commitments that are known and committed.

Contractual obligation payments due by fiscal year ending December 31:

	USD		CND	
2022	$	10,000	$	22,500
2023	$	10,000	$	7,500
2024	$	10,000	$	966
2025	$	10,000	$	-
2026 and after	$	10,000	$	-
	$	50,000	$	30,966

The Company holds a worldwide exclusive right to Competence Stimulating Peptide (CSP) technology from the University of Toronto Innovations Foundation (UTIF). In consideration for the right, the Company will pay UTIF a royalty of a stipulated percentage of the net sales, if any, of the licensed products. If the Company sublicenses any rights to a third party, the Company will pay UTIF a percentage of a sublicense fee or sublicense royalty fees. The Company does not expect to make royalty payments under this agreement in fiscal 2022 and cannot predict when such royalties will become payable, if at all.

Also, the Company holds a worldwide exclusive license to DispersinB® enzyme from the University of Medicine and Dentistry of New Jersey (UMDNJ), now part of Rutgers University (Rutgers). In consideration for the right, the Company will pay a royalty to Rutgers of a stipulated percentage of the net sales, if any, of the licensed products. If the Company sublicenses any rights to a third party, the Company will pay Rutgers a percentage of a sublicense fee and/or sublicense royalty fees. A minimum royalty fee of $10,000 USD per annum is payable for the life of the license, with additional milestone payments possible throughout the term of the agreement.

In addition, the Company holds a non-exclusive, non-transferable licence to use the CDA Skin Health Program logo in different variations and the statements solely in association with the product from Canadian Dermatology Association (CDA). In consideration for the right, the Company will pay CDA during the initial term (3 years) a non-refundable licence fee of $22,500, payable in installments as annual fee of $7,500 starting on commencement date, February 17, 2021.

(b) Guarantee

The Company periodically enters into research and licence agreements with third parties that include indemnification provisions customary in the industry. These guarantees generally require the Company to compensate the other party for certain damages and costs incurred because of claims arising from research and development activities undertaken on behalf of the Company. In some cases, the maximum potential number of future payments that could be required under these indemnification provisions could be unlimited. These indemnification provisions generally survive termination of the underlying agreement. The nature of the indemnification obligations prevents the Company from making a reasonable estimate of the maximum potential amount it could be required to pay. Historically, the Company has not made any indemnification payments under such agreements and no amount has been accrued in the accompanying financial statements with respect to these indemnification obligations.

17. Government and other assistance:

For the year ended December 31, 2021, the Company recorded $1,680,830 in government assistance (2020 - $ 1,219,777). Government assistance was recorded as reductions in research and general and administrative expenditures on the consolidated statements of loss and comprehensive loss. Trade and other receivables included $297,612 (2020 – $308,270) of government assistance receivable.

18. Related parties:

(a) Key management personnel compensation

Key management personnel are those persons having authority and responsibility for planning, directing, and controlling the activities of the Company. The Board of Directors, President & CEO and CFO are key management personnel.

In addition to their base salaries, the Company also provides non-cash benefits, a short-term incentive plan and participation in the Stock Option Plan (Note 15(c)) and Restricted Share Unit Plan (Note 15(d)). The following table details the compensation recorded for key management personnel:

		Year ended December 31, 2021		Year ended December 31, 2020
Salaries, fees and short-erm employee benefits	**$**	**469,367**	$	504,685
Share-based payments		**594,749**		242,399
	$	**1,064,116**	$	747,084

(b) Key management personnel and director transactions

Directors and key management personnel control 27.0% of the voting shares of the Company.

During the year ended December 31, 2021, $13,775 (2020 - $20,000) was paid to a related party pertaining to accumulated interest on prior years' related party cash advances. The balance due to related party at December 31, 2021 is accumulated interest of $8,066 (December 31, 2020 - $21,841). These advances bore interest at 8% per annum as of January 1, 2019 and were repayable upon demand by the lender. During the year ended December 31, 2019, the Company repaid all principal owing on these advances.

As of December 31, 2021, the loan receivable balance of $130,000 (December 31, 2020 - $110,000) represents cash advances provided to a company which is wholly owned by the President & CEO of Kane Biotech as part of a demand loan of up to $150,000 approved by the Board of Directors in 2019. This loan bears interest at 8% per annum and is secured by all of the assets of the borrower. As of December 31, 2021, the interest receivable from this loan is $16,990 (December 31, 2020 - $7,909) and is included in trade and other receivables on the consolidated statement of financial position.

Accrued liabilities owing to key management personnel was $4,976 as of December 31, 2021 (December 31, 2020 – $3,849).

During the year ended December 31, 2020, STEM entered into a contract with a key employee that provides the employee with incremental variable compensation based on a pre-determined formula once STEM achieves a minimum of $2 million of EBITDA. The value of the compensation increases with further increases in EBITDA. Payments under the plan could begin as early as October 8, 2023. The Company has not recorded a liability related to this plan as of December 31, 2021.

19. Expenses by nature:

Expenses incurred for the year ended December 31, 2021 and 2020 are as follows:

		December 31, 2021		December 31, 2020
Personnel expenses				
Wages and salaries	**$**	**2,438,358**	$	1,711,869
Employee benefits and insurance premiums		**124,634**		97,471
Share-based payments		**1,092,162**		464,954
		3,655,154		2,274,294
Depreciation, amortization and writedowns		**254,143**		117,726
Science consumables and contract research		**1,582,598**		1,119,763
Occupancy		**53,751**		116,191
License fees		**12,668**		13,429
Investor relations		**242,908**		259,319
Consulting		**366,552**		322,312
Marketing		**327,198**		637,994
Other		**430,618**		750,663
Less: Government assistance		**(1,473,592)**		(860,459)
	$	**5,451,998**	$	4,751,232

20. Segmented information:

The Company has a separate operating segment for its Stem Animal Health subsidiary, which operates the animal health business. There are no other distinct operating segments within the remaining operations of the Company.

20. Segmented information (continued):

Information regarding the results by operating segment for the year ended December 31, 2021 is as follows:

	Year ended December 31, 2021	Year ended December 31, 2021	Year ended December 31, 2021
Revenue	**STEM**	**All Other Segments**	**Total**
License	$ 50,000	$ 86,884	$ 136,884
Royalty	146,178	-	146,178
Sales of goods and services	1,279,014	45,699	1,324,713
Total Revenue	1,475,192	132,583	1,607,775
Cost of sales-sales of goods and services	1,005,393	33,941	1,039,334
Gross Profit	469,799	98,642	568,441
Expenses			
General and administration	1,098,414	2,976,334	4,074,748
Research	201,427	1,175,823	1,377,250
	1,299,841	4,152,157	5,451,998
Loss from operations	(830,042)	(4,053,515)	(4,883,557)
Other expenses (income):			
Finance income	(112,046)	(9,883)	(121,929)
Finance costs	14,561	401,496	416,057
Fair value adjustment - government loan	-	(323,798)	(323,798)
Foreign exchange loss (gain)	3,336	(7,311)	(3,975)
Net other expenses (income)	(94,149)	60,504	(33,645)
Loss and comprehensive loss for the period	$ (735,893)	$ (4,114,019)	$ (4,849,912)
Loss and comprehensive loss attributable to:			
Shareholders	(490,547)	(4,114,019)	(4,604,566)
Minority interest	(245,346)	-	(245,346)
Loss and comprehensive loss for the period	(735,893)	(4,114,019)	(4,849,912)

20. Segmented information (continued):

Information regarding the financial position by operating segment as of December 31, 2021 is as follows:

	Year ended December 31, 2021 STEM	Year ended December 31, 2021 All Other Segments	Year ended December 31, 2021 Total
Current assets	1,614,549	1,265,861	2,880,410
Non-current assets	937,308	2,316,575	3,253,883
Total assets	2,551,857	3,582,436	6,134,293
Current liabilities	507,644	4,213,365	4,721,009
Non-current liabilties	387,500	2,592,798	2,980,298
Shareholders' equity (deficit)	1,656,713	(3,223,727)	(1,567,014)
Total liabilities and shareholder's equity	2,551,857	3,582,436	6,134,293

In terms of geographic segmentation, a substantial proportion of its revenues come from non-Canadian sources. The breakdown of Canadian to non-Canadian revenues is as follows:

	Year ended December 31 2021	Year ended **December 31 2020**
Domestic	**$ 931,951**	$ 668,271
International	**675,824**	673,303
	$ 1,607,775	$ 1,341,574

Three of the Company’s largest customers accounted for 53% of the Company’s total sales for year ended December 31, 2021 (2020 – three customers, 69%).

21. Determination of fair values:

Several of the Company's accounting policies and disclosures require the determination of fair value, for both financial and non-financial assets and liabilities. Fair values that have been determined for measurement and/or disclosure purposes based on certain models are indicated below. When applicable, further information about the assumptions made in determining fair values is disclosed in the notes specific to that asset or liability.

(a) Share-based payment transactions:

The fair value of stock options is measured using the Black-Scholes formula. Measurement inputs include share price on measurement date, exercise price of the instrument, expected volatility (based on weighted average historic volatility adjusted for changes expected due to publicly available information), weighted average expected life of the instruments, expected dividends, and the risk-free interest rate (based on government bonds). Service and non-market performance conditions attached to the transactions are not considered in determining fair value.

The fair value of restricted share units is determined by the Company’s closing share price on the TSX Venture Exchange on the date of issuance.

(b) Financial assets and liabilities:

The Company has determined the estimated fair values of its financial instruments based on appropriate valuation methodologies. The carrying values of current monetary assets and liabilities approximate their fair values due to their relatively short periods to maturity except for the long-term government loans which as of December 31, 2021 has a fair value of $1,115,635 (December 31, 2020 - $656,690).

21. Determination of fair values (continued):

Financial assets and liabilities that are recognized on the consolidated statement of financial position at fair value follow a hierarchy that is based on the significance of the inputs used in making the measurements. The long-term government loans represent a level 2 input that represents inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices).

22. Financial risk management:

The Company's activities expose it to a variety of financial risks: market risk (including foreign exchange and interest rate risks), credit risk and liquidity risk. Risk management is the responsibility of the Company, which identifies, evaluates and, where appropriate, mitigates financial risks.

(a) Foreign exchange risk:

The Company operates in Canada and has relationships with entities in other countries. Foreign exchange risk arises because the cost of transactions denominated in foreign currencies may vary due to changes in exchange rates.

Balances in foreign currencies as of December 31 were approximately**:**

		2021		2020
		U.S. Dollars		U.S. Dollars
Cash and cash equivalents	**$**	**299,900**	$	37,429
Trade and other receivables		**286,846**		268,024
Accounts payables and accrued liabilities		**(436,034)**		(206,432)
	$	**150,712**	$	99,021

Fluctuations in the U.S. dollar exchange rates may potentially have a significant impact on the Company's results of operations. The Company estimates that a decrease in the Canadian to US dollar exchange rate of 10% would result in net income of $15,071 (2020 - $9,902).

(b) Interest rate risk:

The Company is exposed to interest rate risk to the extent that short-term deposits are at a floating short-term rate of interest and their market value will vary with the change in short-term market interest rates. The Company's maximum exposure to interest rate risk is based on the effective interest rate and the current carrying value of these assets.

There is a risk that future cash flows from invested cash, cash equivalents and short-term deposits will vary as the market interest rates fluctuate because these investments earn interest at market rates. Based on the December 31, 2021 balance of approximately $50,054 (2020 - $50,000), a variation of 100 basis points in the market interest rate would not affect loss and comprehensive loss by a material amount. For the year ended December 31, 2021, the Company recorded interest income of $1,500 (2019 - $454) in relation to these assets.

The Company is also exposed to interest rate fair value risk on loans payable that bear interest at a fixed rate.

(c) Credit risk:

The Company limits its exposure to credit risk by investing only in banks that have a strong credit rating. Trade and other receivables are subject to normal credit risk. The maximum exposure to credit risk is equal to the carrying value of the trade receivables and loan receivable which is $314,159 (December 31, 2020 - $404,720). The Company regularly assesses the trade and other receivables and takes action to collect the amounts or provide adequate reserves against doubtful accounts. The Company currently has no reserve for doubtful accounts as there have been no bad debts to date. As of December 31, 2021, the Company has accounts receivable that are past due but not impaired of $283,532 (December 31, 2020 - $302,390) which were all collected subsequent to December 31, 2021.

The Company has assessed the collectability of the loan receivable and has determined that it is collectable.

22. Financial risk management (continued):

(d) Liquidity risk:

Liquidity risk is the risk that the current financial obligations exceed the cash available to satisfy those obligations at any point in time. The Company's objective in managing liquidity risk is to maintain sufficient readily available cash in order to meet its liquidity requirements. The Company achieves this by primarily relying on private placement offerings of common shares and warrants.

The following table summarizes the Company's financial liabilities with corresponding maturity.

	< 1 Year	1-3 years	3-5 years	5-10 years	Total
Due to related party	$ 8,066	$ -	$ -	$ -	$ 8,066
Long-term government loans	-	682,140	710,357	428,093	1,820,590
Loan payable	2,406,378	-	-	-	2,406,378
Accounts payable and accrued liabilities	2,057,774	-	-	-	2,057,774
	$ 4,472,218	$ 682,140	$ 710,357	$ 428,093	$ 6,292,808

(e) Capital management:

The Company's primary objective when managing capital, defined as shares, warrants, loan payable and long-term government loans, is to ensure that it has sufficient cash resources to fund its development and commercialization activities and to maintain its ongoing operations.

As of December 31, 2021, the capital was $ 27,313,288 (2020 - $24,872,402).

To fund its activities, the Company relies primarily on private placements of its common shares. To secure additional capital the Company may attempt to raise funds through the issuance of equity, by securing strategic partners or by borrowing. The Company is not subject to externally imposed capital requirements and there has been no change with respect to the overall capital management strategy during the year ended December 31, 2021.

23. Changes in liabilities from financing activities

Changes in liabilities from financing activities during the year ended December 31, 2021 and 2020 are as follows:

	January 1, 2020	Cash - Principal	Cash - Interest	Interest Accrued	Non-Cash	December 31, 2020
Long-term borrowings	$ 152,964	$ 914,803			$ (411,077)	$ 656,690
Short-term borrowings	41,841	1,460,000	-	32,533	-	1,534,374
	$ 194,805	$ 2,374,803	$ -	$ 32,533	$ (411,077)	$ 2,191,064

	January 1, 2021	Cash - Principal	Cash - Interest	Interest Accrued	Non-Cash	December 31, 2021
Long-term borrowings	$ 656,690	$ 692,105		$ 90,638	$ (323,798)	$ 1,115,635
Short-term borrowings	1,534,374	640,312	-	212,420		2,387,106
	$ 2,191,064	$ 1,332,417	$ -	$ 303,058	$ (323,798)	$ 3,502,741

24. Subsequent events:

(a) Expiration of warrants

Subsequent to December 31, 2021, all 35,669,192 of warrants outstanding as at December 31, 2021 expired without being exercised.

24. Subsequent events (continued):

(b) Private placement offering

On March 15, 2022, the Company announced its intention to undertake a non-brokered private placement offering of up to 10,000,000 common shares at a price of $0.10 per share for gross proceeds of up to $1,000,000.