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U.S. SECURITIES AND EXCHANGE COMMISSION

WASHINGTON D.C. 20549

FORM 10-Q

(Mark One)

☒ **Quarterly report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.**

For the quarterly period ended May 31, 2019

☐ **Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.**

For the transition period from_____ to _____

Commission File Number 0-23386

CRYO-CELL INTERNATIONAL, INC.

(Exact name of Registrant as Specified in its Charter)

DELAWARE	**22-3023093**
(State or other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**

700 Brooker Creek Blvd. Oldsmar, FL 34677
(Address of Principal Executive Offices) (Zip Code)

Issuer's phone number, including area code: (813) 749-2100

(Former name, former address and former fiscal year, if changed since last report).

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.01 par value	**CCEL**	**OTCQB**

Check whether the registrant (1) filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the past 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☐ No ☒

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files. Yes ☒ No ☐ Not Applicable ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, anon-accelerated filer or a smaller reporting company. See definition of "large accelerated filer," "accelerated filer", "small reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐	Accelerated filer ☐
Non-accelerated filer ☐	Smaller reporting company ☒
	Emerging growth company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

State the number of shares outstanding of each of the Registrant's classes of common stock, as of the latest practicable date. As of July 9, 2019, 13,598,909 shares of $0.01 par value common stock were issued and 7,803,333 were outstanding.

CRYO-CELL INTERNATIONAL, INC. AND SUBSIDIARIES

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CRYO-CELL INTERNATIONAL, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	(Unaudited) May 31, 2019	November 30, 2018
ASSETS		
Current Assets		
Cash and cash equivalents	$ 6,468,587	$ 6,040,033
Marketable securities	839,809	875,689
Accounts receivable (net of allowance for doubtful accounts of $2,432,645 and $2,264,848, respectively)	5,758,673	5,867,335
Prepaid expenses	610,581	461,815
Inventory, current portion	1,046,195	1,260,557
Other current assets	278,143	254,465
Total current assets	15,001,988	14,759,894
Property and Equipment-net	1,747,762	1,493,401
Other Assets		
Investment - Tiahne Stock	308,000	308,000
Intangible assets, net	1,287,545	1,341,336
Inventory, net of current portion	12,646,000	14,775,316
Goodwill	1,941,411	1,941,411
Deferred tax assets	7,562,705	7,656,897
Deposits and other assets, net	393,974	113,888
Total other assets	24,139,635	26,136,848
Total assets	$ 40,889,385	$ 42,390,143
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current Liabilities		
Accounts payable	$ 1,028,999	$ 1,261,653
Accrued expenses	965,009	2,702,788
Current portion of note payable	3,100,000	3,100,000
Deferred revenue	8,516,593	8,365,284
Total current liabilities	13,610,601	15,429,725
Other Liabilities		
Deferred revenue, net of current portion	21,984,017	20,317,231
Contingent Consideration	3,612,048	4,282,975
Note payable, net of current portion and debt issuance costs	8,351,511	9,843,510
Long-term liability - revenue sharing agreements	1,425,000	1,425,000
Total other liabilities	35,372,576	35,868,716
Total liabilities	48,983,177	51,298,441
Commitments and contingencies (Note 10)	—	—
Stockholders' Deficit		
Preferred stock ($.01 par value, 500,000 authorized and none issued and outstanding)	—	—
Series A Junior participating preferred stock ($.01 par value, 20,000 authorized and none issued and outstanding)	—	—
Common stock ($.01 par value, 20,000,000 authorized; 13,598,909 issued and 7,803,333 outstanding as of May 31, 2019 and 13,596,409 issued and 7,800,833 outstanding as of November 30, 2018)	135,989	135,964
Additional paid-in capital	35,746,866	35,515,382
Treasury stock, at cost	(19,571,113)	(19,571,113)
Accumulated other comprehensive income	—	340,984
Accumulated deficit	(24,405,534)	(25,329,515)
Total stockholders' deficit	(8,093,792)	(8,908,298)
Total liabilities and stockholders' deficit	$ 40,889,385	$ 42,390,143

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

CRYO-CELL INTERNATIONAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Unaudited)

	For the Three Months Ended		For the Six Months Ended	
	May 31, 2019	May 31, 2018	May 31, 2019	May 31, 2018
Revenue:				
Processing and storage fees	$ 7,679,869	$6,295,455	$15,014,896	$12,495,522
Public banking revenue	234,115	—	368,480	—
Licensee and royalty income	201,828	203,159	201,828	203,159
Product revenue	12,040	26,849	37,760	54,900
Total revenue	8,127,852	6,525,463	15,622,964	12,753,581
Costs and Expenses:				
Cost of sales	2,628,291	1,777,138	5,094,518	3,378,646
Selling, general and administrative expenses	3,647,927	3,533,057	7,393,229	7,122,576
Impairment of public inventory	2,332,763	—	2,332,763	—
Change in fair value of contingent consideration	(1,037,984)	—	(670,927)	—
Research, development and related engineering	4,957	29,284	10,841	42,693
Depreciation and amortization	55,334	36,248	112,314	72,793
Total costs and expenses	7,631,288	5,375,727	14,272,738	10,616,708
Operating Income	496,564	1,149,736	1,350,226	2,136,873
Other Expense:				
Other income (expense)	32,339	9,785	(33,854)	(23,780)
Interest expense	(424,287)	(304,094)	(831,212)	(585,071)
Total other expense	(391,948)	(294,309)	(865,066)	(608,851)
Income before income tax expense	104,616	855,427	485,160	1,528,022
Income tax expense	(50,943)	(315,921)	(155,610)	(3,518,588)
Net Income (Loss)	$ 53,673	$ 539,506	$ 329,550	$ (1,990,566)
Net income (loss) per common share - basic	$ 0.01	$ 0.07	$ 0.04	$ (0.28)
Weighted average common shares outstanding - basic	7,803,333	7,247,464	7,802,344	7,177,082
Net income (loss) per common share - diluted	$ 0.01	$ 0.07	$ 0.04	$ (0.28)
Weighted average common shares outstanding - diluted	8,421,236	7,917,735	8,422,142	7,177,082
Other Comprehensive Income				
Unrealized gain on marketable securities (net of tax)	$ —	$ 1,254	$ —	$ 120,000
Comprehensive Income (Loss)	$ 53,673	$ 540,760	$ 329,550	$ (1,870,566)

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

CRYO-CELL INTERNATIONAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

	For the Six Months Ended	
	May 31, 2019	May 31, 2018
Cash flows from operating activities:		
Net income (loss)	$ 329,550	$(1,990,566)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation and amortization expense	208,300	120,338
Impairment of public inventory	2,332,763	—
Change in fair value of contingent consideration	(670,927)	—
Compensatory element of stock options	225,809	268,386
Provision for doubtful accounts	385,362	185,107
Deferred income tax expense	—	3,023,437
Amortization of debt issuance costs	57,999	51,540
Changes in assets and liabilities:		
Accounts receivable	(276,700)	120,671
Prepaid expenses	(148,766)	(116,666)
Inventory	10,915	(109,928)
Other current assets	(23,678)	15,720
Deposits and other assets, net	49,145	(700,000)
Accounts payable	(232,654)	(815,400)
Accrued expenses	(1,719,371)	(400,376)
Deferred revenue	1,818,095	2,071,632
Net cash provided by operating activities	2,345,842	1,723,895
Cash flows used in investing activities:		
Purchases of property and equipment	(408,870)	(253,704)
Purchase of intangible asset	—	(200,000)
Sales (purchases) of marketable securities and other investments, net	35,880	(13,283)
Net cash used in investing activities	(372,990)	(466,987)
Cash flows from financing activities:		
Repayments of note payable	(1,549,998)	(1,000,000)
Proceeds from the exercise of stock options	5,700	4,920
Net cash used in financing activities	(1,544,298)	(995,080)
Increase in cash and cash equivalents	428,554	261,828
Cash and cash equivalents - beginning of period	6,040,033	6,279,154
Cash and cash equivalents - end of period	$ 6,468,587	$ 6,540,982
Supplemental non-cash investing activities:		
Unrealized gain on marketable securities, net of tax	$ —	$ 120,000
Cumulative-effect adjustment due to the adoption of ASU 2016-01	$ (340,984)	$ —

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

CRYO-CELL INTERNATIONAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT
(Unaudited)

	For the Three Months Ended May 31, 2019						
	Common Stock		Additional Paid-In	Treasury	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Stock	Income/(Loss)	Deficit	Deficit
Balance at February 28, 2019	13,598,909	$135,989	$35,660,039	$(19,571,113)	$ —	$(24,459,207)	$ (8,234,292)
Common stock issued	—	—	—				—
Compensatory element of stock options			86,827				86,827
Cumulative-effect adjustment due to the adoption of ASU 2016-01					—	—	—
ASC 606 adoption adjustment, net of tax						—	—
Net income						53,673	53,673
Balance at May 31, 2019	13,598,909	$135,989	$35,746,866	$(19,571,113)	$ —	$(24,405,534)	$ (8,093,792)

	For the Six Months Ended May 31, 2019						
	Common Stock		Additional Paid-In	Treasury	Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Stock	Income/(Loss)	Deficit	Deficit
Balance at November 30, 2018	13,596,409	$135,964	$35,515,382	$(19,571,113)	$ 340,984	$(25,329,515)	$ (8,908,298)
Common stock issued	2,500	25	5,675				5,700
Compensatory element of stock options			225,809				225,809
Cumulative-effect adjustment due to the adoption of ASU 2016-01					(340,984)	340,984	—
ASC 606 adoption adjustment, net of tax						253,447	253,447
Net income						329,550	329,550
Balance at May 31, 2019	13,598,909	$135,989	$35,746,866	$(19,571,113)	$ —	$(24,405,534)	$ (8,093,792)

	For the Three Months Ended May 31, 2018						
	Common Stock		Additional Paid-In	Treasury	Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Stock	Income/(Loss)	Deficit	Deficit
Balance at February 28, 2018	12,900,767	$129,008	$31,930,880	$(19,571,113)	$ 159,611	$(27,004,763)	$(14,356,377)
Common stock issued	168,716	1,687	983				2,670
Compensatory element of stock options			(287,209)				(287,209)
Unrealized gain on available for sale securities					1,254		1,254
Net income						539,506	539,506
Balance at May 31, 2018	13,069,483	$130,695	$31,644,654	$(19,571,113)	$ 160,865	$(26,465,257)	$(14,100,156)

	For the Six Months Ended May 31, 2018						
	Common Stock		Additional Paid-In	Treasury	Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Stock	Income/(Loss)	Deficit	Deficit
Balance at November 30, 2017	12,899,517	$128,995	$31,373,048	$(19,571,113)	$ 40,865	$(24,474,691)	$(12,502,896)
Common stock issued	169,966	1,700	3,220				4,920
Compensatory element of stock options			268,386				268,386
Unrealized gain on available for sale securities					120,000		120,000
Net loss						(1,990,566)	(1,990,566)
Balance at May 31, 2018	13,069,483	$130,695	$31,644,654	$(19,571,113)	$ 160,865	$(26,465,257)	$(14,100,156)

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

CRYO-CELL INTERNATIONAL, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
May 31, 2018
(Unaudited)

Note 1 – Description of Business, Basis of Presentation and Significant Accounting Policies

Cryo-Cell International, Inc. ("the Company" or "Cryo-Cell") was incorporated in Delaware on September 11, 1989 and is headquartered in Oldsmar, Florida. The Company is organized in three reportable segments, cellular processing and cryogenic cellular storage, with a current focus on the collection and preservation of umbilical cord blood stem cells for family use, the manufacture of PrepaCyte CB units, the processing technology used to process umbilical cord blood stem cells and cellular processing and cryogenic storage of umbilical cord blood stem cells for public use. Revenues recognized for the cellular processing and cryogenic cellular storage represent sales of the umbilical cord blood stem cells program to customers and income from licensees selling the umbilical cord blood stem cells program to customers outside the United States. Revenues recognized for the manufacture of PrepaCyte CB units represent sales of the PrepaCyte CB units to customers. Revenue recognized for the cryogenic storage of umbilical cord blood stem cells for public use is generated from the sale of the cord blood units to the National Marrow Donor Program ("NMDP"), which distributes the cord blood units to transplant centers located in the United States and around the world. The Company's headquarters facility in Oldsmar, Florida handles all aspects of its U.S.-based business operations including the processing and storage of specimens, including specimens obtained from certain of its licensees' customers. The specimens are stored in commercially available cryogenic storage equipment.

The unaudited consolidated financial statements including the Consolidated Balance Sheets as of May 31, 2019 and November 30, 2018, the related Consolidated Statements of Comprehensive Income (Loss) for the three and six months ended May 31, 2019 and May 31, 2018 , Cash Flows for the six months ended May 31, 2019 and May 31, 2018 and Stockholders' Deficit for the three and six months ended May 31, 2019 and May 31, 2018 have been prepared by Cryo-Cell International, Inc. and its subsidiaries ("the Company" or "Cryo-Cell") pursuant to the rules and regulations of the Securities and Exchange Commission for interim financial reporting. Certain financial information and note disclosures, which are normally included in annual financial statements prepared in accordance with accounting principles generally accepted in the United States of America, have been condensed or omitted pursuant to those rules and regulations. It is suggested that these consolidated financial statements be read in conjunction with the financial statements and notes thereto included in the Company's November 30, 2018 Annual Report on Form 10-K. In the opinion of management, all adjustments (which include only normal recurring adjustments) necessary to present fairly the financial position, results of operations, and changes in cash flows for all periods presented have been made. The results of operations for the three and six months ended May 31, 2019 are not necessarily indicative of the results expected for any interim period in the future or the entire year ending November 30, 2019.

Revenue Recognition

Effective December 1, 2018, the Company adopted Accounting Standards Codification ("ASC") Topic 606, Revenue from Contracts with Customers ("ASC 606"), using the modified retrospective transition method. The Company recognized the cumulative effect of applying the new revenue standard to all contracts with customers that were not completed as of December 1, 2018 as an adjustment to the opening balance of stockholders' deficit at the beginning of fiscal year 2019. The reported results for 2019 reflect the application of ASC 606 guidance while the reported results for 2018 were prepared under the guidance of ASC 605, *Revenue Recognition* (ASC 605). ASC 606 applies to all contracts with customers, except for contracts that are within the scope of other standards, such as leases, insurance, collaboration arrangements and financial instruments. ASC 606 also impacts certain other areas, such as the accounting for costs to obtain or fulfill a contract. ASC 606 also requires disclosure of the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers.

The adoption of ASC 606 did not have an impact on the amount of reported revenues with respect to the Company's product or service revenues. In connection with the adoption of ASC 606, the Company is required to capitalize certain contract acquisition costs consisting primarily of commissions paid when contracts are signed and amortize these costs on a systematic basis, consistent with the pattern of transfer of the storage services provided over time for which the asset relates. As of December 1, 2018, the Company capitalized in deposits and other assets, net, $329,231 in incremental contract acquisition costs related to sales commissions on prepaid storage contracts and reversed $18,408 of its variable consideration that the Company determined to be fully constrained, with a corresponding change in the opening balance of stockholders' deficit of $253,447, net of tax, of $94,192.

Under ASC 606, revenue is recognized when, or as, obligations under the terms of a contract are satisfied, which occurs when control of the promised services are transferred to the customers. Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring services to a customer ("transaction price").

At contract inception, if the contract is determined to be within the scope of ASC 606, the Company evaluates its contracts with customers using the five-step model: (1) identify the contract with the customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to separate performance obligations; and (5) recognize revenue when (or as) each performance obligation is satisfied. The Company evaluates its contracts for legal enforceability at contract inception and subsequently throughout the Company's relationship with its customers. If legal enforceability with regards to the rights and obligations exist for both the Company and the customer, then the Company has an enforceable contract and revenue recognition is permitted subject to the satisfaction of the other criteria. If, at the outset of an arrangement, the Company determines that a contract with enforceable rights and obligations does not exist, revenues are deferred until all criteria for an enforceable contract are met. The Company only applies the five-step model to contracts when it is probable that collection of the consideration that the Company is entitled to in exchange for the goods or services being transferred to the customer, will occur.

Contract modifications exist when the modification either creates new or changes in the existing enforceable rights and obligations. The Company's contracts are occasionally modified to account for changes in contract terms and conditions, which the Company refers to as an upgrade or downgrade. An upgrade occurs when a customer wants to pay for additional years of storage. A downgrade occurs when a customer originally entered into a long-term contract (such as twenty-one year or life-time plan) but would like to change the term to aone-year contract. Upgrade modifications qualify for treatment as a separate contract as the additional services are distinct and the increase in contract price reflects the Company's stand-alone selling price for the additional services and will be accounted for on a prospective basis. Downgrade modifications do not qualify for treatment as a separate contract as there is no increase in price over the original contract, thus failing the separate contract criteria. As such, the Company separately considers downgrade modifications to determine if these should be accounted for as a termination of the existing contract and creation of a new contract (prospective method) or as part of the existing contract (cumulative catch-up adjustment). ASC 606 requires that an entity account for the contract modification as if it were a termination of the existing contract, and the creation of a new contract, if the remaining goods or services are distinct from the goods or services transferred on or before the date of the contract modification. As the services after the modification were previously determined to be distinct, the Company concluded that downgrade modifications qualify under this method and will be accounted for on a prospective basis. Although contract modifications do occur, they are infrequent.

Performance Obligations

At contract inception, the Company assesses the goods and services promised in the contracts with customers and identifies a performance obligation for each promise to transfer to the customer a good or service (or bundle of goods or services) that is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied. To identify the performance obligations, the Company considers all of the goods or services promised in the contract regardless of whether they are explicitly stated or are implied by customary business practices. The Company determined that the following distinct goods and services represent separate performance obligations involving the sale of its umbilical cord blood product:

- Collection and processing services
- Storage services
- Public cord blood banking
- License and royalties
- Sale of PrepaCyte CB product

a) Processing and Storage Fees

Processing and storage fees include the Company providing umbilical cord blood and tissue cellular processing and cryogenic cellular storage for private use. Revenues recognized for the cellular processing and cryogenic cellular storage represent sales of the umbilical cord blood stem cells program to customers and income from licensees who are selling the umbilical cord blood stem cells program to customers outside the United States.

The Company recognizes revenue from processing fees at the point in time of the successful completion of processing and recognizes storage fees over time, which is ratably over the contractual storage period as well as other income from royalties paid by licensees related to long-term storage contracts which the Company has under license agreements. Contracted storage periods are annual, twenty-one years and life-time. The life-time storage plan is based on a life expectancy of 81 years, which is the current estimate by the Center for Disease Control for United States women's life expectancy and concluded that additional data analysis would result in an immaterial difference in revenue. Deferred revenue on the accompanying consolidated balance sheets includes the portion of the annual, the twenty-one-year and the life-time storage fees that are being recognized over the contractual storage period as well as royalties received from foreign licensees relating to long-term storage contracts for which the Company has future obligations under the license agreement. The Company classifies deferred revenue as current if the Company expects to recognize the related revenue over the next 12 months from the balance sheet date.

Significant financing

When determining the transaction price of a contract, an adjustment is made if payment from a customer occurs either significantly before or significantly after performance, resulting in a significant financing component. For all plans being annual, twenty-one years and life-time, the storage fee is paid at the beginning of the storage period (prepaid plans). Alternatively, the Company offers payment plans (including a stated service fee) for customers to pay over time for a period of one to twenty-four plus months. The one-time plan includes the collection kit, processing and testing, return medical courier service and twenty-one years of pre-paid storage fees. The life-time plan includes the collection kit, processing and testing, return medical courier service and pre-paid storage fees for the life of the customer. The Company concluded that a significant financing component is not present within either the prepaid or overtime payment plans. The Company has determined that the twenty-one year and life-time prepayment options do not include a significant financing component as the payment terms were structured primarily for reasons other than the provision of financing and to maximize profitability.

The Company has determined that the majority of plans that are paid over time are paid in less than a year. When considered over a twenty-four-month payment plan, the difference between the cash selling price and the consideration paid is nominal. As such, the Company believes that its payment plans do not include significant financing components as they are not significant in the aggregate when considered in the context of all contracts entered into nor significant at the individual contract level.

The Company elected to apply the practical expedient where the Company does not need to assess whether a significant financing component exists if the period between when it performs its obligations under the contract and when the customer pays is one year or less.

As of May 31, 2019, the total aggregate transaction price allocated to the unsatisfied performance obligations was recorded as deferred revenue amounting to $30,500,610, which will be recognized ratably on a straight-line basis over the contractual period of which $8,516,593 will be recognized over the next twelve months.

Variable consideration

In December 2005, the Company began providing its customers that enrolled after December 2005 a payment warranty under which the Company agrees to pay $50,000 to its client if the umbilical cord blood product retrieved is used for a stem cell transplant for the donor or an immediate family member and fails to engraft, subject to various restrictions. Effective February 1, 2012, the Company increased the $50,000 payment warranty to a $75,000 payment warranty to all of its new clients. Effective June 1, 2017, the Company increased the payment warranty to $100,000 to all new clients who choose the premium processing method, Prepacyte CB. Additionally, under the Cryo-Cell CaresTM program, the Company will pay $10,000 to the client to offset personal expenses if the umbilical cord blood product is used for bone marrow reconstitution in a myeloblative transplant procedure. The product warranty and the Cryo-Cell Cares program are available to clients who enroll under this structure for as long as the specimen is stored with the Company. In the processing and storage agreements, the Company provides limited rights which are offered to customers automatically upon contract execution. The Company has determined that the payment warranty represents variable consideration payable to the customer.

Based on the Company's historical experience to date, the Company has determined the payment warranty to be fully constrained under the most likely amount method. Consequently, the transaction price does not currently reflect any expectation of service level credits. At the end of each reporting period, the Company will update the estimated transaction price related to the payment warranty including updating its assessment of whether an estimate of variable consideration is constrained to represent faithfully the circumstances present at the end of the reporting period and the changes in circumstances during the reporting period.

Allocation of transaction price

As the Company's processing and storage agreements contain multiple performance obligations, ASC 606 requires an allocation of the transaction price based on the estimated relative standalone selling prices of the promised services underlying each performance obligation. The Company has selected an adjusted market assessment approach to estimate the stand-alone selling prices of the processing services and storage services and concluded that the published list price is the price that a customer in that market would be willing to pay for those goods or services. The Company also considered the fact that all customers are charged the list prices current at the time of their enrollment where the Company has separately stated list prices for processing and storage.

Costs to Obtain a Contract

Prior to the adoption of ASC 606, the Company expensed in the period, all commissions paid to its internal and external sales representatives the Company employs and to its customers for generating new contracts. With the adoption of ASC 606 as of December 1, 2018, the Company capitalizes commissions that are incremental in obtaining customer contracts and the costs incurred to fulfill a customer contract if those costs are not within the scope of another topic within the accounting literature and meet the specified criteria. These costs are deferred in other current or long-term assets and are expensed to selling, general and administrative expenses as the Company satisfies the performance obligations by transferring the service to the customer. These assets will be periodically assessed for impairment. As a practical expedient, the Company elected to recognize the incremental costs of obtaining its annual contracts as an expense when incurred, as the amortization period of the asset recognized would have been one year.

The Company has determined that payments under the Company'srefer-a-friend program ("RAF program") are incremental costs of obtaining a contract as they provide an incentive for existing customers to refer new customers to the Company and is referred to as commission. The amount paid under the RAF program (either through issuance of credits to customers or check payments) which exceeds the typical commission payment to a sales representative is recorded as a reduction to revenue under ASC 606. During the three and six months ended May 31, 2019, the Company recorded $7,826 and $14,469, respectively, in commission payments to customers under the RAF program as a reduction to revenue. As of December 1, 2018, the Company capitalized $329,231 in incremental contract acquisition costs related to contracts that were not completed, net of the cumulative amortization expense of $66,533 through the adoption date. The Company did not record any impairment losses in relation to costs capitalized. For the three and six months ended May 31, 2019, the Company capitalized additional contract acquisition costs of $20,954 and $23,534, respectively, net of amortization expense.

b) Public banking revenue

The Company sells and provides units not likely to be of therapeutic use for research to qualified organizations and companies operating under Institutional Review Board approval. Control is transferred at the point in time when the shipment has occurred, at which time, the Company records revenue.

c) Licensee and royalty income

Licensee and royalty income consist of royalty income earned on the processing and storage of cord blood stem cell specimens by an affiliate where the Company has a License and Royalty Agreement. The Company records revenue from processing and storage of specimens and pursuant to agreements with licensees. The Company records the royalty revenue in same period that the related processing and storage is being completed by the affiliate.

d) Product Revenue

The Company records revenue from the sale of the PrepaCyte CB product line upon shipment of the product to the Company's customers.

e) Shipping and handling

The Company elected to apply the practical expedient to account for shipping and handling activities performed after the control of a good has been transferred to the customer as a fulfillment cost. Shipping and handling costs that the Company incurs are therefore expensed and included in cost of sales.

The adoption of ASC 606 did not have an impact on the timing of revenue recognition for any of the Company's revenue streams.

Disaggregation of Revenue

The following table provides information about disaggregated revenue by products and services:

	Three months ended	
	May 31, 2019	May 31, 2018
Processing and storage fees	$ 7,679,869	$ 6,295,455
Public banking revenue	234,115	—
Licensee and royalty income	201,828	203,159
Product revenue	12,040	26,849
	$ 8,127,852	$ 6,525,463

	Six months ended	
	May 31, 2019	May 31, 2018
Processing and storage fees	$15,014,896	$12,495,522
Public banking revenue	368,480	—
Licensee and royalty income	201,828	203,159
Product revenue	37,760	54,900
	$15,622,964	$12,753,581

The following table provides information about assets and liabilities from contracts with customers:

	May 31, 2019	At Adoption
Contract assets (sales commissions)	$ 365,086	$ 329,231
Accounts receivables	$ 5,758,673	$ 5,867,335
Short-term contract liabilities (deferred revenue)	$ 8,516,593	$ 8,365,284
Long-term contract liabilities (deferred revenue)	$21,984,017	$20,317,231

The Company, in general, requires the customer to pay for processing and storage services at the time of processing. Contract assets include deferred contract acquisition costs, which will be amortized along with the associated revenue. Contract liabilities include payments received in advance of performance under the contract and are realized with the associated revenue recognized under the contract. Accounts receivable consists of amounts due from clients that have enrolled and processed in the umbilical cord blood stem cell processing and storage programs related to renewals of annual plans and amounts due from license affiliates, and sublicensee territories. The Company did not have asset impairment charges related to contract assets in the three and six months ended May 31, 2019.

The following table presents changes in the Company's contract assets and liabilities during the six months ended May 31, 2019:

	Balance at December 1, 2018	Additions	Deductions	Balance at May 31, 2019
Contract assets (sales commissions)	$ 329,231	$ 44,488	$ (8,633)	$ 365,086
Accounts receivables	$ 5,867,335	$18,471,851	$(18,580,513)	$ 5,758,673
Contract liabilities (deferred revenue)	$ 28,682,515	$ 9,249,051	$ (7,430,956)	$30,500,610

Accounts Receivable

Accounts receivable consist of uncollateralized amounts due from clients that have enrolled and processed in the umbilical cord blood stem cell processing and storage programs and amounts due from license affiliates, and sublicensee territories. Accounts receivable are due within 30 days and are stated at amounts net of an allowance for doubtful accounts. Accounts outstanding longer than the contractual payment terms are considered past due. The Company determines its allowance by considering the length of time accounts receivable are past due, the Company's previous loss history, and the client's current ability to pay its obligations. Therefore, if the financial condition of the Company's clients were to deteriorate beyond the estimates, the Company may have to increase the allowance for doubtful accounts which could have a negative impact on earnings. The Company writes-off accounts receivable when they become uncollectible, and payments subsequently received on such receivables are credited to the allowance for doubtful accounts.

Inventories

As part of the Asset Purchase Agreement, (see Note 2), the Company has an agreement with Duke University ("Duke") expiring on January 31, 2020 for Duke to receive, process, and store cord blood units for the Public Cord Blood Bank ("Duke Services"). As of May 31, 2019, the Company had 5,977 cord blood units in inventory. These units are valued at the lower of cost or net realizable value. Costs include the cost of collecting, transporting, processing and storing the unit. Costs charged by Duke for their Duke Services are based on a monthly fixed fee for storing 12 blood units per month. The Company computes the cost per unit for these Duke Services and capitalizes the unit cost on all blood units shipped and stored in a year at Duke. If the Company ships and stores less than 144 blood units with Duke in a one-year period, a portion of these fixed costs are expensed and included in facility operating costs. Certain costs of collection incurred, such as the cost of collection staff and transportation costs incurred to ship Public Bank units from hospitals to the stem cell laboratory are allocated to banked units based on an average cost method. Costs incurred related to cord blood units that cannot be sold are expensed in the period incurred and are included in facility operating costs in the accompanying statements of operations. The Company records a reserve against inventory for units which have been processed and frozen but may not ultimately become distributable (see Note 4). Due to changes in sales trends and estimated recoverability of cost capitalized into inventory, an impairment charge of $2,332,763 was recognized during the three and six months ended May 31, 2019 to reduce inventory from cost to net realizable value and is included in the accompanying consolidated statements of comprehensive income (loss).

Income Taxes

Deferred income tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred income tax assets and liabilities are measured using enacted tax rates expected to be recovered or settled. The Company has recorded a valuation allowance of $1,634,000 and $1,634,000 as of May 31, 2019 and November 30, 2018, as the Company does not believe it is "more likely than not" that all future income tax benefits will be realized. When the Company changes its determination as to the amount of deferred income tax assets that can be realized, the valuation allowance is adjusted with a corresponding impact to income tax expense in the period in which such determination is made. The ultimate realization of the Company's deferred income tax assets depends upon generating sufficient taxable income prior to the expiration of the tax attributes. In assessing the need for a valuation allowance, the Company projects future levels of taxable income. This assessment requires significant judgment. The Company examines the evidence related to the recent history of losses, the economic conditions in which the Company operates and forecasts and projections to make that determination.

The Company recorded U.S. income taxes of approximately $29,000 and $294,000, for the three months ended May 31, 2019 and May 31, 2018, respectively. The Company recorded U.S. income taxes of approximately $134,000 and $3,497,000 for the six months ended May 31, 2019 and May 31, 2018, respectively. Included in the $3,497,000 tax expense for the six months ended May 31, 2018 is approximately $2,985,000 of expense related to the reduction of the federal tax rate to 21% as of January 1, 2018 as a result of the Tax Cuts and Jobs Act that was signed into law on December 22, 2017. The decrease in the federal tax rate caused a decrease in the Company's deferred tax asset which resulted in an increase in the income tax expense.

The Company records foreign income taxes withheld from installment payments ofnon-refundable up-front license fees and royalty income earned on the processing and storage of cord blood stem cell specimens in geographic areas where the Company has license agreements. The Company recognized approximately $22,000 and $22,000 for the three months ended May 31, 2019 and 2018, respectively, of foreign income tax expense. The Company recognized approximately $22,000 and $22,000 for the six months ended May 31, 2019 and 2018, respectively, of foreign income tax expense. Foreign income tax expense is included in income tax expense in the accompanying consolidated statements of comprehensive income (loss).

The Company recognizes the financial statement benefit of a tax position only after determining that the relevant tax authority would more likely than not sustain the position following an audit. For tax positions meeting the more-likely-than-not threshold, the amount recognized in the financial statements is the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate settlement with the relevant tax authority. Increases or decreases to the unrecognized tax benefits could result from management's belief that a position can or cannot be sustained upon examination based on subsequent information or potential lapse of the applicable statute of limitation for certain tax positions.

The Company recognizes interest and penalties related to uncertain tax positions in income tax expense. For the three and six months ended May 31, 2019 and May 31, 2018, the Company had no provisions for interest or penalties related to uncertain tax positions.

Long-Lived Assets

The Company evaluates the realizability of its long-lived assets, which requires impairment losses to be recorded on long-lived assets used in operations when indicators of impairment, such as reductions in demand or when significant economic slowdowns are present. Reviews are performed to determine whether the carrying value of an asset is impaired, based on comparisons to undiscounted expected future cash flows. If this comparison indicates that there is impairment and carrying value is in excess of fair value, the impaired asset is written down to fair value, which is typically calculated using: (i) quoted market prices or (ii) discounted expected future cash flows utilizing a discount rate. The Company did not note any impairment for the three and six months ended May 31, 2019 and 2018.

Goodwill

Goodwill represents the excess of the purchase price of the assets acquired from Cord:Use (Note 2) over the estimated fair value of the net tangible and identifiable assets acquired. The annual assessment of the reporting unit is performed as of September 1st, and an assessment is performed at other times if an event occurs or circumstances change that would more likely than not reduce the fair value of the asset

below its carrying value. Step one of the impairment assessment compares the fair value of the reporting unit to its carrying value and if the fair value exceeds its carrying value, goodwill is not impaired. If the carrying value exceeds the fair value, the implied fair value of goodwill is compared to the carrying value of goodwill. If the implied fair value exceeds the carrying value then goodwill is not impaired; otherwise, an impairment loss would be recorded by the amount the carrying value exceeds the implied fair value. As of May 31, 2019, and November 30, 2018, goodwill, is reflected on the consolidated balance sheets at $1,941,411 and $1,941,411.

Stock Compensation

As of May 31, 2019, the Company has two stock-based compensation plans, which are described in Note 8 to the unaudited consolidated financial statements. The Company's stock-based employee compensation plan became effective December 1, 2011 as approved by the Board of Directors and approved by the stockholders at the 2012 Annual Meeting. The Company recognized approximately $87,000 and $156,000 for the three months ended May 31, 2019 and May 31, 2018, respectively, of stock compensation expense. The Company recognized approximately $226,000 and $268,000 for the six months ended May 31, 2019 and May 31, 2018 respectively, of stock compensation expense. The Company reversed $444,000 of stock compensation expense during the three months ended May 31, 2018 as the Co-CEOs each opted to receive a lump sum cash payment in lieu of 30,000 shares of earned common stock pursuant to the terms of their Employment Agreements. The reversal had no impact on the accompanying consolidated statements of comprehensive income (loss) as other compensation expense was recognized to offset the reversal.

The Company recognizes stock-based compensation based on the fair value of the related awards. Under the fair value recognition guidance of stock-based compensation accounting rules, stock-based compensation expense is estimated at the grant date based on the fair value of the award and is recognized as expense over the requisite service period of the award. The fair value of service-based vesting condition and performance-based vesting condition stock option awards is determined using the Black-Scholes valuation model. For stock option awards with only service-based vesting conditions and graded vesting features, the Company recognizes stock compensation expense based on the graded-vesting method. To value awards with market-based vesting conditions the Company uses a binomial valuation model. The Company recognizes compensation cost for awards with market-based vesting conditions on a graded-vesting basis over the derived service period calculated by the binomial valuation model. The use of these valuation models involves assumptions that are judgmental and highly sensitive in the determination of compensation expense and include the expected life of the option, stock price volatility, risk-free interest rate, dividend yield, exercise price, and forfeiture rate. Forfeitures are estimated at the time of valuation and reduce expense ratably over the vesting period.

The estimation of stock awards that will ultimately vest requires judgment and to the extent that actual results or updated estimates differ from current estimates, such amounts will be recorded as a cumulative adjustment in the period they become known. The Company considered many factors when estimating forfeitures, including the recipient groups and historical experience. Actual results and future changes in estimates may differ substantially from current estimates.

The estimation of stock awards that will ultimately vest requires judgment and to the extent that actual results or updated estimates differ from current estimates, such amounts will be recorded as a cumulative adjustment in the period they become known. The Company considered many factors when estimating forfeitures, including the recipient groups and historical experience. Actual results and future changes in estimates may differ substantially from current estimates.

The Company issues performance-based equity awards which vest upon the achievement of certain financial performance goals, including revenue and income targets. Determining the appropriate amount to expense based on the anticipated achievement of the stated goals requires judgment, including forecasting future financial results. The estimate of the timing of the expense recognition is revised periodically based on the probability of achieving the required performance targets and adjustments are made as appropriate. The cumulative impact of any revision is reflected in the period of the change. If the financial performance goals are not met, the award does not vest, so no compensation cost is recognized and any previously stock-recognized stock-based compensation expense is reversed.

The Company issues equity awards with market-based vesting conditions which vest upon the achievement of certain stock price targets. If the awards are forfeited prior to the completion of the derived service period, any recognized compensation is reversed. If the awards are forfeited after the completion of the derived service period, the compensation cost is not reversed, even if the awards never vest.

Fair Value of Financial Instruments

Management uses a fair value hierarchy, which gives the highest priority to quoted prices in active markets. The fair value of financial instruments is estimated based on market trading information, where available. Absent published market values for an instrument or other assets, management uses observable market data to arrive at its estimates of fair value. Management believes that the carrying amount of cash and cash equivalents, accounts receivable, accounts payable and accrued expenses approximate fair value due to the short-term nature of these instruments. The Company believes that the fair value of its Revenue Sharing Agreements (”RSA”) liability recorded on the balance sheet is between the recorded book value and up to the Company’s previous settlement experience, due to the various terms and conditions associated with each RSA.

The Company uses an accounting standard that defines fair value as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, the standard establishes a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. The three levels of inputs used to measure fair value are as follows:

Level 1	Quoted prices in active markets for identical assets or liabilities.
Level 2	Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data.
Level 3	Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

The following table summarizes the financial assets and liabilities measured at fair value on a recurring basis as of May 31, 2019 and November 30, 2018, respectively, segregated among the appropriate levels within the fair value hierarchy:

Description	Fair Value at May 31, 2019	Fair Value Measurements at May 31, 2019 Using Level 1	Level 2	Level 3
Assets:				
Marketable securities	$ 839,809	$839,809	—	—
Total	$ 839,809	$839,809	—	—
Liabilities:				
Contingent consideration	$ 3,612,048			
Total	$ 3,612,048			
Contingent Consideration:				
Beginning Balance as of November 30, 2018	$ 4,282,975			
Subtractions – Cord:Use earnout	—			
Fair value adjustment as of May 31, 2019	(670,927)			
Ending balance as of May 31, 2019	$ 3,612,048			

Description	Fair Value at November 30, 2018	Fair Value Measurements at November 30, 2018 Using Level 1	Level 2	Level 3
Assets:				
Trading Securities	$ 68,816	$ 68,816	—	—
Available-for-sale	806,873	806,873	—	—
	$ 875,689	$875,689	—	—
Liabilities:				
Contingent consideration	$ 4,282,975	$ —	—	$4,282,975
Total	$ 4,282,975	$ —	—	$4,282,975

The following is a description of the valuation techniques used for these items, as well as the general classification of such items pursuant to the fair value hierarchy:

Trading securities – Fair values for these investments are based on quoted prices in active markets and are therefore classified within Level 1 of the fair value hierarchy. For trading securities, there was $9,016 in unrealized holding gain and loss recorded in other income (loss) and expense on the accompanying consolidated statements of comprehensive income (loss) for the three months ended May 31, 2018. For trading securities, there was ($25,208) in unrealized holding loss recorded in other income and expense on the accompanying consolidated statements of comprehensive income (loss) for the six months ended May 31, 2018.

Available-for-sale securities - These investments are classified as available for sale and consist of marketable equity securities that we intend to hold for an indefinite period of time. Investments are stated at fair value and unrealized holding gains and losses are reported as a component of accumulated other comprehensive income until realized. Realized gains or losses on disposition of investments are computed using the first in, first out (FIFO) method and reported as income or loss in the period of disposition in the accompanying consolidated statements of comprehensive income (loss). For available-for-sale securities, there was $1,254 in unrealized holding gain, net of tax, reported as comprehensive income on the accompanying statements of comprehensive income (loss) for the three months ended May 31, 2018. For available-for-sale securities, there was $120,000 in unrealized holding gain, net of tax, respectively, reported as a component of comprehensive income on the accompanying consolidated statements of comprehensive income (loss) for the six-month period ended May 31, 2018.

Marketable securities - Effective December 1, 2018, the Company adopted ASU2016-01, which requires equity securities with readily determinable fair values to be measured at fair value with the changes in fair value recognized through net income. Such securities are no longer reflected as trading or available-for-sale but are noted as marketable securities. As a result of this accounting change, in the first quarter of 2019, the Company recognized a cumulative-effect adjustment from accumulated other comprehensive income to retained earnings of approximately $341,000 in the consolidated statements of stockholders' deficit as of the date of adoption. Prior periods have not been restated for the impact of this accounting change. There was $31,000 and ($36,000) in unrealized holding gain (losses), respectively, recorded in other income and expense on the accompanying consolidated statements of comprehensive income (loss) for the three and six months ended May 31, 2019, respectively.

Contingent consideration - The contingent consideration is the earnout that Cord:Use is entitled to from the Company's sale of the public cord blood inventory from and after closing. See Note 2. The estimated fair value of the contingent earnout was determined using a Monte Carlo analysis examining the frequency and mean value of the resulting earnout payments. The resulting value captures the risk associated with the form of the payout structure. The risk-neutral method is applied, resulting in a value that captures the risk associated with the form of the payout structure and the projection risk. The carrying amount of the liability may fluctuate significantly and actual amounts paid may be materially different from the estimated value of the liability.

Product Warranty and Cryo-Cell Cares™ Program

In December 2005, the Company began providing its customers that enrolled after December 2005 a payment warranty under which the Company agrees to pay $50,000 to its client if the umbilical cord blood product retrieved is used for a stem cell transplant for the donor or an immediate family member and fails to engraft, subject to various restrictions. Effective February 1, 2012, the Company increased the $50,000 payment warranty to a $75,000 payment warranty to all of its new clients. Effective June 1, 2017, the Company increased the payment warranty to $100,000 to all new clients who choose the premium processing method, Prepacyte CB. Additionally, under the Cryo-Cell CaresTM program, the Company will pay $10,000 to the client to offset personal expenses if the umbilical cord blood product is used for bone marrow reconstitution in a myeloblative transplant procedure. The product warranty and the Cryo-Cell Cares program are available to clients who enroll under this structure for as long as the specimen is stored with the Company. The Company has not experienced any claims under the warranty program nor has it incurred costs related to these warranties.

As discussed above, the Company has determined that the payment warranty represents variable consideration payable to the customer. Upon the adoption of ASC 606, the Company has concluded the payment warranty be fully constrained under the most likely amount method, therefore, the transaction price does not reflect any expectation of service level credits at May 31, 2019. At the end of each reporting period, the Company shall update the estimated transaction price related to the payment guarantee including updating its assessment of whether an estimate of variable consideration is constrained to represent faithfully the circumstances present at the end of the reporting period and the changes in circumstances during the reporting period.

Recently Issued Accounting Pronouncements

In August 2018, the FASB issued Accounting Standards Update No. 2018-15, *Intangibles – Goodwill and Other Internal-Use Software (Topic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract.* This update addresses how a customer should account for the costs of implementing a cloud computing service arrangement (also referred to as a "hosting arrangement"). Entities should account for costs associated with implementing a cloud computing arrangement that is considered a service contract in the same way as accounting for implementation costs incurred to develop or obtain software for internal use using the guidance in Topic 350-40. The amendments address when costs should be capitalized rather than expensed, the term to use when amortizing capitalized costs, and how to evaluate the unamortized portion of these capitalized implementation costs for impairment. The ASU also includes guidance on how to present implementation costs in the financial statements and creates additional disclosure requirements. The guidance is effective for annual periods beginning after December 15, 2019, and interim periods within that reporting period. The Company is currently evaluating the effect that the updated standard will have on our financial statements.

In June 2018, the FASB issued Accounting Standards Update No. 2018-07, *Compensation – Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting.* This update simplifies the accounting for nonemployee share-based payment transactions by expanding the scope of Topic 718, Compensation-Stock Compensation, to include share-based payment transactions for acquiring goods and services from nonemployees. The guidance is effective for annual periods beginning after December 15, 2018, and interim periods within that reporting period. The Company is currently evaluating the effect that the updated standard will have on our financial statements.

In February 2018, the FASB issued Accounting Standards Update No. 2018-02*, Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*. This update relates to the impacts of the tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Act"). The guidance permits the reclassification of certain income tax effects of the Act from Other Comprehensive Income to Retained Earnings (stranded tax effects). The guidance also requires certain new disclosures. The guidance is effective for annual periods beginning after December 15, 2018, and interim periods within that reporting period. Early adoption is permitted. Entities may adopt the guidance using one of two transition methods; retrospective to each period (or periods) in which the income tax effects of the Act related to the items remaining in Other Comprehensive Income are recognized or at the beginning of the period of adoption. The Company is currently evaluating the impact that the guidance may have on its Consolidated Financial Statements.

In January 2017, the FASB issued Accounting Standards Update No. 2017-04, *Intangibles – Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*. The update removes Step 2 from the goodwill impairment test. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019, although early adoption is permitted. The Company is currently evaluating the effect that the updated standard will have on our financial statements.

In February 2016, the FASB issued Accounting Standards UpdateNo. 2016-02, *Leases (Topic 842)*. This update requires organizations that lease assets with lease terms of more than 12 months to recognize assets and liabilities for the rights and obligations created by those leases on their balance sheets. It also requires new qualitative and quantitative disclosures to help investors and other financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018, with early adoption permitted. The Company is currently evaluating the effect that the updated standard will have on its consolidated balance sheets and related disclosures.

Note 2 – Acquisition

On June 11, 2018, Cryo-Cell completed its acquisition of substantially all of the assets (the "Cord Purchase") of Cord:Use Cord Blood Bank, Inc., a Florida corporation ("Cord:Use"), in accordance with the definitive Asset Purchase Agreement between Cryo-Cell and Cord:Use (the "Purchase Agreement"), including without limitation Cord:Use's inventory of public cord blood units existing as of the closing date (the "Public Cord Blood Inventory") and Cord:Use's shares of common stock of Tianhe Stem Cell Biotechnologies, Inc., an Illinois corporation (the "Tianhe Capital Stock"). Cord:Use was in the business of public and private cord blood and tissue, collection, processing, storage and banking.

The aggregate consideration payable at closing under the Purchase Agreement was $14,000,000, with $10,500,000 paid in cash and the balance paid through the delivery to Seller of 465,426 shares of Cryo-Cell's common stock, par value $0.01 per share ("Common Stock"), at $7.52 per share. In addition, Cryo-Cell assumed certain limited liabilities incurred by Cord:Use in connection with its business that were unpaid as of the closing date and that directly relate to the services to be provided after closing by Cryo-Cell. Cryo-Cell also assumed certain of Cord:Use's contracts and the obligations arising therefrom after the closing.

Additionally, Cord:Use is entitled to an earnout from Cryo-Cell's sale of the public cord blood inventory from and after closing. Each calendar year after the closing, Cryo-Cell will pay to Cord:Use 75% of all gross revenues, net of any returns, received from the sale of public cord blood inventory in excess of $500,000. Such payments will be made quarterly, within 30 days of the end of the last month of each calendar quarter, until the public cord blood inventory is exhausted. In addition, each calendar year after closing, until the public cord blood inventory is exhausted, for every $500,000 of retained gross revenues, net of any returns, received and retained by Cryo-Cell in excess of the initial $500,000 retained by Cryo-Cell during such year, Cryo-Cell will deliver $200,000 worth of Cryo-Cell Common stock to Cord:Use, up to an aggregate value of $5,000,000. Cord:Use is also entitled to a portion of the gross profits generated, or deemed to have been generated, by Cryo-Cell from its ownership of the Tianhe Capital Stock.

The Company incurred $580,000 in costs associated with the acquisition of Cord:Use.

The following summarizes the fair value of the consideration of the Acquisition as of the purchase date:

Consideration	
Cash	$10,500,000
Cryo-Cell common stock	3,500,000
Cord blood inventory earnout	4,698,255
Consideration	$18,698,255

The following summarizes the preliminary allocation of the total purchase price for the Acquisition:

Accounts receivable	$ 188,019
Inventory	16,037,957
Prepaid expenses	68,867
Property and equipment	568,407
Other asset - Tiahne capital stock	308,000
Brand	31,000
Customer relationships	960,000
Total identifiable net assets acquired	18,162,250
Less: Deferred revenue	(1,405,406)
Goodwill	1,941,411
Total	$18,698,255

The Company has not completed its assignment of goodwill to the segment reporting units. Goodwill includes the fair value of the assembled workforce. The fair value of the assembled workforce was estimated by applying a cost approach, representing a level 2 measurement. The goodwill is not deductible for income tax purposes.

The property and equipment are stated at an estimate of fair value.

The Tiahne capital stock is an investment that is valued based on fair value. Cord:Use had a supply and equity participation agreement with Tiahne who is engaged in medical and life science research that involves the use of stem cells derived from umbilical cord blood units in clinical trials for humans.

The fair value of the company brand and customer relationships were estimated by applying an income approach, representing a level 3 measurement. The fair value estimates are based on (1) an assumed discount rate of 19%, (2) long-term sustainable growth rate of 3%, (3) market royalty rate of 1% and (4) one and thirty-year lives for the brand and customer relationships, respectively.

The fair values of the assets acquired includes public cord blood banking inventory of $16,037,957 which the Company expects to sell to outside customers. The Company also acquired accounts receivable of $188,019 and prepaid expenses of $68,867.

The fair values of the customer relationships reflect the anticipated cash flows over their expected lives.

The fair value of deferred revenue is valued based on the cost method. Deferred revenues arepre-payment fees for future storage of umbilical cord blood and/or cord tissue specimens. The short- and long-term deferred revenue is $330,508 and $1,074,898, respectively.

The valuations are not final and are subject to revision for a period not to exceedone-year after the acquisition date as information relative to the acquisition date fair values become available.

Unaudited Pro forma Results

The following table provides the Company’s consolidated unaudited pro forma revenues, net income per basic and diluted common share had the results of the acquired businesses’ operations been included in its operations commencing on December 1, 2016, based on available information related to the respective operations. This proforma information presented is not necessarily indicative either of the

combined results of operations that actually would have been realized by the Company had the acquisition been consummated at the beginning of the period for which the pro forma information is presented, or of future results, and does not account for any operation improvements to be made by the Company post-acquisition.

	Three months ended May 31, 2018	Six months ended May 31, 2018
Revenue	$ 7,610,357	$ 14,293,369
Net income (loss)	($ 569,088)	($ 4,049,426)
Earnings (loss) per share:		
Basic	($ 0.07)	($ 0.53)
Diluted	($ 0.07)	($ 0.53)

Note 3– Segment Reporting

During the third quarter of fiscal 2018, the Company purchased the assets and assumed contracts that Cord:Use used in the operation of its cord blood business (See Note 2). The Company evaluated and determined that this acquisition qualifies as a separate segment.

The Company is organized in three reportable segments:

1. The cellular processing and cryogenic storage of umbilical cord blood and cord tissue stem cells for family use. Revenue is generated from the initial processing and testing fees and the annual storage fees charged each year for storage (the "Umbilical cord blood and cord tissue stem cell service").
2. The manufacture of Prepacyte® CB units, the processing technology used to process umbilical cord blood stem cells. Revenue is generated from the sales of the Prepacyte® CB units (the "Prepacyte®-CB").
3. The cellular processing and cryogenic storage of umbilical cord blood stem cells for public use. Revenue is generated from the sale of the cord blood units to the National Marrow Donor Program ("NMDP"), which distributes the cord blood units to transplant centers located in the United States, and around the world.

The following table shows, by segment: net revenue, cost of sales, depreciation and amortization, operating profit, interest expense, and income tax (expense) benefit for the three and six months ended May 31, 2019 and May 31, 2018:

	For the three months ended May 31, 2019	For the three months ended May 31, 2018
Net revenue		
Umbilical cord blood and cord tissue stem cell service	$ 7,881,697	$ 6,498,614
Prepacyte®-CB	12,040	26,849
Public cord blood banking	234,115	—

Total net revenue	$ 8,127,852	$ 6,525,463
Cost of sales		
Umbilical cord blood and cord tissue stem cell service	$ 2,218,926	$ 1,726,259
Prepacyte®-CB	4,621	50,879
Public cord blood banking	404,744	—
Total cost of sales	$ 2,628,291	$ 1,777,138
Depreciation and amortization		
Umbilical cord blood and cord tissue stem cell service	$ 46,269	$ 27,185
Prepacyte®-CB	9,065	9,063
Public cord blood banking	—	—
Total depreciation and amortization	$ 55,334	$ 36,248
Operating income		
Umbilical cord blood and cord tissue stem cell service	$ 3,001,600	$ 1,182,829
Prepacyte®-CB	(1,644)	(33,093)
Public cord blood banking	(2,503,392)	—
Total operating income	$ 496,564	$ 1,149,736
Interest expense		
Umbilical cord blood and cord tissue stem cell service	$ 424,287	$ 304,094
Prepacyte®-CB	—	—
Public cord blood banking	—	—
Total interest expense	$ 424,287	$ 304,094
Income tax expense		
Umbilical cord blood and cord tissue stem cell service	$ 50,943	$ 315,921
Prepacyte®-CB	—	—
Public cord blood banking	—	—
Total income tax expense	$ 50,943	$ 315,921

	For the six months ended May 31, 2019	For the six months ended May 31, 2018
Net revenue		
Umbilical cord blood and cord tissue stem cell service	$15,216,724	$12,698,681
Prepacyte®-CB	37,760	54,900
Public cord blood banking	368,480	—
Total net revenue	$15,622,964	$12,753,581
Cost of sales		
Umbilical cord blood and cord tissue stem cell service	$ 4,257,530	$ 3,281,581
Prepacyte®-CB	164,627	97,065
Public cord blood banking	672,361	—
Total cost of sales	$ 5,094,518	$ 3,378,646

Depreciation and amoritzation		
Umbilical cord blood and cord tissue stem cell service	$ 94,186	$ 54,666
Prepacyte®-CB	18,128	18,127
Public cord blood banking	—	—
Total depreciation and amortization	$ 112,314	$ 72,793
Operating income		
Umbilical cord blood and cord tissue stem cell service	$ 4,131,863	$2,197,165
Prepacyte®-CB	(144,993)	(60,292)
Public cord blood banking	(2,636,644)	—
Operating income	$ 1,350,226	$2,136,873
Interest expense		
Umbilical cord blood and cord tissue stem cell service	$ 831,212	$ 585,071
Prepacyte®-CB	—	—
Public cord blood banking	—	—
Total interest expense	$ 831,212	$ 585,071
Income tax expenses		
Umbilical cord blood and cord tissue stem cell service	$ 155,610	$3,518,588
Prepacyte®-CB	—	—
Public cord blood banking	—	—
Total income taxes	$ 155,610	$3,518,588

The following table shows the assets by segment as of May 31, 2019 and November 30, 2018:

	As of May 31, 2019	As of November 30, 2018
Assets		
Umbilical cord blood and cord tissue stem cell service	$ 27,155,586	$ 26,239,260
Prepacyte®-CB	241,112	319,802
Public cord blood banking	13,492,687	15,831,081
Total assets	$ 40,889,385	$ 42,390,143

Note 4 – Inventory

Inventory is comprised of public cord blood banking specimens, collection kits, finished goods,work-in-process and raw materials. Collection kits are used in the collection and processing of umbilical cord blood and cord tissue stem cells, finished goods include products purchased or assumed for resale and for the use in the Company's processing and storage service. Inventory in the Public Cord Blood Bank includes finished goods

that are specimens that are available for resale. The Company considers inventory in the Public Cord Blood Bank that has not completed all testing to determine viability to be work in process. The components of inventory at May 31, 2019 and November 30, 2018 are as follows:

	May 31, 2019	November 30, 2018
Raw materials	$ —	$ —
Work-in-process	142,351	188,085
Work-in-process – Public Bank	—	—
Finished goods	43,855	5,262
Finished goods – Public Bank	13,492,686	15,831,081
Collection kits	21,021	19,163
Inventory reserve	(7,718)	(7,718)
Total inventory	$ 13,692,195	$ 16,035,873
Inventory, current portion	$ 1,046,195	$ 1,260,557
Inventory, long-term portion	12,646,000	14,775,316
Total inventory	$ 13,692,195	$ 16,035,873

During the second quarter of fiscal 2019, due to changes in sales trends and estimated recoverability of cost capitalized into inventory for the public banking inventory, the Company prepared an analysis and determined that the value of the public inventory should be reduced from cost to net realizable value and this led to an impairment charge to the public inventory of $2,332,763.

Due to the nature of the units of public inventory, the net realizable value of those units that are expected to be sold during the next twelve months are included in current inventory. The remaining balance of the public inventory is considered to be long-term. In order to conform to the current period presentation, the Company made certain reclassifications to the Public Bank inventory prior period balance in the Consolidated Balance Sheets. This reclassification had no effect on the previously reported total assets or liabilities, net income or cash flows from operating activities.

Note 5 – Intangible Assets

The Company incurs certain legal and related costs in connection with patent and trademark applications. If a future economic benefit is anticipated from the resulting patent or trademark or an alternate future use is available to the Company, such costs are capitalized and amortized over the expected life of the patent or trademark. The Company's assessment of future economic benefit involves considerable management judgment. A different conclusion could result in the reduction of the carrying value of these assets.

Intangible assets were as follows as of May 31, 2019 and November 30, 2018:

	Useful lives	May 31, 2019	November 30, 2018
Patents and Domain Names	10-20 years	$ 234,570	$ 234,570
Less: Accumulated amortization		(29,594)	(23,663)
License agreement	10 years	470,000	470,000
Less: Intangible asset impairment		(185,000)	(185,000)
Less: Accumulated amortization		(139,361)	(123,528)
Customer relationships-Prepacyte®CB	15 years	41,000	41,000
Less: Intangible asset impairment		(26,267)	(26,267)
Less: Accumulated amortization		(5,803)	(5,276)
Brand		31,000	31,000
Less: Accumulated amortization		(31,000)	(15,500)
Customer relationships – Cord:Use		960,000	960,000
Less: Accumulated amortization		(32,000)	(16,000)
Net Intangible Assets		$1,287,545	$ 1,341,336

Amortization expense of intangibles was approximately $27,000 and $11,000 for the three months ended May 31, 2019 and May 31, 2018, respectively. Amortization expense of intangibles was approximately $54,000 and $22,000 for the six months ended May 31, 2019 and May 31, 2018, respectively.

Note 6 – Notes Payable

On May 20, 2016, the Company entered into a Credit Agreement ("Agreement") with Texas Capital Bank, National Association ("TCB") for a term loan of $8.0 million in senior credit facilities. The proceeds of the term loan were used by the Company to fund repurchases of the Company's common stock. Subject to the terms of the Agreement, on May 20, 2016, TCB advanced the Company $100.00. On July 1, 2016, TCB advanced the remaining principal amount of $7,999,900 per a promissory note dated May 20, 2016 between the Company and TCB, at a rate of 3.75% per annum plus LIBOR, payable monthly with a maturity date of July 2021. On August 26, 2016, the Company entered into a First Amendment to Credit Agreement with TCB. Pursuant to terms of the First Amendment to Credit Agreement, on August 26, 2016, TCB made an additional advance to the Company in principal amount of $2,133,433 per an Amended and Restated Promissory Note dated August 26, 2016 between the Company and TCB. The additional proceeds of the term loan were used by the Company to fund the extinguishment of revenue sharing agreements. On June 11, 2018, the Company entered into a Second Amendment to Credit Agreement with TCB. Pursuant to the terms of the Second Amendment to Credit Agreement, TCB increased the current outstanding principal amount of the loan from TCB by $9,000,000 to finance a portion of the purchase price of the Cord:Use Purchase. In connection therewith, Cryo-Cell executed and delivered to TCB a Second Amended and Restated Promissory Note, in the principal amount of $15,500,000. As of the three month and six months ended May 31, 2019, the Company paid interest of $181,440 and $361,682, respectively, which is reflected in interest expense on the accompanying consolidated statements of comprehensive income (loss). As of the three month and six months ended May 31, 2018, the Company paid interest of $94,818 and $188,645, respectively, which is reflected in interest expense on the accompanying consolidated statements of comprehensive income (loss).

Collateral of the term and subordinated loans includes all money, securities and property of the Company.

The Company incurred debt issuance costs related to the term and subordinated loans in the amount of $548,085 which is recorded as a direct reduction of the carrying amount of the note payable and amortized over the life of the loan. As of the three and six months ended May 31, 2019, $28,106 and $58,000, respectively, of the debt issuance costs were amortized. As of the three and six months ended May 31, 2018, $24,837 and $51,540, respectively, of the debt issuance costs were amortized and are reflected in interest expense on the accompanying consolidated statements of comprehensive income (loss).

As of May 31, 2019 and November 30, 2018, the note payable obligation was as follows:

	May 31, 2019	November 30, 2018
Note payable	$ 11,658,433	$ 13,208,433
Unamortized debt issuance costs	(206,922)	(264,923)
Net note payable	$ 11,451,511	$ 12,943,510
Current portion of note payable	$ 3,100,000	$ 3,100,000
Long-term note payable, net of debt issuance costs	8,351,511	9,843,510
Total	$ 11,451,511	$ 12,943,510

Interest expense on the note payable for the three and six months ended May 31, 2019 and May 31, 2018 was as follows:

	For the three months ended May 31, 2019	For the six months ended May 31, 2019
Interest expense on notes payable	$ 181,440	$ 361,682
Debt issuance costs	28,106	58,000
Total Interest expense	$ 209,546	$ 419,682

	For the three months ended May 31, 2018	For the six months ended May 31, 2018
Interest expense on notes payable	$ 94,818	$ 188,645
Debt issuance costs	24,837	51,540
Total interest expense	$ 119,655	$ 240,185

Note 7 – Income (Loss) per Common Share

The following table sets forth the calculation of basic and diluted net income per common share:

	Three Months Ended		Six Months Ended	
	May 31, 2019	May 31, 2018	May 31, 2019	May 31, 2018
Numerator:				
Net Income	$ 53,673	$ 539,506	$ 329,550	$(1,990,566)
Denominator:				
Weighted-average shares outstanding-basic	7,803,333	7,247,464	7,802,344	7,177,082
Dilutive common shares issuable upon exercise of stock options	617,903	670,271	619,798	—
Weighted-average shares-diluted	8,421,236	7,917,735	8,422,142	7,177,082
Net income per common share:				
Basic	$ 0.01	$ 0.07	$ 0.04	$ (0.28)
Diluted	$ 0.01	$ 0.07	$ 0.04	$ (0.28)

For the three months ended May 31, 2019, the Company excluded the effect of 51,636 outstanding options from the computation of diluted earnings per share, as the effect of potentially dilutive shares from the outstanding stock options would be anti-dilutive. For the six months ended May 31, 2019, the Company

excluded the effect of 51,636 outstanding options from the computation of diluted earnings per share, as the effect of potentially dilutive shares from the outstanding stock options would be anti-dilutive. For the three months ended May 31, 2018, the Company excluded the effect of 51,636 outstanding options from the computation of diluted earnings per share, as the effect of potentially dilutive shares from the outstanding stock options would be anti-dilutive. For the six months ended May 31, 2018, the Company excluded the effect of all outstanding stock options from the calculation of diluted earnings per share, as the effect of potentially dilutive shares from the outstanding stock options would be anti-dilutive.

Note 8 – Stockholders' Equity

Employee Stock Incentive Plan

The Company maintains the 2006 Stock Incentive Plan (the "2006 Plan") under which it has reserved 1,000,000 shares of the Company's common stock for issuance pursuant to stock options, restricted stock, stock-appreciation rights (commonly referred to as "SARs") and stock awards (i.e. performance options to purchase shares and performance units). As of May 31, 2019 and November 30, 2018, there were 370,000 and 444,000 options issued, but not yet exercised, under the 2006 Plan, respectively. As of May 31, 2019, there were 0 shares available for future issuance under the 2006 Plan.

The Company maintains the 2012 Equity Incentive Plan (the "2012 Plan") which became effective December 1, 2011 as approved by the Board of Directors and approved by the stockholders at the 2012 Annual Meeting on July 10, 2012. The 2012 Plan originally reserved 1,500,000 shares of the Company's common stock for issuance pursuant to stock options, restricted stock, SARs, and other stock awards (i.e. performance shares and performance units). In May 2012, the Board of Directors approved an amendment to the 2012 Plan to increase the number of shares of the Company's common stock reserved for issuance to 2,500,000 shares. As of May 31, 2019, there were 621,365 service-based options issued, 129,729 service-based restricted common shares granted, 823,300 performance-based and 116,218 market-based restricted common shares granted under the 2012 Plan. As of May 31, 2019, there were 0 shares available for future issuance under the 2012 Plan. In March 2018, the Company received notice that shares of the Company's common stock issued to certain executive officers pursuant to the Company's 2012 Stock Incentive Plan had purportedly been issued in excess of the shares reserved for issuance under the Plan. The Company has established an independent committee of the Board of Directors to review this issue.

The Company granted 1,500 options to an optionee during the second fiscal quarter of 2019 as approved by the Board of Directors. These options are not currently issued out of the 2006 or 2012 Plan.

Service-based vesting condition options

The fair value of each option award is estimated on the date of the grant using the Black-Scholes valuation model that uses the assumptions noted in the following table. Expected volatility is based on the historical volatility of the Company's stock over the most recent period commensurate with the expected life of the Company's stock options. The Company uses historical data to estimate option exercise and employee termination within the valuation model. The risk-free rate for periods within the contractual life of the option is based on the U.S. Treasury yield curve in effect at the time of grant. The expected term of options granted to employees is calculated, in accordance with the "simplified method" for "plain vanilla" stock options allowed under GAAP. Expected dividends are based on the historical trend of the Company not issuing dividends.

There were 1,500 and 51,636 options granted during the three and six months ended May 31, 2019 and May 31, 2018, respectively.

Variables used to determine the fair value of the options granted for the three and six months ended May 31, 2019 and May 31, 2018, respectively, are as follows:

	Three Months Ended May 31, 2019	Three Months Ended May 31, 2018	Six Months Ended May 31, 2019	Six Months Ended May 31, 2018
Weighted average values:				
Expected dividends	0%	0%	0%	0%
Expected volatility	51.2%	50.8%	51.2%	50.8%
Risk free interest rate	2.31%	2.67%	2.31%	2.67%
Expected life	5 years	5 years	5 years	5 years

Stock option activity for options with only service-based vesting conditions for the six months ended May 31, 2019, was as follows:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value
Outstanding at November 30, 2018	1,001,365	$ 2.77	3.97	$ 4,580,967
Granted	1,500	7.04		990
Exercised	(2,500)	2.28		14,175
Expired/forfeited	(7,500)	2.22		41,075
Outstanding at May 31, 2019	992,865	$ 2.79	3.57	$ 4,889,909
Exercisable at May 31, 2019	969,821	$ 2.69	3.55	$ 4,868,182

The aggregate intrinsic value represents the total value of the difference between the Company's closing stock price on the last trading day of the period and the exercise price of the options, multiplied by the number of in-the-money stock options that would have been received by the option holders had all option holders exercised their options on either May 31, 2019 or November 30, 2018, as applicable. The intrinsic value of the Company's stock options changes based on the closing price of the Company's stock.

For the three and six months ended May 31, 2019, the Company issued 0 and 2,500 common shares to option holders who exercised options for $0 and $5,700, respectively.

For the three and six months ended May 31, 2018, the Company issued 1,000 and 2,250 common shares to option holders who exercised options for $2,670 and $4,920, respectively.

Significant option groups outstanding and exercisable at May 31, 2019 and related price and contractual life information are as follows:

	Outstanding			Exercisable	
Range of Exercise Prices	Outstanding	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Outstanding	Weighted Average Exercise Price
$1.01 to $2.00	422,500	2.44	$ 1.73	422,500	$ 1.73
$2.01 to $3.00	265,000	2.13	$ 2.72	265,000	$ 2.72
$3.01 to $4.00	227,229	6.67	$ 3.18	223,062	$ 3.18
$6.01 to $7.00	25,000	7.84	$ 6.95	23,334	$ 6.98
$7.01 to $8.00	53,136	4.59	$ 7.83	35,925	$ 7.82
	992,865	3.57	$ 2.79	969,821	$ 2.69

A summary of the status of the Company's non-vested options as of May 31, 2019, and changes during the six months ended May 31, 2019, is presented below:

	Options	Weighted Average Grant-Date Fair Value
Non-vested at November 30, 2018	40,254	$ 3.06
Granted	1,500	3.28
Vested	(18,710)	3.23
Forfeited	—	—
Non-vested at May 31, 2019	23,044	$ 2.94

As of May 31, 2019, there was approximately $49,000 of total unrecognized compensation cost related to non-vested share-based compensation arrangements granted under the 2006 Plan and the 2012 Plan. The cost is expected to be recognized over a weighted-average period of .52 years as of May 31, 2019. The total fair value of shares vested during the six months ended May 31, 2019 was approximately $60,000.

During the second fiscal quarter of 2018, the Company entered into Amended and Restated Employment Agreements ("2018 Employment Agreements") with each of the Company's Co-CEOs. Per the Employment Agreements, each of the Co-CEOs is to receive base grant equity awards in the form of qualified stock options of the Company's common stock. As of March 8, 2018, David Portnoy and Mark Portnoy were granted 23,636 and 20,000 stock options of the Company's common stock, respectively. The options were issued under the Company's 2012 Stock Plan and will vest 1/3 upon grant, 1/3 on December 1, 2018 and the remaining 1/3 on November 30, 2019. The fair value of the total options vested as of May 31, 2019 and May 31, 2018 was approximately $100,000 and $48,000, respectively, and is reflected as selling, general and administrative expenses in the accompanying consolidated statements of comprehensive income (loss). As of May 31, 2019 and May 31, 2018, there was approximately $39,000 and $91,000, respectively, of total unrecognized compensation cost related to the non-vested options of common stock and these will continue to vest as notated above and per the 2018 Employment Agreements.

During the second fiscal quarter of 2018, the Company entered into an Amendment Agreement with the Company's CIO. Per the Amendment Agreement, the CIO is to receive a base grant equity award in the form of qualified stock options of the Company's common stock. As of May 21, 2018, Oleg Mikulinsky was granted 8,000 stock options of the Company's common stock. The options were issued under the Company's 2012 Stock Plan and will vest 1/3 upon grant, 1/3 on December 1, 2018 and the remaining 1/3 on November 30, 2019. The fair value of the total options vested as of May 31, 2019 and May 31, 2018 was approximately $19,000 and $9,000, respectively, and is reflected as selling, general and administrative expenses in the accompanying consolidated statements of comprehensive income (loss). As of May 31, 2019 and May 31, 2018, there was approximately $9,000 and $19,000, respectively, of total unrecognized compensation cost related to the non-vested options of common stock and these will continue to vest as notated above and per the Amendment Agreement.

Performance and market-based vesting condition options

Per the 2018 Employment Agreements, based upon certain performance criteria, the Company shall grant David Portnoy and Mark Portnoy a percentage of up to 47,273 and 40,000, respectively, of qualified stock options of the Company's common stock. For market-based vesting condition options, accounting principles do not require that the market condition be met in order for the compensation cost to be recognized. Fair value of these options has been determined using a Monte Carlo valuation approach and is being recognized over the requisite service period, regardless if the market condition will be met. During fiscal 2019, 15,756 and 13,332, respectively, of qualified stock options will be expensed over the requisite service period. The fair value of these options as of May 31, 2019 and May 31, 2018 was approximately $90,900 and $73,550, respectively, and is reflected as selling, general and administrative expenses in the accompanying consolidated statement of comprehensive income (loss). As of May 31, 2019 and May 31, 2018, there was approximately $90,900 and $73,550, respectively, of total unrecognized compensation cost related to these options of common stock. For performance-based vesting condition options, the Company estimated the fair value of the qualified stock options that met certain performance targets by the end of the fiscal 2018 requisite service period using a Black-Scholes valuation model. The total estimated fair value of 26,243 and 22,222 of qualified options was approximately $161,000 and $0 as of May 31, 2019 and May 31, 2018, respectively. Since these options have not been granted, the Company re-values the fair value of these options each period and records an adjustment to compensation expense. The adjustment made to compensation expense related to these options during the six months ended May 31, 2019 and May 31, 2018 was approximately $66,000 and $0, respectively, and is reflected as selling, general and administrative expenses in the accompanying consolidated statements of comprehensive income (loss).

Per the Amendment Agreement, based upon certain performance criteria, the Company shall grant Oleg Mikulinsky a percentage of up to 8,000 of qualified stock options of the Company's common stock. For market-based vesting condition options, accounting principles do not require that the market condition be met in order for the compensation cost to be recognized. Fair value of these options has been determined using a Monte Carlo valuation approach and is being recognized over the requisite service period, regardless if the market condition will be met. During fiscal 2019, 2,666 of qualified stock options will be expensed over the requisite service period. The fair value of these options as of May 31, 2019 and May 31, 2018 was approximately $9,600 and $6,750, respectively, and is reflected as selling, general and administrative expenses in the accompanying consolidated statement of comprehensive income (loss). As of May 31, 2019 and May 31, 2018, there was approximately $9,600 and $6,750, respectively, of total unrecognized compensation cost related to these options of common stock. For performance-based vesting condition options, the Company estimated the fair value of the qualified stock options that met certain performance targets by the end of the fiscal 2018 requisite service period using a Black-Scholes valuation model. The total estimated fair value of 4,444 of qualified options was approximately $16,000 and $0 as of May 31, 2019 and May 31, 2018, respectively.

Since these options have not been granted, the Company re-values the fair value of these options each period and records an adjustment to compensation expense. The adjustment made to compensation expense related to these options during the six months ended May 31, 2019 and May 31, 2018 was approximately $6,000 and $0, respectively, and is reflected as selling, general and administrative expenses in the accompanying consolidated statements of comprehensive income (loss).

Restricted common shares

As of April 15, 2016, the Company entered into Amended and Restated Employment Agreements ("Employment Agreements") with each of the Company's Co-CEOs. The Employment Agreements provide for the grant of shares of the Company's common stock based on certain performance measures being attained by each of the Company's Co-CEOs during fiscal year 2016 and fiscal year 2017. The Employment Agreements state if David Portnoy and Mark Portnoy are employed by the Company on November 30, 2016 and November 30, 2017, then no later than February 28, 2017 and February 28, 2018, respectively, the Company will grant up to 186,487 and 162,163 shares of common stock for each fiscal year. Based upon the performance measures attained as of November 30, 2016, the Company granted 183,145 and 159,257 shares of common stock to David Portnoy and Mark Portnoy, respectively. There was $0 of total unrecognized compensation cost as of May 31, 2019 and May 31, 2018, respectively. Based upon the performance measures being attained as of November 30, 2017, David Portnoy and Mark Portnoy earned a total of 121,801 and 105,915 shares of common stock, respectively. Pursuant to the terms of the Employment Agreements, the Co-CEOs each opted to receive a lump sum cash payment in lieu of 30,000 shares of earned common stock which amounted to approximately $444,000. The Company then granted the remaining earned shares of 91,801 and 75,915 to David Portnoy and Mark Portnoy, respectively. The fair value of the shares granted was approximately $756,000. There was $0 and $0 of total unrecognized compensation cost as of May 31, 2019 and May 31, 2018, respectively.

As of April 18, 2016, the Company entered into a second Amendment Agreement (the "Amendment"), with the Company's CIO Oleg Mikulinsky effective December 1, 2015, amending certain terms of the Amendment Agreement dated May 1, 2013 and Mikulinsky Employment Agreement dated March 5, 2012. The Amendment provides for the grant of shares of the Company's common stock based on certain performance measures being attained by the Company during fiscal year 2016 and fiscal year 2017. The Amendment states if Executive is employed by the Company on November 30, 2016 and November 30, 2017, then no later than February 28, 2017 and February 28, 2018, respectively, the Company will grant Executive up to 20,000 shares of restricted stock based on performance as set forth in the Amendment per each fiscal year. Based upon performance measures being attained as of November 30, 2016, the Company granted 19,620 shares of common stock to Oleg Mikulinksy. There was $0 of total unrecognized compensation cost as of May 31, 2019 and May 31, 2018, respectively. Based upon performance measures being attained as of November 30, 2017, the Company will grant a total of 14,729 shares of common stock to Oleg Mikulinksy. The fair value of the shares to be granted is approximately $80,000. There was $0 and $0 of total unrecognized compensation cost as of May 31, 2019 and May 31, 2018, respectively.

Note 9 – License Agreements

The Company enters into two types of licensing agreements and in both types, the Company earns revenue on the initial license fees. Under the technology agreements, the Company earns processing and storage royalties from the affiliates that process in their own facility. Under the marketing agreements, the Company earns processing and storage revenues from affiliates that store specimens in the Company's facility in Oldsmar, Florida.

Technology Agreements

The Company has entered into a definitive License and Royalty Agreement with LifeCell International Private Limited, formerly Asia Cryo-Cell Private Limited, ("LifeCell") to establish and market its umbilical cord blood and menstrual stem cell programs in India.

Per the License and Royalty Agreement with Lifecell, there is a $1 Million cap on the amount of royalty due to the Company per year and a $10 Million cap on the amount of royalties due to the Company for the term of the License and Royalty Agreement. Since inception of the License and Royalty Agreement, the Company has recorded approximately $8,600,000 in royalty income due under the terms of the License and Royalty Agreement, of which, Lifecell has paid the Company approximately $8,100,000 as of May 31, 2019. The balance of approximately $500,000 is reflected as Accounts Receivable on the accompanying consolidated balance sheets.

Marketing Agreements

The Company has definitive license agreements to market the Company's umbilical cord blood stem cell programs in Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama and Pakistan.

The following table details the initial license fees for the technology and marketing agreements and processing and storage royalties earned under the technology agreements for the three and six months ended May 31, 2019 and May 31, 2018. The initial license fees and processing and storage royalties are reflected in licensee and royalty income in the accompanying consolidated statements of operations.

Processing and Storage Royalties

	Three Months Ended May 31, 2019	Six Months Ended May 31, 2019
India	$ 201,828	$ 201,828
Total	$ 201,828	$ 201,828

	Three Months Ended May 31, 2018	Six Months Ended May 31, 2018
India	$ 203,159	$ 203,159
Total	$ 203,159	$ 203,159

Note 10 – Legal Proceedings

On December 3, 2015, a complaint styled Gary T. Brotherson, M.D., et al. v. Cryo-Cell International, Inc., Case No.15-007461-CI, Circuit Court, Sixth Judicial Circuit, Pinellas County, Florida, was served on the Company, naming it as defendant and alleging, among other things, that the Company breached certain agreements with plaintiffs and seeking damages in excess of $15,000, the jurisdictional amount of the court in which the action is pending. On January 12, 2016, the Company served its answer, affirmative defenses, and counterclaim against the plaintiffs. The Company believes the plaintiffs' claims are without merit and it intends to contest the action vigorously. At this time, it is not possible for the Company to estimate the loss or the range of possible loss in the event of an unfavorable outcome, as the ultimate resolution of the complaint is uncertain at this time. No amounts have been accrued as of May 31, 2019.

In addition, from time to time the Company is subject to proceedings, lawsuits, contract disputes and other claims in the normal course of its business. The Company believes that the ultimate resolution of current matters should not have a material adverse effect on the Company's business, consolidated financial position or results of operations. It is possible, however, that there could be an unfavorable ultimate outcome for or resolution which could be material to the Company's results of operations for a particular quarterly reporting period. Litigation is inherently uncertain and there can be no assurance that the Company will prevail. The Company does not include an estimate of legal fees and other related defense costs in its estimate of loss contingencies.

Note 11 – Share Repurchase Plan

In December 2011, the Company's Board of Directors authorized management at its discretion to repurchase up to one million (1,000,000) shares of the Company's outstanding common stock. On June 6, 2012, the Board of Directors of the Company increased the number of shares of the Company's outstanding common stock that management is authorized to repurchase to up to three million (3,000,000). On April 8, 2015, the Board of Directors of the Company increased the number of shares of the Company's outstanding common stock that management is authorized to repurchase to up to six million (6,000,000) shares. On October 6, 2016, the Board of Directors of the Company increased the number of shares of the Company's outstanding common stock that management is authorized to repurchase to up to eight million (8,000,000) shares. The repurchases must be effectuated through open market purchases, privately negotiated block trades, unsolicited negotiated transactions, and/or pursuant to any trading plan that may be adopted in accordance with Rule 10b5-1 of the Securities and Exchange Commission or in such other manner as will comply with the provisions of the Securities Exchange Act of 1934.

As of May 31, 2019, the Company had repurchased an aggregate of 5,801,086 shares of the Company's common stock at an average price of $3.37 per share through open market and privately negotiated transactions. The Company did not purchase any of the Company's common stock during the six months ended May 31, 2019 and May 31, 2018.

The repurchased shares will be held as treasury stock at cost and have been removed from common shares outstanding as of May 31, 2019 and November 30, 2018. As of May 31, 2019, and November 30, 2018, 5,801,086 and 5,801,086 shares, respectively, were held as treasury stock.

Subsequent to the balance sheet date, the Company has not repurchased any additional shares of the Company's common stock.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Forward Looking Statements

This Form 10-Q, press releases and certain information provided periodically in writing or orally by the Company's officers or its agents may contain statements which constitute "forward-looking statements". The terms "Cryo-Cell International, Inc.," "Cryo-Cell," "Company," "we," "our" and "us" refer to Cryo-Cell International, Inc. The words "expect," "anticipate," "believe," "goal," "strategy," "plan," "intend," "estimate" and similar expressions and variations thereof, if used, are intended to specifically identify forward-looking statements. Those statements appear in a number of places in this Form 10-Q and in other places, and include statements regarding the intent, belief or current expectations of the Company, its directors or its officers with respect to, among other things:

(i) our future performance and operating results;

(ii) our future operating plans;

(iii) our liquidity and capital resources; and

(iv) our financial condition, accounting policies and management judgments.

Investors and prospective investors are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, and that actual results may differ materially from those projected in the forward-looking statements as a result of various factors. The factors that might cause such differences include:

(i) any adverse effect or limitations caused by recent increases in government regulation of stem cell storage facilities;

(ii) any increased competition in our business including increasing competition from public cord blood banks particularly in overseas markets but also in the U.S.;

(iii) any decrease or slowdown in the number of people seeking to store umbilical cord blood stem cells or decrease in the number of people paying annual storage fees;

(iv) any new services relating to other types of stem cells that have not yet been offered commercially, and there is no assurance that other stem cell services will be launched or will gain market acceptance;

(v) any adverse impacts on revenue or operating margins due to the costs associated with increased growth in our business, including the possibility of unanticipated costs relating to the operation of our facility and costs relating to the commercial launch of new types of stem cells;

(vi) any unique risks posed by our international activities, including but not limited to local business laws or practices that diminish our affiliates' ability to effectively compete in their local markets;

(vii) any technological or medical breakthroughs that would render our business of stem cell preservation obsolete;

(viii) any material failure or malfunction in our storage facilities; or any natural disaster or act of terrorism that adversely affects stored specimens;

(ix) any adverse results to our prospects, financial condition or reputation arising from any material failure or compromise of our information systems;

(x) the costs associated with defending or prosecuting litigation matters, particularly including litigation related to intellectual property, and any material adverse result from such matters;

(xi) the success of our licensing agreements and their ability to provide us with royalty fees;

(xii) any difficulties and increased expense in enforcing our international licensing agreements;

(xiii) any adverse performance by or relations with any of our licensees;

(xiv) any inability to enter into new licensing arrangements including arrangements withnon-refundable upfront fees;

(xv) any inability to realize cost savings as a result of recent acquisitions;

(xvi) any inability to realize a return on an investment;

(xvii) any increased U.S. income tax expense as a result of inability to utilize or exhaustion of net operating losses;

(xviii) any adverse impact on our revenues and operating margins as a result of discounting of our services in order to generate new business in tough economic times where consumers are selective with discretionary spending;

(xix) the success of our global expansion initiatives;

(xx) our actual future ownership stake in future therapies emerging from our collaborative research partnerships;

(xxi) our ability to minimize our future costs related to R&D initiatives and collaborations and the success of such initiatives and collaborations;

(xxii) any inability to successfully identify and consummate strategic acquisitions;

(xxiii) any inability to realize benefits from any strategic acquisitions;

(xxiv) the Company's ability to realize a profit on the acquisition of PrepaCyte-CB;

(xxv) the Company's ability to realize a profit on the acquisition of Cord:Use;

(xxvi) the costs associated with proxy contests and its impact on our business and

(xxvii) other factors many of which are beyond our control.

We undertake no obligation to publicly update or revise the forward-looking statements made in this Form10-Q to reflect events or circumstances after the date of this Form 10-Q or to reflect the occurrence of unanticipated events.

Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect management's analysis only as of the date hereof. Cryo-Cell International, Inc. undertakes no obligation to publicly revise these forward-looking statements to reflect events or circumstances that arise after the date hereof. Readers should carefully review the risk factors described in other documents the Company files from time to time with the Securities and Exchange Commission, including the Annual Report on Form 10-K filed by the Company and any Current Reports on Form 8-K filed by the Company.

Overview

The Company is engaged in cellular processing and cryogenic storage, with a current focus on the collection and preservation of umbilical cord blood stem cells for family use. The Company's principal sources of revenues are service fees for cord blood processing and preservation for new customers and recurring annual storage fees. Effective April 2016, the Company offers two pricing models, a standard plan and premium plan. The Company charges fees of $1,675 for the standard plan and $2,025 for the premium plan to new clients for the collection kit, processing, testing and return medical courier service, with discounts in the case of multiple children from the same family and in other circumstances. The Company charges an annual storage fee of $175 for new clients that enroll in the standard and premium plans; storage fees for existing customers depend on the contracts with such customers. The Company continues to offer a one-time payment plan for 21 years of storage and a life-time payment plan, pursuant to which the client is charged $4,580 for the standard plan and $4,930 for the premium plan and $5,595 for the standard plan and $6,595 for the premium plan, respectively, less discounts in the case of multiple children from the same family and in other circumstances. The one-time plan includes the collection kit, processing and testing, return medical courier service and 21 years of pre-paid storage fees. The life-time plan includes the collection kit, processing and testing, return medical courier service and pre-paid storage fees for the life of the client. The Company also receives other income from licensing fees and royalties from global affiliates.

On June 11, 2018, Cryo-Cell completed its acquisition of substantially all of the assets (the "Cord Purchase") of Cord:Use Cord Blood Bank, Inc., a Florida corporation ("Cord:Use"), in accordance with the definitive Asset Purchase Agreement between Cryo-Cell and Cord:Use (the "Purchase Agreement"), including without limitation Cord:Use's inventory of public cord blood units existing as of the closing date (the "Public Cord Blood Inventory") and Cord:Use's shares of common stock of Tianhe Stem Cell Biotechnologies, Inc., an Illinois corporation (the "Tianhe Capital Stock"). Cord:Use was in the business of public and private cord blood and tissue, collection, processing, storage and banking. The aggregate consideration payable at closing under the Purchase Agreement was $14,000,000, with $10,500,000 paid in cash and the balance paid through the delivery to Seller of 465,426 shares of Cryo-Cell's common stock, par value $0.01 per share ("Common Stock"), at $7.52 per share. In addition, Cryo-Cell assumed certain limited liabilities incurred by Cord:Use in connection with its business that were unpaid as of the closing date and that directly relate to the services to be provided after closing by Cryo-Cell. Cryo-Cell also assumed certain of Cord:Use's contracts and the obligations arising therefrom after the closing. Additionally, Cord:Use is entitled to an earnout from Cryo-Cell's sale of the Public Cord Blood Inventory from and after closing. Each calendar year after the closing, Cryo-Cell is required to pay to Cord:Use 75% of all gross revenues, net of any returns, received from the sale of public cord blood inventory in excess of $500,000. Such payments are to be made quarterly, within 30 days of the end of the last month of each calendar quarter, until the public cord blood inventory is exhausted. In addition, each calendar year after closing, until the public cord blood inventory is exhausted, for every $500,000 of retained gross revenues, net of any returns, received and retained by Cryo-Cell in excess of the initial $500,000 retained by Cryo-Cell during such year, Cryo-Cell is to deliver $200,000 worth of Cryo-Cell Common stock to Cord:Use, up to an aggregate value of $5,000,000. Cord:Use is also entitled to a portion of the gross profits generated, or deemed to have been generated, by Cryo-Cell from its ownership of the Tianhe Capital Stock.

During the six months ended May 31, 2019, total revenue increased 22% as compared to the same period in 2018. The Company reported net income of approximately $330,000 or $0.04 per basic common share for the six months ended May 31, 2019 compared to a net loss of approximately ($1,991,000) or ($0.28) per basic common share for the same period in 2018. Net income for the six months ended May 31, 2019 principally resulted from a 22% increase in revenue offset by a 51% increase in cost of sales, a 4% increase in selling, general and administrative expenses. Included in the net loss for the six months ended May 31, 2018 was approximately $2,985,000 of income tax expense related to the reduction of the federal tax rate to 21% as of January 1, 2018 as a result of the Tax Cuts and Jobs Act that was signed into law on December 22, 2017. The decrease in the federal tax rate caused a decrease in the Company's deferred tax asset which resulted in an increase in the income tax expense.

At May 31, 2019, the Company had cash and cash equivalents of $6,468,587. The Company's cash increased approximately $429,000 during the first six months of fiscal 2019. Cash provided by operations was approximately $2,346,000 which was offset by approximately $373,000 used for the purchase of property and equipment and approximately $1,550,000 used to repay the note payable. On May 20, 2016, the Company entered into a Credit Agreement ("Agreement") with Texas Capital Bank, National Association ("TCB") for a term loan of $8.0 million in senior credit facilities. The proceeds of the term loan were used by the Company to fund repurchases of the Company's common stock. Subject to the terms of the Agreement, on May 20, 2016, TCB advanced the Company $100.00. On July 1, 2016, TCB advanced the remaining principal amount of $7,999,900 per a promissory note dated May 20, 2016 between the Company and TCB.

On August 26, 2016, the Company entered into a First Amendment to Credit Agreement with TCB. Pursuant to terms of the First Amendment to Credit Agreement, on August 26, 2016, TCB made an additional advance to the Company in principal amount of $2,133,433 per an Amended and Restated Promissory Note dated August 26, 2016 between the Company and TCB. The proceeds of the term loan were used by the Company to fund the extinguishment of some of the revenue sharing agreements.

On June 11, 2018, the Company entered into a Second Amendment to Credit Agreement with TCB. Pursuant to the terms of the Second Amendment to Credit Agreement, TCB made an additional advance to the Company in principal amount of $9,000,000 per an Amended and Restated Promissory Note dated June 11, 2018 between the Company and TCB in the principal amount of $15,500,000. The proceeds were used to finance a portion of the purchase price of the Cord:Use purchase. See Note 2.

Consistent with its fiduciary duties, the board of directors and management has reviewed and will continue to review strategic options and opportunities for the Company, in order to maximize shareholder value. These options may include, but are not limited to, strategic mergers or acquisitions, investments in other public and/or private companies, repurchases of RSA interests, a deregistration of the Company's common stock under the Securities Exchange Act of 1934 or a going-private transaction. These options may or may not be related to the Company's current business. In order to undertake any of the aforementioned activities, the Company may take on substantial debt or equity capital which could increase the risk of investment in the Company.

Results of Operations - Six Month Period Ended May 31, 2019 Compared to theSix-Month Period Ended May 31, 2018

Revenues. Revenues for the six months ended May 31, 2019 were $15,622,964 as compared to $12,753,581 for the same period in 2018, a 22% increase. The increase in revenue was primarily attributable to a 20% increase in processing and storage fees.

Processing and Storage Fees. The increase in processing and storage fee revenue is attributable to a 16% increase in recurring annual storage fee revenue and a 25% increase in the number of new domestic cord blood specimens processed in the first six months of fiscal 2019 versus the same period in 2018.

Public Banking Revenue. For the six months ended May 31, 2019, revenue from public banking was $368,480 compared to $0 for the six months ended May 31, 2018.

Product Revenue. For the six months ended May 31, 2019, revenue from the PrepaCyt®-CB product sales was $37,760 compared to $54,900 for the six months ended May 31, 2018.

Licensee and Royalty Income. Licensee and royalty income for the six months ended May 31, 2019, was $201,828 as compared to $203,159 for the 2018 period. Licensee and royalty income for the six months ended May 31, 2019 and May 31, 2018 consists of royalty income earned on the processing and storage of specimens in India where the Company has a definitive License and Royalty Agreement.

Per the License and Royalty Agreement with Lifecell, there is a $1 Million cap on the amount of royalties due to the Company per year and a $10 Million cap on the amount of royalties due to the Company for the term of the License and Royalty Agreement. Since inception of the License and Royalty Agreement, the Company has recorded approximately $8,600,000 in royalty income due under the terms of the License and Royalty Agreement, of which, Lifecell has paid the Company approximately $8,100,000 as of May 31, 2019. The balance of approximately $500,000 is reflected as Accounts Receivable on the accompanying consolidated balance sheets.

Cost of Sales. Cost of sales for the six months ended May 31, 2019 was $5,094,518 as compared to $3,378,646 for the same period in 2018, representing a 51% increase. Cost of sales includes wages and supplies associated with process enhancements to the existing production procedures and quality systems in the processing of cord blood specimens at the Company's facility in Oldsmar, Florida and depreciation expense of approximately $96,000 and $48,000 for the six months ended May 31, 2019 and 2018, respectively. Also, included in Cost of sales is $164,627 and $97,065 related to the costs associated with production of the PrepaCyte®-CB processing and storage system for the six months ended May 31, 2019 and May 31, 2018, respectively. Also included in Cost of Sales is $672,376 and $0 for the six months ended May 31, 2019 and May 31, 2018, respectively, related to the public cord blood bank. The increase in cost of sales for the six months ended May 31, 2019 versus May 31, 2018 is due to the increased costs due to the public cord blood bank and the increased costs associated with the 25% increase in the number of new domestic cord blood specimens processed for the six months ended May 31, 2019 versus May 31, 2018.

Selling, General and Administrative Expenses. Selling, general and administrative expenses for the six months ended May 31, 2019 were $7,393,229 as compared to $7,122,576 for the 2018 period representing a 4% increase. These expenses are primarily comprised of expenses for consumer advertising, salaries and wages for personnel and professional fees. The increase in selling, general and administrative expenses is due in part to an increase in selling and marketing expenses of $203,000 or 7% and a $200,000 increase in bad debt expense.

Research, Development and Related Engineering Expenses. Research, development and related engineering expenses for the six months ended May 31, 2019 were $10,841 as compared to $42,693 for the 2018 period.

Depreciation and Amortization. Depreciation and amortization (not included in Cost of Sales) for the six months ended May 31, 2019 was $112,314 compared to $72,793 for the 2018 period.

Change in the Fair Value of Contingent Consideration. Change in the fair value of the contingent consideration for the six months ended May 31, 2019 was $670,927 compared to $0 for the 2018 period. The contingent consideration is the earnout that Cord:Use is entitled to from the Company's sale of the public cord blood inventory from and after closing, described above. The contingent consideration was remeasured to fair value as of May 31, 2019. The estimated fair value of the contingent earnout was determined using a Monte Carlo analysis examining the frequency and mean value of the resulting earnout payments. The resulting value captures the risk associated with the form of the payout structure. The risk-neutral method is applied, resulting in a value that captures the risk associated with the form of the payout structure and the projection risk. The carrying amount of the liability may fluctuate significantly and actual amounts paid may be materially different from the estimated value of the liability.

Impairment of Public Inventory. The impairment of public inventory for the six months ended May 31, 2019 was $2,332,763 compared to $0 for the 2018 period. Due to changes in sales trends and estimated recoverability of cost capitalized into inventory, an impairment charge of $2,332,763 was recognized during the six months ended May 31, 2019 to reduce inventory from cost to net realizable value.

Interest Expense. Interest expense during the six months ended May 31, 2019 was $831,212 compared to $585,071 for the six months ended May 31, 2018, of which, $419,682 and $240,185, respectively, related to the credit and subordination agreements with Texas Capital Bank, National Association as described in Note 6. The remaining interest expense is mainly comprised of amounts due to the parties to the Company's revenue sharing agreements ("RSAs") based on the Company's storage revenue collected.

Income Taxes. U.S. income tax expense for the six months ended May 31, 2019 was $133,782 compared to $3,496,616 for the six months ended May 31, 2018. Included in the $3,496,616 tax expense for the six months ended May 31, 2018 is approximately $2,985,000 of expense related to the reduction of the federal tax rate to 21% as of January 1, 2018 as a result of the Tax Cuts and Jobs Act that was signed into law on December 22, 2017. The decrease in the federal tax rate caused a decrease in the Company's deferred tax asset which resulted in an increase in the income tax expense.

Deferred tax assets and liabilities are measured using enacted tax rates expected to be recovered or settled. The ultimate realization of our deferred tax assets depends upon generating sufficient future taxable income prior to the expiration of the tax attributes. In assessing the need for a valuation allowance, we must project future levels of taxable income. This assessment requires significant judgment. We examine the evidence related to the recent history of tax losses, the economic conditions in which we operate and our forecasts and projections to make that determination.

The Company records foreign income taxes withheld from installment payments ofnon-refundable up-front license fees and royalty income earned on the processing and storage of cord blood stem cell specimens in geographic areas where the Company has license agreements. The Company recorded $21,828 and $21,972 for the six months ended May 31, 2019 and May 31, 2018, respectively, of foreign income tax expense, which is included in income tax expense in the accompanying consolidated statements of comprehensive income (loss).

Results of Operations - Three Month Period Ended May 31, 2019 Compared to the Three-Month Period Ended May 31, 2018

Revenues. Revenues for the three months ended May 31, 2019 were $8,127,852 as compared to $6,525,463 for the same period in 2018. The increase in revenue was primarily attributable to a 22% increase in processing and storage fees.

Processing and Storage Fees. The increase in processing and storage fee revenue is primarily attributable to a 23% increase in the number of new cord blood specimens processed for three months ended May 31, 2019 versus the same period in 2018.

Public Banking Revenue. For the three months ended May 31, 2019, revenue from public banking was $234,115 compared to $0 for the three months ended May 31, 2018.

Product Revenue. For the three months ended May 31, 2019, revenue from the PrepaCyte®-CB product sales was $12,040 compared to $26,849 for the three months ended May 31, 2018.

Licensee and Royalty Income. Licensee and royalty income for the three months ended May 31, 2019, was $201,828 as compared to $203,159 for the 2018 period. Licensee and royalty income for the three months ended May 31, 2019 and May 31, 2018 consisted of royalty income earned on the processing and storage of cord blood stem cell specimens in India where the Company has a definitive license agreement.

Per the License and Royalty Agreement with Lifecell, there is a $1 Million cap on the amount of royalties due to the Company per year and a $10 Million cap on the amount of royalties due to the Company for the term of the License and Royalty Agreement. Since inception of the License and Royalty Agreement, the Company has recorded approximately $8,600,000 in royalty income due under the terms of the License and Royalty Agreement, of which, Lifecell has paid the Company approximately $8,100,000 as of May 31, 2019. The balance of approximately $500,000 is reflected as Accounts Receivable on the accompanying consolidated balance sheets.

Cost of Sales. Cost of sales for the three months ended May 31, 2019 was $2,628,291 as compared to $1,777,138 for the same period in 2018, representing a 48% increase. Cost of sales includes wages and supplies associated with process enhancements to the existing production procedures and quality systems in the processing of cord blood specimens at the Company's facility in Oldsmar, Florida and depreciation expense of approximately $48,000 and $24,000 for the three months ended May 31, 2019 and 2018, respectively. Also, included in Cost of Sales is $4,621 and $50,880 related to the costs associated with production of the PrepaCyte®-CB processing and storage system for the three months ended May 31, 2019 and May 31, 2018, respectively. Also included in Cost of Sales is $404,771 and $0 for the three months ended May 31, 2019 and May 31, 2018, respectively, related to the public cord blood bank. The increase in cost of sales for the three months ended May 31, 2019 versus May 31, 2018 is due to the increased costs associated with the 23% increase in the number of new domestic cord blood specimens processed in the second quarter fiscal 2019 versus the second quarter fiscal 2018.

Selling, General and Administrative Expenses. Selling, general and administrative expenses for the three months ended May 31, 2019 were $3,647,927 as compared to $3,533,057 for the 2018 period representing a 3% increase. Selling, general and administrative expenses is primarily comprised of expenses for selling and marketing expenses, salaries and wages for personnel and professional fees. The increase in selling, general and administrative expenses is due in part to an increase of $58,000 or 4% in selling and marketing expenses.

Research, Development and Related Engineering Expenses. Research, development and related engineering expenses for the three months ended May 31, 2019 were $4,957 as compared to $29,284 for the 2018 period.

Depreciation and Amortization. Depreciation and amortization (not included in Cost of Sales) for the three months ended May 31, 2019 was $55,334 compared to $36,248 for the 2018 period.

Change in the Fair Value of Contingent Consideration. Change in the fair value of the contingent consideration for the three months ended May 31, 2019 was $1,037,984 compared to $0 for the 2018 period. The contingent consideration is the earnout that Cord:Use is entitled to from the Company's sale of the public cord blood inventory from and after closing, described above. The contingent consideration was remeasured to fair value as of May 31, 2019. The estimated fair value of the contingent earnout was determined using a Monte Carlo analysis examining the frequency and mean value of the resulting earnout payments. The resulting value captures the risk associated with the form of the payout structure. The risk-neutral method is applied, resulting in a value that captures the risk associated with the form of the payout structure and the projection risk. The carrying amount of the liability may fluctuate significantly and actual amounts paid may be materially different from the estimated value of the liability.

Impairment of Public Inventory. The impairment of public inventory for the three months ended May 31, 2019 was $2,332,763 compared to $0 for the 2018 period. Due to changes in sales trends and estimated recoverability of cost capitalized into inventory, an impairment charge of $2,332,763 was recognized during the three months ended May 31, 2019 to reduce inventory from cost to net realizable value.

Interest Expense. Interest expense during the three months ended May 31, 2019, was $424,287 compared to $304,094 during the comparable period in 2018, of which, $209,546 and $119,655, respectively, related to the credit and subordination agreements with Texas Capital Bank, National Association as described in Note 6. The remaining interest expense is mainly comprised of amounts due to the parties to the Company's revenue sharing agreements ("RSAs") based on the Company's storage revenue collected.

Income Taxes. U.S. income tax expense for the three months ended May 31, 2019 was $29,115 compared to $293,949 for the three months ended May 31, 2018.

Deferred tax assets and liabilities are measured using enacted tax rates expected to be recovered or settled. The ultimate realization of our deferred tax assets depends upon generating sufficient future taxable income prior to the expiration of the tax attributes. In assessing the need for a valuation allowance, we must project future levels of taxable income. This assessment requires significant judgment. We examine the evidence related to the recent history of tax losses, the economic conditions in which we operate and our forecasts and projections to make that determination.

The Company records foreign income taxes withheld from installment payments ofnon-refundable up-front license fees and royalty income earned on the processing and storage of cord blood stem cell specimens in geographic areas where the Company has license agreements. The Company recorded $21,828 and $21,972 for the three months ended May 31, 2019 and 2018, respectively, of foreign income tax expense, which is included in income tax expense in the accompanying consolidated statements of comprehensive income (loss).

Liquidity and Capital Resources

On May 20, 2016, the Company entered into a Credit Agreement ("Agreement") with Texas Capital Bank, National Association ("TCB") for a term loan of $8.0 million in senior credit facilities. The proceeds of the term loan were used by the Company to fund repurchases of the Company's common stock. Subject to the terms of the Agreement, on May 20, 2016, TCB advanced the Company $100.00. On July 1, 2016, TCB advanced the remaining principal amount of $7,999,900 per a promissory note dated May 20, 2016 between the Company and TCB.

On August 26, 2016, the Company entered into a First Amendment to Credit Agreement with TCB. Pursuant to terms of the First Amendment to Credit Agreement, on August 26, 2016, TCB made an additional advance to the Company in principal amount of $2,133,433 per an Amended and Restated Promissory Note dated August 26, 2016 between the Company and TCB. The additional proceeds of the term loan were used by the Company to fund the extinguishment of revenue sharing agreements.

On June 11, 2018, the Company entered into a Second Amendment to Credit Agreement with TCB. Pursuant to the terms of the Second Amendment to Credit Agreement, TCB made an additional advance to the Company in principal amount of $9,000,000 per an Amended and Restated Promissory Note dated June 11, 2018 between the Company and TCB in the principal amount of $15,500,000. The proceeds were used to finance a portion of the purchase price of the Cord:Use Purchase.

Prior to the loans, the Company's principal source of cash has been from sales of its umbilical cord blood program to customers and royalties from licensees.

At May 31, 2019, the Company had cash and cash equivalents of $6,468,587 as compared to $6,040,033 at November 30, 2018. The increase in cash and cash equivalents during the six months ended May 31, 2019 was primarily attributable to the following:

Net cash provided by operating activities for the six months ended May 31, 2019 was $2,345,842, which was primarily attributable to the Company's operating results and an increase in the Company's new clients choosing the prepaid storage plans versus the annual storage fee plan.

Net cash provided by operating activities for the six months ended May 31, 2018 was $1,723,895, which was primarily attributable to the Company's operating results and an increase in the Company's new clients choosing the prepaid storage plans versus the annual storage fee plan which was partially offset by a deposit of $700,000 that was paid per the Asset Purchase Agreement with Cord:Use (see Note 2).

Net cash used in investing activities for the six months ended May 31, 2019 was $372,990 which was primarily attributable to sales and purchases of marketable securities and other investments in the amount of $35,880 offset by the purchases of property and equipment of $408,870 which includes the purchase of land in May 2019 for a purchase price of $350,351.

Net cash used in investing activities for the six months ended May 31, 2018 was $466,987 which was attributable to the purchases of property, equipment and sales and purchases of marketable securities and other investments and intangibles of $466,987.

Net cash used in financing activities for the six months ended May 31, 2019 was $1,544,298, which was primarily attributable to the payments of $1,550,000 to repay the note payable described above offset by the receipt of $5,700 from the exercise of stock options.

Net cash used in financing activities for the six months ended May 31, 2018 was $995,080, which was primarily attributable to the payments of $1,000,000 to repay the note payable described above offset by the receipt of $4,920 from the exercise of stock options.

The Company does not have a line of credit.

The Company anticipates making discretionary capital expenditures of approximately $500,000 over the next twelve months for software enhancements and purchases of property and equipment. The Company anticipates funding future property and equipment purchases with cash-on-hand and cash flows from future operations.

The Company anticipates that its cash and cash equivalents, marketable securities and cash flows from future operations will be sufficient to fund its known cash needs for at least the next 12 months. Cash flows from operations will depend primarily upon increasing revenues from sales of its umbilical cord blood and cord tissue cellular storage services and managing discretionary expenses. If expected increases in revenues are not realized, or if expenses are higher than anticipated, the Company may be required to reduce or defer cash expenditures or otherwise manage its cash resources during the next 12 months so that they are sufficient to meet the Company's cash needs for that period. In addition, the Company may consider seeking equity or debt financing if deemed appropriate for its plan of operations, and if such financing can be obtained on acceptable terms. There is no assurance that any reductions in expenditures, if necessary, will not have an adverse effect on the Company's business operations, including sales activities and the development of new services and technology.

Critical Accounting Policies

This discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these financial statements requires us to make judgments, estimates, and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses and disclosures of contingent assets and liabilities. For a full discussion of our accounting policies please refer to Note 1 to the Consolidated Financial Statements included in our 2018 Annual Report on Form 10-K filed with the SEC on February 28, 2019. Our most critical accounting policies and estimates include: recognition of revenue and the related allowance for doubtful accounts, stock-based compensation, income taxes, inventory and license and revenue sharing agreements. We continually evaluate our judgments, estimates and assumptions. We base our estimates on the terms of underlying agreements, historical experience and other factors that we believe are reasonable based on the circumstances, the results of which form our management's basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. There have been changes to our critical accounting policies and estimates from the information provided in Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations* included in our 2018 Annual Report on Form10-K. Please refer to Note 1 to the Consolidated Financial Statements.

Recently Issued Accounting Pronouncements

See Note 1 to the Consolidated Financial Statements.

Off-Balance Sheet Arrangements

The Company has no off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on its financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Not applicable.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Based on their most recent review, as of the end of the period covered by this report, the Company's principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures are effective, and that information required to be disclosed by the Company in the reports that it files or submits under the Securities Exchange Act of 1934, as amended, is accumulated and communicated to the Company's management, including its principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure and are effective to ensure that such information is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. In March 2018, the Company received notice that shares of the Company's common stock issued to certain executive officers pursuant to the Company's 2012 Stock Incentive Plan had purportedly been issued in excess of the shares reserved for issuance under the Plan. The Company has established an independent committee of the Board of Directors to review this issue. As part of this research, management is reviewing the Company's disclosure controls and procedures.

The Company has not made an amended 8-K filing with respect to the Current Reports on Form 8-K that was filed on July 16, 2015 to announce the acquisition of PrepaCyte. Accordingly, the Company is not deemed a timely filer. Management intends to subsequently make this amended 8-K filing to include the required pre-acquisition financial statements of PrepaCyte as well as the required pro forma financial information.

Changes in Internal Control Over Financial Reporting

Other than as disclosed in "Evaluation of Disclosure Controls and Procedures" above with the respect to the matters reviewed in March 2018, there were no other changes in the Company's internal controls over financial reporting during the six months ended May 31, 2019 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Beginning December 1, 2018, the Company implemented ASC 606, *Revenue from Contracts with Customers.* We are in the process of implementing changes to our processes related to revenue recognition and the control activities within them. These included the development of new policies based on the five-step model provided in the new revenue standard, new training, ongoing contract review requirements, and gathering of information provided for disclosures.

Limitations on the Effectiveness of Controls

Our management, including our co-CEOs and CFO, does not expect that our disclosure controls and internal controls will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management or board override of the control.

The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

CEO and CFO Certifications

Appearing as exhibits 31.1, 31.2 and 31.3 to this report there are Certifications of the Co-CEOs and the CFO. The Certifications are required in accordance with Section 302 of the Sarbanes-Oxley Act of 2002 (the Section 302 Certifications). This Item of this report is the information concerning the evaluation referred to in the Section 302 Certifications and this information should be read in conjunction with the Section 302 Certifications for a more complete understanding of the topics presented.

PART II - OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

On December 3, 2015, a complaint styled *Gary T. Brotherson, M.D., et al. v. Cryo-Cell International, Inc.,* Case No. 15-007461-CI, Circuit Court, Sixth Judicial Circuit, Pinellas County, Florida, was served on the Company, naming it as defendant and alleging, among other things, that the Company breached certain agreements with plaintiffs and seeking damages in excess of $15,000, the jurisdictional amount of the court in which the action is pending. On January 12, 2016, the Company served its answer, affirmative defenses, and counterclaim against the plaintiffs. The Company believes the plaintiffs' claims are without merit and it intends to contest the action vigorously. At this time, it is not possible for the Company to estimate the loss or the range of possible loss in the event of an unfavorable outcome, as the ultimate resolution of the complaint is uncertain at this time. No amounts have been accrued as of May 31, 2019.

In addition, from time to time the Company is subject to proceedings, lawsuits, contract disputes and other claims in the normal course of its business. The Company believes that the ultimate resolution of current matters should not have a material adverse effect on the Company's business, consolidated financial position or results of operations. It is possible, however, that there could be an unfavorable ultimate outcome for or resolution which could be material to the Company's results of operations for a particular quarterly reporting period. Litigation is inherently uncertain and there can be no assurance that the Company will prevail. The Company does not include an estimate of legal fees and other related defense costs in its estimate of loss contingencies.

ITEM 1A. RISK FACTORS

Not applicable.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

ISSUER PURCHASE OF EQUITY SECURITIES

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs
March 1 – 31, 2019	—	$ —	—	2,198,914
April 1 – 30, 2019	—	$ —	—	2,198,914
May 1 – 31, 2019	—	$ —	—	2,198,914

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

(a) Exhibits

31.1	Certification of Co-CEO Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
31.2	Certification of Co-CEO Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
31.3	Certification of CFO Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
32.1	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

SIGNATURES

In accordance with Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Cryo-Cell International, Inc.

/s/ DAVID PORTNOY
David Portnoy
Co-Chief Executive Officer

Cryo-Cell International, Inc.

/s/ MARK PORTNOY
Mark Portnoy
Co-Chief Executive Officer

Cryo-Cell International, Inc.

/s/ JILL TAYMANS
Jill M. Taymans
Vice President, Finance

Date: July 15, 2019

EXHIBIT 31.1

CERTIFICATION OF CO-CHIEF EXECUTIVE OFFICER

I, David Portnoy, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cryo-Cell International, Inc. (the "Registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The Registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules13a-15(f) for the Registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this quarterly report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting;

5. The Registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Dated: July 15, 2019

/s/ David Portnoy
David Portnoy

EXHIBIT 31.2

CERTIFICATION OF CO-CHIEF EXECUTIVE OFFICER

I, Mark Portnoy, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cryo-Cell International, Inc. (the "Registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The Registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules13a-15(f) for the Registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this quarterly report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting;

5. The Registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Dated: July 15, 2019

/s/ Mark Portnoy
Mark Portnoy

EXHIBIT 31.3

CERTIFICATION OF CHIEF FINANCIAL OFFICER

I, Jill M. Taymans, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cryo-Cell International, Inc. (the "Registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The Registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the Registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this quarterly report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting;

5. The Registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Dated: July 15, 2019

/s/ Jill M. Taymans
Jill M. Taymans

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Cryo-Cell International, Inc. (the "Company") on Form10-Q for the quarter ended May 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, David Portnoy, Co-Chief Executive Officer of the Company, I, Mark Portnoy, Co-Chief Executive Officer of the Company and I, Jill M. Taymans, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ David Portnoy
David Portnoy
Co-Chief Executive Officer

July 15, 2019

/s/ Mark Portnoy
Mark Portnoy
Co-Chief Executive Officer

July 15, 2019

/s/ Jill M. Taymans
Jill M. Taymans
Vice President, Finance (Chief Financial Officer)

July 15, 2019