

**UNITED STATES
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 March 31, 2019

OR

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 001-36714

JAGUAR HEALTH, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

46-2956775
(I.R.S. Employer
Identification No.)

201 Mission Street, Suite 2375
San Francisco, California 94105
(Address of principal executive offices, zip code)

(415) 371-8300
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No
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, Par Value \$0.0001 Per Share	JAGX	The NASDAQ Capital Market

As of May 14, 2019 there were 66,334,017 shares of voting common stock, par value \$0.0001 per share, outstanding, 40,301,237 shares of non-voting common stock, par value \$0.0001 per share, outstanding, and 5,524,926 shares of convertible preferred stock, par value \$0.0001 per share, outstanding (convertible into 33,149,556 shares of voting common stock, subject to certain voting restrictions as provided in the Certificate of Designation for the convertible preferred stock)

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PART I. — FINANCIAL INFORMATION**Item 1. Condensed Consolidated Financial Statements****JAGUAR HEALTH, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS**

	March 31, 2019	December 31, 2018
	(Unaudited)	
Assets		
Current assets:		
Cash	\$ 2,571,778	\$ 2,568,191
Accounts receivable	914,758	995,683
Other receivable	2,296	6,118
Inventory	2,960,048	3,342,177
Prepaid expenses and other current assets	866,170	1,237,772
Total current assets	7,315,050	8,149,941
Property and equipment, net	745,405	760,617
Operating lease - right-of-use asset	1,077,701	—
Intangible assets, net	31,288,889	31,710,556
Other assets	235,488	420,831
Total assets	<u>\$ 40,662,533</u>	<u>\$ 41,041,945</u>
Liabilities, convertible preferred stock and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 6,563,892	\$ 5,414,260
Accrued liabilities	3,980,713	4,939,441
Warrant liability	1,275,443	220,376
Convertible debt - current, net of discount	11,149,944	11,239,170
Operating lease liability - current	521,787	—
Notes payable, net of discount	1,258,546	4,845,575
Total current liabilities	24,750,325	26,658,822
Operating lease liability - long-term	116,328	—
Total liabilities	<u>\$ 24,866,653</u>	<u>\$ 26,658,822</u>
Commitments and contingencies (See Note 6)		
Series A convertible preferred stock: \$0.0001 par value, 10,000,000 shares authorized at March 31, 2019 and December 31, 2018; 5,524,926 shares issued and outstanding at March 31, 2019 and December 31, 2018; (redemption value and liquidation preference of \$12,738,822 and \$9,199,002 at March 31, 2019 and December 31, 2018, respectively)	9,000,002	9,000,002
Stockholders' equity:		
Common stock - voting: \$0.0001 par value, 150,000,000 shares authorized at March 31, 2019 and December 31, 2018, respectively; 59,415,042 and 24,603,104 shares issued and outstanding at March 31, 2019 and December 31, 2018, respectively	5,942	2,460
Common stock - non-voting: \$0.0001 par value, 50,000,000 shares authorized at March 31, 2019 and December 31, 2018; 40,301,237 shares issued and outstanding at March 31, 2019 and December 31, 2018	4,030	4,030
Additional paid-in capital	109,640,556	99,927,410
Accumulated deficit	(102,854,650)	(94,550,779)
Total stockholders' equity	6,795,878	5,383,121
Total liabilities, convertible preferred stock and stockholders' equity	<u>\$ 40,662,533</u>	<u>\$ 41,041,945</u>

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

JAGUAR HEALTH, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(Unaudited)

	Three Months Ended	
	March 31,	
	2019	2018
Product revenue, net	\$ 1,589,733	\$ 626,967
Collaboration revenue	—	177,389
Total revenue	<u>1,589,733</u>	<u>804,356</u>
Operating expenses		
Cost of product revenue	864,943	464,161
Research and development	1,421,360	757,866
Sales and marketing	1,565,124	1,712,190
General and administrative	3,513,414	2,998,400
Total operating expenses	<u>7,364,841</u>	<u>5,932,617</u>
Loss from operations	(5,775,108)	(5,128,261)
Interest expense	(547,130)	(602,022)
Other income, net	6,384	297,500
Change in fair value of warrants, derivative liability and conversion option liability	(46,057)	(263,854)
Loss on extinguishment of debt	(1,941,960)	—
Net loss	(8,303,871)	(5,696,637)
Deemed dividend attributable to preferred stock	—	(995,000)
Net loss attributable to common shareholders	<u>\$ (8,303,871)</u>	<u>\$ (6,691,637)</u>
Net loss per share, basic and diluted	<u>\$ (0.24)</u>	<u>\$ (0.75)</u>
Weighted-average common shares outstanding, basic and diluted	<u>34,524,145</u>	<u>8,631,142</u>

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

JAGUAR HEALTH, INC.
CONDENSED CONSOLIDATED STATEMENT OF CHANGES
IN CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY

(Unaudited)

	Series A Preferred Stock		Common stock - voting		Common stock - non-voting		Additional paid-in capital	Accumulated deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount			
Balances - January 1, 2018	—	\$—	4,180,484	\$ 6,271	42,617,893	\$ 4,262	\$ 79,655,191	\$ (62,404,722)	\$ 17,261,002
Issuance of preferred stock and common stock, March 2018	5,524,926	9,000,002	1,960,794	196	—	—	4,999,804	—	5,000,000
Beneficial conversion feature of the series A convertible preferred stock, March 2018	—	(995,000)	—	—	—	—	995,000	—	995,000
Deemed dividend on the series A convertible preferred stock, March 2018	—	995,000	—	—	—	—	(995,000)	—	(995,000)
Issuance of common stock, March 2018	—	—	716,425	72	—	—	1,305,702	—	1,305,774
Issuance of common stock, March 2018	—	—	478,853	48	—	—	750,052	—	750,100
Issuance of common stock in exchange for redemption of convertible debt	—	—	956,553	96	—	—	1,403,917	—	1,404,013
Issuance of common stock in exchange for services, March 2018	—	—	3,333	—	—	—	6,425	—	6,425
Issuance of common stock in exchange for payment of interest expense, March 2018	—	—	285,694	29	—	—	704,696	—	704,725
Stock-based compensation	—	—	—	—	—	—	272,243	—	272,243
Net loss	—	—	—	—	—	—	—	(5,696,637)	(5,696,637)
Balances - March 31, 2018	<u>5,524,926</u>	<u>\$ 9,000,002</u>	<u>8,582,136</u>	<u>\$ 6,712</u>	<u>42,617,893</u>	<u>\$ 4,262</u>	<u>\$ 89,098,030</u>	<u>\$ (68,101,359)</u>	<u>\$ 21,007,645</u>

	Series A Preferred Stock		Common stock - voting		Common stock - non-voting		Additional paid-in capital	Accumulated deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount			
Balances - January 1, 2019	5,524,926	\$ 9,000,002	24,603,104	\$ 2,460	40,301,237	\$ 4,030	\$ 99,927,410	\$ (94,550,779)	\$ 5,383,121
Issuance of common stock, net of offering costs	—	—	13,333,333	1,335	—	—	2,501,560	—	2,502,895
Issuance of common stock in exchange of notes payable and accrued interest	—	—	18,764,637	1,876	—	—	6,072,354	—	6,074,230
Issuance of common stock in exchange of accrued interest, January 2018	—	—	1,382,636	138	—	—	446,591	—	446,729
Issuance of common stock, net of offering costs, March 2019	—	—	1,331,332	133	—	—	266,133	—	266,266
Stock-based compensation	—	—	—	—	—	—	426,508	—	426,508
Net loss	—	—	—	—	—	—	—	(8,303,871)	(8,303,871)
Balances - March 31, 2019	<u>5,524,926</u>	<u>\$ 9,000,002</u>	<u>59,415,042</u>	<u>\$ 5,942</u>	<u>40,301,237</u>	<u>\$ 4,030</u>	<u>\$ 109,640,556</u>	<u>\$ (102,854,650)</u>	<u>\$ 6,795,878</u>

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

JAGUAR HEALTH, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

	Three Months Ended	
	March 31, 2019	March 31, 2018
Cash flows from operating activities		
Net loss	\$ (8,303,871)	\$ (5,696,637)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization expense	436,880	329,561
Interest paid on the conversion of debt to equity	—	20,496
Common stock issued in exchange for services rendered	—	6,425
Loss on extinguishment of debt	1,941,960	—
Amortization of operating lease right-of-use-assets	56,575	—
Stock-based compensation	426,508	272,243
Amortization of debt issuance costs and debt discount	178,180	403,824
Change in fair value of warrants, conversion option and derivative liability	46,057	267,854
Changes in assets and liabilities		
Accounts receivable	80,925	104,849
Other receivable	3,822	(1,034)
Inventory	382,130	(255,703)
Prepaid expenses and other current assets	149,929	130,694
Other non-current assets	27,172	—
Deferred collaboration revenue	—	(177,389)
Operating lease liabilities	(93,235)	—
Accounts payable	1,149,632	(4,192,753)
Accrued expenses	51,762	(834,123)
Total cash used in operating activities	(3,465,574)	(9,621,693)
Cash flows from investing activities		
Purchase of equipment	—	(6,527)
Proceeds from disposal of equipment	—	—
Total cash used in investing activities	—	(6,527)
Cash flows from financing activities		
Proceeds from issuance of notes payable	800,000	—
Proceeds from issuance of long-term debt	—	2,310,000
Repayment of notes payable	(100,000)	(1,689,199)
Proceeds from issuance of common stock through a stock purchase agreement with a private investor November 2017	—	1,305,774
Proceeds from the issuance of common stock, December 2017	—	750,100
Proceeds from the issuance of common stock, March 2018	—	5,000,000
Proceeds from the issuance of convertible preferred stock, March 2018	—	9,199,002
Proceeds from issuance of common stock, January to March 2019	2,502,895	—
Issuance of common stock, January 2019, net	266,266	—
Issuance costs associated with the issuance of convertible preferred stock, March 2018	—	(199,000)
Total cash provided by financing activities	3,469,161	16,676,677
Net increase in cash	3,587	7,048,457
Cash at beginning of period	2,568,191	759,867
Cash at end of period	\$ 2,571,778	\$ 7,808,324

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

JAGUAR HEALTH, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (continued)
(Unaudited)

	Three Months Ended	
	March 31, 2019	March 31, 2018
Supplemental schedule of non-cash financing and investing activities		
Interest paid on long-term debt	\$ -	\$ 19,344
Common stock issued as redemption of notes payable and related interest	\$ -	\$ 950,000
Common stock issued as redemption of notes payable and related interest	\$ -	\$ 1,158,308
Deemed dividend attributable to preferred stock	\$ -	\$ 995,000
Repayment of accrued interest on note payable by issuance of common stock	\$ 446,729	\$ -
Repayment of Note Payable principal by issuance of common stock	\$ 4,374,108	\$ -
Issuance of March 2019 letter of credit warrant	\$ 116,297	\$ -
Issuance of warrants with Notes Payable	\$ 892,713	\$ -

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

JAGUAR HEALTH, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and Business

Jaguar Health, Inc. (“Jaguar”, “we” or the “Company”), formerly known as Jaguar Animal Health, Inc., was incorporated on June 6, 2013 (inception) in Delaware. The Company was a majority-owned subsidiary of Napo Pharmaceuticals, Inc. (“Napo” or the “Former Parent”) until the close of the Company’s initial public offering on May 18, 2015. The Company was formed to develop and commercialize first-in-class gastrointestinal products for companion and production animals and horses. The Company’s first commercial product, Neonorm Calf, was launched in 2014 and Neonorm Foal was launched in the first quarter of 2016. The Company’s activities are subject to significant risks and uncertainties, including failing to secure additional funding in order to timely complete the development and commercialization of products.

On July 31, 2017, Jaguar completed a merger with Napo pursuant to the Agreement and Plan of Merger dated March 31, 2017 by and among Jaguar, Napo, Napo Acquisition Corporation (“Merger Sub”), and Napo’s representative (the “Merger Agreement”). In accordance with the terms of the Merger Agreement, upon the completion of the merger, Merger Sub merged with and into Napo, with Napo surviving as our wholly-owned subsidiary (the “Merger” or “Napo Merger”). Immediately following the Merger, Jaguar changed its name from “Jaguar Animal Health, Inc.” to “Jaguar Health, Inc.” Napo now operates as a wholly-owned subsidiary of Jaguar focused on human health and the ongoing commercialization of Mytesi, a Napo drug product approved by the U.S. FDA for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therapy.

The Company manages its operations through two segments—human health and animal health and is headquartered in San Francisco, California.

Reverse stock-split

On May 18, 2018, the stockholders of Jaguar approved at the 2018 Annual Meeting of Stockholders of the Company and the Board approved, in accordance with the authority granted by the Company’s stockholders at the Annual Meeting, a 1-for-15 reverse stock split of the Company’s issued and outstanding shares of common stock, effective June 1, 2018. The reverse split has been retrospectively reflected in all voting and non-voting common stock, warrants, and common stock option shares disclosed in these condensed consolidated financial statements. The non-voting common stock and the convertible preferred stock were excluded from the reverse split.

Liquidity and Going Concern

The accompanying condensed consolidated financial statements have been prepared assuming the Company will continue as a going concern. The Company has incurred recurring operating losses since inception and has an accumulated deficit of \$102.9 million as of March 31, 2019. The Company expects to incur substantial losses in future periods. Further, the Company’s future operations are dependent on the success of the Company’s ongoing development and commercialization efforts, as well as securing additional financing. There is no assurance that profitable operations, if ever achieved, could be sustained on a continuing basis.

The Company plans to finance its operations and capital funding needs through equity and/or debt financing, collaboration arrangements with other entities, as well as revenue from future product sales. However, there can be no assurance that additional funding will be available to the Company on acceptable terms on a timely basis, if at all, or that the Company will generate sufficient cash from operations to adequately fund operating needs or ultimately achieve profitability. If the Company is unable to obtain an adequate level of financing needed for the long-term development and commercialization of its products, the Company will need to curtail planned activities and reduce costs. Doing so will likely have an adverse effect on the Company’s ability to execute on its business plan. These matters raise substantial doubt about the ability of the Company to continue in existence as a going concern within one year after the

issuance date of the condensed consolidated financial statements. The accompanying condensed consolidated financial statements do not include any adjustments that might result from the outcome of these uncertainties.

On January 7, 2019, Jaguar entered into a common stock purchase agreement with Oasis Capital, relating to an offering of an aggregate of up to 5,333,333 shares of common stock via an equity line of credit. Under the terms of the purchase agreement, the Company has the right to "put," or sell, up to 5,333,333 shares of common stock to Oasis Capital for an amount equal to the product of (i) the number of shares set forth on the applicable put notice (minus the deposit and clearing fees associated with such purchase) and (ii) a fixed price of \$0.75 per share or such other price agreed upon between the Company and Oasis Capital. Jaguar had the option to increase the equity line of credit by an additional 8,000,000 shares of common stock by notifying Oasis Capital at any time after the effective date of the purchase agreement. In March 2019, Jaguar exercised this option. As of March 31, 2019, the Company had sold all of the 5,333,333 shares of common stock of the equity line and all 8,000,000 shares of common stock from the option to Oasis Capital.

Between January through March 31, 2019, Jaguar entered into exchange agreements with Chicago Venture Partners L.P., pursuant to which the Company issued to CVP 18,764,637 shares of common stock, with a fair value of \$6.1 million, in exchange for a reduction of approximately \$4.4 million in the principal amount of the CVP Promissory Notes and \$1.7 million in accrued interest thereon.

In March 2019, Jaguar began entering into securities purchase agreements with selected accredited investors, pursuant to which the Company intends to issue up to \$5.5 million aggregate principal amount of promissory notes to such Investors. As an inducement for entering into the Securities Purchase Agreement, each investor will also receive warrants exercisable for shares of the Company's common stock. As of March 31, 2019, two Notes with an aggregate principal of \$800,000 had been issued.

In March 2019, Jaguar entered into a securities purchase agreement with Oasis Capital pursuant to which Jaguar agreed to issue and sell, in a registered public offering by Jaguar directly to Oasis, an aggregate of 1,331,332 shares of common stock at an offering price of \$0.20 for gross proceeds of approximately \$266,266.

2. Summary of Significant Accounting Policies

Basis of Presentation

The condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") for interim financial information and on a basis consistent with the annual consolidated financial statements, and in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for a fair presentation of the periods presented. These interim financial results are not necessarily indicative of the results to be expected for the year ending December 31, 2019, or for any other future annual or interim period. These unaudited condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and notes thereto contained in our Annual Report on Form 10-K for the year ended December 31, 2018.

There has been a material change to the Company's significant accounting policies during the three months ended March 31, 2019, as compared to the significant accounting policies described in Note 2 of the "Notes to Condensed Consolidated Financial Statements" in the Company's Annual Report on Form 10-K for the year ended December 31, 2018. The Company adopted ACS 842 "Leases" and implemented a new policy to account for modifications of preferred stock using the model in ASC 470-50.

Principals of Consolidation

The condensed consolidated financial statements have been prepared in accordance with US GAAP and applicable rules and regulations of the Securities and Exchange Commission ("SEC") and include the accounts of the

Company and its wholly owned subsidiary. All inter-company transactions and balances have been eliminated in consolidation.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires the Company's management to make judgments, assumptions and estimates that affect the amounts reported in its consolidated financial statements and the accompanying notes. The accounting policies that reflect the Company's more significant estimates and judgments and that the Company believes are the most critical to aid in fully understanding and evaluating its reported financial results are valuation of stock options; valuation of warrant liabilities; valuation of derivative liability, impairment testing of goodwill, acquired in-process research and development ("IPR&D"), and long lived assets; useful lives for depreciation and amortization; valuation adjustments for excess and obsolete inventory; allowance for doubtful accounts; deferred taxes and valuation allowances on deferred tax assets; evaluation and measurement of contingencies; and recognition of revenue, including estimates for product returns. Those estimates could change, and as a result, actual results could differ materially from those estimates.

Concentrations

Cash is the financial instrument that potentially subjects the Company to a concentration of credit risk as cash is deposited with a bank and cash balances are generally in excess of Federal Deposit Insurance Corporation insurance limits. The carrying value of cash approximates fair value at March 31, 2019 and December 31, 2018.

For the three months ended March 31, 2019 and 2018, substantially all of the Company's revenue has been derived from the sale of Mytesi. For the three months ended March 31, 2019, the Company earned Mytesi revenue primarily from two pharmaceutical distributors in the United States. For the three months ended March 31, 2018, the Company earned Mytesi revenue primarily from four pharmaceutical distributors in the United States, each of whom amounted to a percentage of total net revenue of at least 10%. Revenue earned from each as a percentage of total net revenue is as follows:

<i>Consolidated (percentage of total net sales)</i>	For the three months ended	
	March 31,	
	2019	2018
Customer 1	68 %	20 %
Customer 2	30 %	— %
Customer 3	— %	21 %
Customer 4	— %	21 %
Customer 5	— %	18 %
Other*	2 %	20 %
	100 %	100 %

*- No other customer represented more than 10% of net sales

The Company is subject to credit risk from its accounts receivable related to its sales. The Company generally does not perform evaluations of customers' financial condition and generally does not require collateral. The Company's significant pharmaceutical distributors and their related accounts receivable balance as a percentage of total accounts receivable were as follows:

	As of March 31, 2019	As of March 31, 2018
Customer 1	75 %	— %
Customer 2	24 %	95 %
Customer 3	1 %	5 %

No other customer represented more than 10% of the Company's accounts receivable balances as of those dates.

The Company is subject to credit risk from its inventory suppliers. The Company sources drug substance from a single supplier and drug product from a single supplier.

Fair Values

The Company's financial instruments include, cash, accounts receivable, accounts payable, warrant liabilities, derivative liability, debt conversion option liability, and debt. Cash is reported at fair value. The recorded carrying amount of accounts receivable, accounts payable and accrued expenses reflect their fair value due to their short-term nature. The carrying value of the interest-bearing debt approximates fair value based upon the borrowing rates currently available to the Company for bank loans with similar terms and maturities. See Note 3 for the fair value measurements.

Inventories

Inventories are stated at the lower of cost or net realizable value. The Company calculates inventory valuation adjustments when conditions indicate that net realizable value is less than cost due to physical deterioration, usage, obsolescence, reductions in estimated future demand or reduction in selling price. Inventory write-downs are measured as the difference between the cost of inventory and net realizable value.

Land, Property and Equipment

Land is stated at cost, reflecting fair value of the property at July 31, 2017, the date of the Napo merger. Equipment is stated at cost, less accumulated depreciation. Equipment begins to be depreciated when it is placed into service. Depreciation is calculated using the straight-line method over the estimated useful lives of 3 to 10 years.

Expenditures for repairs and maintenance of assets are charged to expense as incurred. Costs of major additions and betterments are capitalized and depreciated on a straight-line basis over their estimated useful lives. Upon retirement or sale, the cost and related accumulated depreciation of assets disposed of are removed from the accounts and any resulting gain or loss is included in the statements of operations and comprehensive loss.

Long-Lived Assets

The Company regularly reviews the carrying value and estimated lives of all of its long-lived assets, including property and equipment to determine whether indicators of impairment may exist that warrant adjustments to carrying values or estimated useful lives. The determinants used for this evaluation include management's estimate of the asset's ability to generate positive income from operations and positive cash flow in future periods as well as the strategic significance of the assets to the Company's business objectives.

Definite-lived intangible assets are amortized on a straight-line basis over the estimated periods benefited, and are reviewed when appropriate for possible impairment.

Leases

ASC Topic 842, Leases, requires lessees to recognize right-of-use assets and lease liabilities for all leases with a term of greater than 12 months regardless of their classification on the balance sheet and to provide expanded disclosures about leasing arrangements. The Company adopted Topic 842 effective January 1, 2019 using the optional transition method and did not restate comparative periods. There was no effect on accumulated deficit at adoption.

The Company has elected the package of practical expedients to (i) not reassess whether expired or existing contracts are or contain leases, (ii) not reassess the lease classification for any expired or existing leases and (iii) not reassess the accounting for initial direct costs.

The adoption of the new leases standard resulted in the following adjustments to the consolidated balance sheet as of January 1, 2019:

	December 31, 2018	Adoption Impact	January 1, 2019
			(unaudited)
Operating lease right-of-use assets	—	1,111,214	1,111,214
Operating leases liabilities, current portion	—	336,647	336,647
Operating leases liabilities, long term	—	394,703	394,703
Deferred rent	379,864	(379,864)	—

At the inception of an arrangement, the Company determines whether the arrangement is or contains a lease based on the unique facts and circumstances present. Operating lease liabilities and their corresponding right-of-use assets are recorded based on the present value of lease payments over the expected lease term. The interest rate implicit in lease contracts is typically not readily determinable. As such, the Company utilizes its incremental borrowing rate, which is the rate incurred to borrow on a collateralized basis over a similar term, an amount equal to the lease payments in a similar economic environment. Certain adjustments to the right-of-use asset may be required for items such as initial direct costs paid or incentives received.

Operating Lease

The Company has a non-cancelable operating lease with CA-Mission Street Limited Partnership for its offices in San Francisco, California through September 1, 2020. The lease agreement calls for monthly base rents between \$38,391 and \$40,730 over the term of the lease.

Prior to the Company's adoption of ASC 842 on January 1, 2019, the Company recorded lease expense for its operating leases in accordance with ASC 840.

Goodwill and Indefinite-lived Intangible Assets

Goodwill is tested for impairment on an annual basis and in between annual tests if events or circumstances indicate that an impairment loss may have occurred. The test is based on a comparison of the reporting unit's book value to its estimated fair market value. The Company performs the annual impairment test during the fourth quarter of each fiscal year using the opening consolidated balance sheet as of the first day of the fourth quarter, with any resulting impairment recorded in the fourth quarter of the fiscal year. The Company did not record an impairment of goodwill during the three months ended March 31, 2019 and 2018.

Acquired in-process research and development (IPR&D) are intangible assets initially recognized at fair value and classified as indefinite-lived assets until the successful completion or abandonment of the associated research and development efforts. During the development period, these assets will not be amortized as charges to earnings; instead these assets will be tested for impairment on an annual basis or more frequently if impairment indicators are identified. The Company analyzed and determined that there was no impairment to IPR&D in the three months ended March 31, 2019 due to the January 2019 change in distributors from Mission to Cardinal Health. The Company did not record an impairment for indefinite-lived intangible assets during the three months ended March 31, 2019 and 2018.

Research and Development Expense

Research and development expense consists of expenses incurred in performing research and development activities including related salaries, clinical trial and related drug and non-drug product costs, contract services and other outside service expenses. Research and development expense is charged to operating expense in the period incurred.

Revenue Recognition

The Company recognizes revenue in accordance with ASC Topic 606, *Revenue from Contracts with Customers* (“ASC 606”), which was adopted on January 1, 2018, using the modified retrospective method, which was elected to apply to all active contracts as of the adoption date. Application of the modified retrospective method did not impact amounts previously reported by the Company, nor did it require a cumulative effect adjustment upon adoption, as the Company's method of recognizing revenue under ASC 606 yielded similar results to the method utilized immediately prior to adoption. Accordingly, there was no effect to each financial statement line item as a result of applying the new revenue standard.

Practical Expedients, Elections, and Exemptions

The Company recognizes revenue in accordance with the core principle of ASC 606 or when there is a transfer of control of promised goods or services to customers in an amount that reflects the consideration that the Company expects to be entitled to in exchange for those goods or services.

The Company used a practical expedient available under ASC 606-10-65-1(f)4 that permits it to consider the aggregate effect of all contract modifications that occurred before the beginning of the earliest period presented when identifying satisfied and unsatisfied performance obligations, transaction price, and allocating the transaction price to the satisfied and unsatisfied performance obligations.

The Company also used a practical expedient available under ASC 606-10-32-18 that permits it to not adjust the amount of consideration for the effects of a significant financing component if, at contract inception, the expected period between the transfer of promised goods or services and customer payment is one year or less.

The Company has elected to treat shipping and handling activities as fulfillment costs.

Additionally, the Company elected to record revenue net of sales and other similar taxes.

Contracts

Effective January 16, 2019, Napo Pharmaceuticals, Inc. engaged Cardinal Health as its exclusive third party logistics distribution agent for commercial sales for the Company's Mytesi product and to perform certain other services which include, without limitation, storage, distribution, returns, customer support, financial support, EDI and system access support (Exclusive Distribution Agreement) .

In addition to the terms and conditions of the Agreement, Cardinal Health's purchase of products, and assumption of title therein, is set forth in the Title Model Addendum. The Title Model Addendum states that upon receipt of product at the 3PL Facility (Cardinal Health in La Vergne, Tennessee) from the Company, title and risk of loss for the Mytesi product purchased by Cardinal Health (excluding consigned inventory) shall pass to Cardinal Health, and title and risk of loss for consigned inventory shall remain with Client until purchased by Cardinal Health in accordance with this Addendum. Napo Pharmaceuticals, Inc. considers Cardinal Health the Company's exclusive customer for Mytesi products per the Cardinal Health Exclusive Distribution agreement.

Jaguar's Neonorm and Botanical extract products are primarily sold to distributors, who then sell the products to the end customers. Since 2014, the Company has entered into several distribution agreements with established distributors such as Animart, Vedco, VPI, RJ Matthews, Henry Schein, and Stockmen Supply to distribute the Company's products in the United States, Japan, and China. The distribution agreements and the related purchase order together meet the contract existence criteria under ASC 606-10-25-1. Jaguar sells directly to its customers without the use of an agent.

Performance obligations

For animal products sold by Jaguar Health, the single performance obligation identified above is the Company's promise to transfer the Company's animal products to distributors based on specified payment and shipping terms in the arrangement. Product warranties are assurance type warranties that do not represent a performance obligation. For the Company's human product, Mytesi, which is sold by Napo Pharmaceuticals Inc., the single performance obligation identified above is the Company's promise to transfer Mytesi to Cardinal Health, the Company's exclusive distributor for the product, based on specified payment and shipping terms as outlined in the Exclusive Distribution Agreement. The product warranties are assurance type warranties that do not represent a performance obligation.

Transaction price

For both Jaguar and Napo, the transaction price is the amount of consideration to which the Company expects to collect in exchange for transferring promised goods or services to a customer. The transaction price of Mytesi and Neonorm is the Wholesaler Acquisition Cost ("WAC"), net of discounts, returns, and price adjustments.

Allocate transaction price

For both Napo and Jaguar, the entire transaction price is allocated to the single performance obligation contained in each contract.

Point in time recognition

For both Napo and Jaguar, a single performance obligation is satisfied at a point in time, upon the free on board ("FOB") terms of each contract when control, including title and all risks, has transferred to the customer.

Disaggregation of Product Revenue

Human

Sales of Mytesi are recognized as revenue when the products are delivered to the Cardinal wholesaler. Net revenues from the sale of Mytesi were \$1,543,121 and \$583,269 for the three months ended March 31, 2019 and 2018, respectively.

Animal

The Company recognized Neonorm revenues of \$46,612 and \$43,698 for the three months ended March 31, 2019 and 2018, respectively. Revenues are recognized upon shipment which is when title and control is transferred to the buyer. Sales of Neonorm Calf and Foal to distributors are made under agreements that may provide distributor price adjustments and rights of return under certain circumstances.

Collaboration Revenue

On January 27, 2017, the Company entered into a licensing, development, co-promotion and commercialization agreement with Elanco US Inc. ("Elanco") to license, develop and commercialize Canalevia, the Company's drug product candidate under investigation for treatment of acute and chemotherapy-induced diarrhea in dogs, and other drug product formulations of crotelemer for treatment of gastrointestinal diseases, conditions and symptoms in cats and other companion animals. On November 1, 2017, the Company received a letter from Elanco serving as formal notice of their decision to terminate the agreement by giving the Company 90 days written notice. According to the agreement, termination became effective on January 30, 2018. Under the terms of the agreement, the Company received revenue of \$0 and \$177,389 in the three months ended March 31, 2019 and 2018, respectively.

On September 24, 2018, the Company entered into a Distribution, License and Supply Agreement ("License Agreement") with Knight Therapeutics, Inc. ("Knight"). The License Agreement has a term of 15 years (with automatic renewals) and provides Knight with an exclusive right to commercialize current and future Jaguar human health products (including Crofelemer, Lechlemer, and any product containing a proanthocyanidin or with an anti-secretory mechanism) in Canada and Israel. In addition, Knight was granted a right of first negotiation for expansion to Latin America. Under the License Agreement, Knight is responsible for applying for and obtaining necessary regulatory approvals in the territory of Canada and Israel, as well as marketing, sales and distribution of the licensed products. Knight will pay a transfer price for all licensed products, and upon achievement of certain regulatory and sales milestones, Jaguar may receive payments from Knight in an aggregate amount of up to approximately \$18 million payable throughout the initial 15-year term of the agreement. The Company did not have any license revenues in the three months ended March 31, 2019 and 2018.

Comprehensive Income (Loss)

For all periods presented, the comprehensive income (loss) was equal to the net income (loss); therefore, a separate statement of comprehensive income (loss) is not included in the accompanying condensed consolidated financial statements.

Recent Accounting Pronouncements

In June 2018, the FASB issued ASU 2018-07, *Compensation - Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting*. This update expands the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees. The amendments specify that Topic 718 applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor's own operations by issuing share-based payment awards. The amendments also clarify that Topic 718 does not apply to share-based payments used to effectively provide (1) financing to the issuer or (2) awards granted in conjunction with selling goods or services to customers as part of a contract accounted for under ASC 606. The amendments in ASU 2018-07 are effective for public business entities for fiscal years beginning after December 15, 2018, including interim periods within that fiscal year. Early adoption is permitted. The Company adopted this standard on January 1, 2019, and this standard did not have a material impact on the Company's financial position, results of operations or disclosures.

In August 2018, the FASB issued ASU 2018-15, *Intangible - Goodwill and Other - Internal-Use Software (Subtopic 350-40)*, which aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. ASU2018-15 is effective for the Company in the first quarter of 2020. Early adoption is permitted. ASU2018-15 permits either a prospective or retrospective transition approach. The Company is currently evaluating ASU2018-15 to determine the impact to its condensed consolidated financial statements and related disclosures.

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820)*. The new guidance modifies the disclosure requirements on fair value measurements. ASU 2018-13 is effective for the Company beginning in the first quarter of 2020 and must be adopted on a modified retrospective basis, with certain exceptions. Early adoption is permitted. The Company does not expect ASU 2018-13 to have a significant impact to its condensed consolidated financial statements and related disclosures.

3. Fair Value Measurements

ASC 820 "Fair Value Measurements," defines fair value, establishes a framework for measuring fair value under generally accepted accounting principles and enhances disclosures about fair value measurements. Fair value is defined under ASC 820 as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market

participants on the measurement date. Valuation techniques used to measure fair value under ASC 820 must maximize the use of observable inputs and minimize the use of unobservable inputs. The standard describes a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value which are the following:

- Level 1— Observable inputs such as quoted prices (unadjusted) for identical instruments in active markets.
- Level 2— Observable inputs such as quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, or model derived valuations whose significant inputs are observable.
- Level 3— Unobservable inputs that reflect the reporting entity’s own assumptions.

The following tables set forth the fair value of the Company’s financial instruments that were measured at fair value on a recurring basis as of March 31, 2019 and December 31, 2018.

	March 31, 2019 (unaudited)			
	Level 1	Level 2	Level 3	Total
Warrant liability	\$ —	\$ —	\$ 1,275,443	\$ 1,275,443
Total fair value	\$ —	\$ —	\$ 1,275,443	\$ 1,275,443

	December 31, 2018			
	Level 1	Level 2	Level 3	Total
Warrant liability	\$ —	\$ —	\$ 220,376	\$ 220,376
Total fair value	\$ —	\$ —	\$ 220,376	\$ 220,376

The change in the estimated fair value of Level 3 liabilities is summarized below:

	Three Months Ended March 31, 2019 Warrant Liability (unaudited)
Beginning fair value of Level 3 liability	\$ 220,376
Additions	1,009,010
Extinguishment	—
Change in fair value	46,057
Ending fair value of Level 3 liability	\$ 1,275,443

Warrant Liability

The warrants associated with the Level 3 warrant liability were the November 2016 Series A Warrants, the October 2018 Underwriter Warrants, the Notes Payable warrants and the LOC warrant, which at March 31, 2019 were valued at \$10,994, \$274,018, \$874,134, and \$116,297 respectively in the Company’s consolidated balance sheet. At December 31, 2018, the warrants associated with the Level 3 warrant liability were the November 2016 Series A Warrants, the October 2018 Underwriter Warrants, which were valued at \$7,388 and \$212,988, respectively in the Company’s consolidated balance sheet.

The Series A warrant valuation of \$7,388 at December 31, 2018 was computed using the Black-Scholes-Merton pricing model using a stock price of \$0.23, a strike price of \$11.25 per share, an expected term of 3.41 years, volatility of 135.63% and a risk-free discount rate of 2.46%. The Series A warrant valuation of \$10,994 at March 31, 2019 was computed using the Black-Scholes-Merton pricing model using a stock price of \$0.28, a strike price of \$11.25 per share, an expected term of 3.16 years, volatility of 145.72% and a risk-free discount rate of 2.21%. The net change in the fair

value of the warrants of \$3,606 for the three months ended March 31, 2019 is recorded in the change in fair value of warrants, derivative liability and conversion option liability in the consolidated statements of operations

The October 2018 Underwriter Warrants valuation of \$212,988 at December 31, 2018 was computed using the Black-Scholes-Merton pricing model using a stock price of \$0.23, a strike price of \$0.75 per share, an expected term of 4.76 years, volatility of 135.63% and a risk free discount rate of 2.51%. The October 2018 Underwriter Warrants valuation of \$274,018 at March 31, 2019 was computed using the Black-Scholes-Merton pricing model using a stock price of \$0.28, a strike price of \$0.75 per share, an expected term of 4.51 years, volatility of 145.72% and a risk-free discount rate of 2.23%. The net change in the fair value of the warrants of \$61,030 for the three months ended March 31, 2019 is recorded in the change in fair value of warrants, derivative liability and conversion option liability in the consolidated statements of operations

The Note Payable Warrants were issued in March 2019 with an initial valuation of \$892,713, computed using the Black-Scholes-Merton pricing model using a stock price of \$0.47, a strike price of \$0.47 per share, an expected term of 5.0 years, volatility of 145.72% and a risk free discount rate of 2.42%. The Note Payable Warrants valuation of \$874,134 at March 31, 2019 was computed using the Black-Scholes-Merton pricing model using a stock price of \$0.28, a strike price of \$0.47 per share, an expected term of 5.0 years, volatility of 145.72% and a risk-free discount rate of 2.23%. The net change in the fair value of the warrants of \$18,579 for the three months ended March 31, 2019 is recorded in the change in fair value of warrants, derivative liability and conversion option liability in the consolidated statements of operations.

The LOC Warrants were issued on March 29, 2019 with a valuation at issuance and at March 31, 2019 of \$116,297, computed using the Black-Scholes-Merton pricing model using a stock price of \$0.28, a strike price of \$0.25 per share, an expected term of 5.0 years, volatility of 145.72% and a risk-free discount rate of 2.23%.

4. Balance Sheet Components

Goodwill

The change in the carrying amount of goodwill at March 31, 2019 and December 31, 2018 was as follows:

	March 31, 2019 <u>(unaudited)</u>	December 31, 2018
Beginning balance	\$ —	\$ 5,210,821
Impairment	—	(5,210,821)
Ending balance	<u>\$ —</u>	<u>\$ —</u>

Intangible assets

Intangible assets at March 31, 2019 and December 31, 2018 consisted of the following:

	March 31, 2019 (unaudited)	December 31, 2018
Developed technology	\$ 25,000,000	\$ 25,000,000
Accumulated developed technology amortization	(2,777,778)	(2,361,111)
Developed technology, net	<u>22,222,222</u>	<u>22,638,889</u>
In process research and development	8,800,000	8,800,000
Trademarks	300,000	300,000
Accumulated trademark amortization	(33,333)	(28,333)
Trademarks, net	<u>266,667</u>	<u>271,667</u>
Total intangible assets, net	<u>\$ 31,288,889</u>	<u>\$ 31,710,556</u>

Amortization expense was \$421,667 in the three months ended March 31, 2019 and 2018.

The following table summarizes the Company's estimated future amortization expense of intangible assets with finite lives as of March 31, 2019:

	Amounts
2020	\$ 1,265,000
2021	1,686,667
2022	1,686,667
2023	1,686,667
2024	1,686,667
Thereafter	14,477,221
	<u>\$ 22,488,889</u>

5. Related Party Transactions**Management Services Agreement**

In March 2018, concurrent with the issuance of the Company's Series A convertible participating preferred stock to Sagard Capital Partners, the Company entered into a Management Services Agreement with Sagard Capital Partners. Under the agreement, Sagard Partners will provide consulting and management advisory service to the Company from March 2018 through March 2021. These services include assistance with strategic planning regarding the Company's commercial strategy, research and due diligence regarding human resource activities, and strategic advice in financial matters. In consideration for such services, the Company will pay Sagard Capital Partners an annual fee of \$450,000, with total fees over the term of the agreement not to exceed \$1,350,000.

Letter of Credit

To satisfy the letter of credit requirement in the Company's new office lease agreement, Pacific Capital Management, LLC, one of the Company's existing shareholders, caused its financial institution to issue a letter of credit in the amount of \$475,000 on behalf of the Company, dated August 28, 2018. In consideration of the letter of credit, in August 2018 the Company issued to Capital Management, LLC a warrant to purchase 670,586 shares of the Company's voting common stock. The warrant is exercisable on or after March 28, 2019 at an exercise price of \$0.70 per common

share and has a five year term. The \$493,688 fair value of the Warrant was classified in the statement of stockholders' equity (see Note 6).

6. Commitments and Contingencies

On August 28, 2018, the Company entered into an office lease extension agreement for approximately 6,311 square feet of office space in San Francisco, CA. The term of the Lease began on September 1, 2018 and will expire on September 30, 2020, unless earlier terminated in accordance therewith. The monthly base rent under the Lease is as follows: \$38,392 for the first twelve months, \$39,544 for the subsequent twelve months, and \$40,730 for the final month. The Company will also pay an additional monthly amount for the Company's proportionate share of the building's operating charges. An existing shareholder provided a standby letter of credit in the amount of \$475,000 to the Lessor as collateral for the full performance by the Company of all of its obligations under the Lease. In consideration of the Letter of Credit, the Company issued the existing shareholder a five-year warrant to purchase 670,586 shares of the Company's voting common stock (see Note 5). The Warrant is exercisable on or after March 28, 2019 at an exercise price of \$0.70 per share. The fair value of the warrant was determined to be \$493,688 using the Black-Scholes-Merton model with the following criteria: stock price of \$0.84 per share, expected life of 5 years, volatility of 132%, risk-free rate of 2.77% and dividend rate of 0%. The \$493,688 fair value of the Warrant was classified in the statement of stockholders' equity with an offset to deferred rent. Each month, \$19,748 of this rent will be recognized as non-cash rent expense.

In December 2018, the Company did not meet a covenant per the terms of the \$475,000 Letter of Credit, the result of which required the Company to issue a Letter of Credit of \$122,000 to the shareholder who issued the original \$475,000 letter of credit. In March 2019, the Company canceled the \$122,000 letter of credit in lieu of issuing the shareholder a promissory note for that amount in April 2019, as well as issuing the shareholder a warrant (see Note 7).

The Company recognizes lease expense on a straight-line basis over the non-cancelable lease period. Lease expense was \$171,750 and \$90,278 for the three months ended March 31, 2019 and 2018. Lease expense is included in general and administrative expense in the statements of operations.

Asset transfer and transition commitment update

On September 25, 2017, Napo entered into the Termination, Asset Transfer and Transition Agreement dated September 22, 2017 with Glenmark Pharmaceuticals Ltd. ("Glenmark"). As a result of the agreement, Napo now controls commercial rights for Mytesi® for all indications, territories and patient populations globally, and also holds commercial rights to the existing regulatory approvals for crofelemer in Brazil, Ecuador, Zimbabwe and Botswana. In exchange, Napo agrees to pay Glenmark 25% of any payment it receives from a third party to whom Napo grants a license or sublicense or with whom Napo partners in respect of, or sells or otherwise transfers any of the transferred assets, subject to certain exclusions, until Glenmark has received a total of \$7.0 million. No payments have been made to date.

Revenue sharing commitment update

On December 14, 2017, the Company announced its entry into a collaboration agreement with Seed Mena Businessmen Services LLC ("SEED") for Equilevia™, the Company's non-prescription, personalized, premium product for total gut health in equine athletes. According to the terms of the Agreement, the Company will pay SEED 15% of total revenue generated from any clients or partners introduced to the Company by SEED in the form of fees, commissions, payments or revenue received by the Company or its business associates or partners, and the agreed-upon revenue percentage increases to 20% after the first million dollars of revenue. In return, SEED will provide the Company access to its existing UAE ("United Arab Emirates") network and contacts and assist the Company with any legal or financial requirements. The agreement became effective on December 13, 2017 and will continue indefinitely until terminated by either party pursuant to the terms of the Agreement. Upon termination for any reason, the Company remains obligated to make Revenue Sharing Payments to SEED until the end of 2018. No payments have been made to date.

Commitment to purchase Bridge Notes

Sagard Capital Partners, L.P. has committed to purchase short-term notes payable in the amount of \$500,000. As of March 31, 2019, no notes payable have been issued to Sagard.

Purchase Commitment

As of March 31, 2019, the Company had no material purchase orders to vendors.

Legal Proceedings

On July 20, 2017, a putative class action complaint was filed in the United States District Court, Northern District of California, Civil Action No. 3:17-cv-04102, by Tony Plant (the “Plaintiff”) on behalf of shareholders of the Company who held shares on April 12, 2017 and were entitled to vote at the 2017 Special Shareholders Meeting, against the Company and certain individuals who were directors as of the date of the vote (collectively, the “Defendants”), in a matter captioned Tony Plant v. Jaguar Animal Health, Inc., et al., making claims arising under Section 14(a) and Section 20(a) of the Exchange Act and Rule 14a-9, 17 C.F.R. § 240.14a-9, promulgated thereunder by the SEC. The claims alleged false and misleading information provided to investors in the Joint Proxy Statement/Prospectus on Form S-4 (File No. 333-217364) declared effective by the Commission on July 6, 2017 related to the solicitation of votes from shareholders to approve the merger and certain transactions related thereto. The Company accepted service of the complaint and summons on behalf of itself and the United States-based director Defendants on November 1, 2017. The Company has not accepted service on behalf of, and Plaintiff has not yet served, the non-U.S.-based director Defendants. On October 3, 2017, Plaintiff filed a motion seeking appointment as lead plaintiff and appointment of Monteverde & Associates PC as lead counsel. That motion was granted. Plaintiff filed an amended complaint against the Company and the United States-based director Defendants on January 10, 2018. The Defendants filed a motion to dismiss on March 12, 2018, for which oral arguments were held on June 14, 2018. The court dismissed the amended complaint on September 20, 2018. Plaintiff was entitled to amend that complaint within 20 days from the date of dismissal. On October 10, 2018, Plaintiff amended the amended complaint to focus on the Company’s commercial strategy in support of Equilevia and the related disclosure statements in the Form S-4 described above. On November 6, 2018, the Defendants moved to dismiss the second amended complaint. The Defendants argue in their motion that the second amended complaint fails to state a claim upon which relief can be granted because the omissions and misrepresentations alleged in the complaint are immaterial as a matter of law. The motion has been fully briefed and is pending decision by the court. If the Plaintiff were able to prove his allegations in this matter and to establish the damages he asserts, then an adverse ruling could have a material impact on the Company. The Company believes that it is not probable that an asset has been impaired or a liability has been incurred as of the date of the financial statements and the amount of any potential loss is not reasonably estimable.

Other than as described above, there are currently no claims or actions pending against us, the ultimate disposition of which could have a material adverse effect on our results of operations, financial condition or cash flows.

Contingencies

From time to time, the Company may be involved in legal proceedings (other than those noted above) arising in the ordinary course of business. The Company believes there is no litigation pending that could have, individually or in the aggregate, a material adverse effect on the financial position, results of operations or cash flows.

7. Debt and Warrants

Convertible Notes

Convertible notes at March 31, 2019 and December 31, 2018 consist of the following:

	March 31, 2019 (unaudited)	December 31, 2018
June 2017 convertible debt	\$ 740,882	\$ 740,882
Napo convertible debt	10,446,751	10,553,888
	11,187,633	11,294,770
Less: unamortized debt discount and debt issuance costs	(37,689)	(55,600)
Net convertible debt obligation	<u>\$ 11,149,944</u>	<u>\$ 11,239,170</u>
Convertible debt - non-current, net of discount	—	—
Convertible debt - current, net of discount	<u>\$ 11,149,944</u>	<u>\$ 11,239,170</u>

February 2015 Convertible Note

In February 2015, the Company issued a convertible promissory note to an accredited investor in the aggregate principal amount of \$150,000. This note was issued pursuant to the convertible note purchase agreement dated December 23, 2014. In March of 2018, the debtor agreed to accept 135,605 shares of the Company's common stock as payment for all outstanding principal and interest in the amount of \$203,408.

June 2017 Convertible Note

On June 29, 2017, the Company issued a secured convertible promissory note to Chicago Venture Partners, L.P. ("CVP") in the aggregate principal amount of \$2,155,000 less an original issue discount of \$425,000 and less \$30,000 to cover the lender's legal fees for net cash proceeds of \$1,700,000. Interest on the outstanding balance will be paid 8% per annum from the purchase price date until the balance is paid in full.

The Note provides for two separate features that result in a derivative liability:

1. Repayment of mandatory default amount upon an event of default—upon the occurrence of any event of default, the lender may accelerate the Note resulting in the outstanding balance becoming immediately due and payable in cash; and
2. Automatic increase in the interest rate on and during an event of default—during an event of default, the interest rate will increase to the lesser of 17% per annum or the maximum rate permitted under applicable law.

The Company computed fair values at the date of issuance of \$15,000 and \$5,000 for the repayment and the interest rate increase feature, respectively, using the Binomial Lattice Model, which was based on the generalized binomial option pricing formula. The \$20,000 combined fair value was carved out and was included as a derivative liability on the Balance Sheet. The derivatives were revalued at September 30, 2018 and determined to have a de minimis fair value.

On August 2, 2018, the Company and CVP agreed to an amendment extending the maturity date to August 26, 2019, and limiting the aggregate amount that CVP is permitted to redeem on a monthly basis to \$500,000, which is the maximum aggregate redemption amount for all notes outstanding with CVP. This amendment resulted in the Company accounting for the transaction as a troubled debt restructuring, under which the carrying amount of the note payable remained unchanged but interest expense is computed using a new effective rate that equates the present value of the future cash payments specified by the new terms with the carrying amount of the note.

Between October 2018 and December 2018, the Company and CVP renegotiated the terms of the June 2017 Note agreement such that CVP agreed not to make any redemptions of the Note until March 2019. In consideration of this standstill arrangement, the Company paid CVP a total standstill fee of \$499,403 for all four CVP Notes. The standstill fee allocated to the June 2017 Note was \$63,296, of which \$37,296 increased the principal balance and \$26,000 was paid in cash. These restructurings in whole represented four separate restructurings of the June 2017 Convertible Note agreement, resulting in two troubled debt restructurings accounted for under ASC 470-60 and two modifications accounted for under ASC 470-50. For the two modifications resulting in troubled debt restructurings, the changes were accounted for prospectively and a new effective interest rate was determined that equated the present value of the future cash payments specified by the new terms with the carrying amount of the Note. For the two modifications that resulted in modification accounting, a new effective rate was determined at the date of modification that equated the revised cash flows to the carrying amount of the Note.

The balance of the June 2017 convertible debt as of March 31, 2019 of \$703,193 consists of the \$740,882 face value of the note less a note discount of \$37,689, and is included in convertible debt in the current liabilities section of the consolidated balance sheet. The balance of the June 2017 convertible debt as of December 31, 2018 of \$685,282 consisted of the \$740,882 face value of the note less a note discount of \$55,600, and is included in convertible debt in the current liabilities section of the consolidated balance sheet.

Napo Convertible Notes

March 2017 Convertible Notes

In March 2017, Napo entered into an exchangeable Note Purchase Agreement with two lenders for the funding of face amount of \$1,312,500 in two \$525,000 tranches of face amount \$656,250. The notes bear interest at 3% and mature on December 1, 2017. The Company assumed the notes at fair value of \$1,312,500 as part of the Napo Merger.

First Amendment to Note Purchase Agreement and Notes

In December 2017, Napo amended the exchangeable note purchase agreement to extend the maturity of the first tranche and second tranche of notes to February 15, 2018 and April 1, 2018, respectively, increase the principal amount by 12%, and reduce the conversion price from \$0.56 per share to \$0.20 per share. The Company also issued 2,492,084 shares of common stock to the lenders in connection with this amendment to partially redeem \$299,050 from the first tranche of the notes. The amended face value of the notes was \$1,170,950. This amendment resulted in the Company treating the notes as having been extinguished and replaced with new notes for accounting purposes due to meeting the 10% cash flow test. The conversion option in the notes was bifurcated and accounted for as a conversion option liability at its fair value.

Second Amendment to Note Purchase Agreement and Notes

On February 16, 2018, Napo amended the exchangeable note purchase agreement to extend the maturity date of the Second Tranche Notes from April 1, 2018 to May 1, 2018. In addition, the Company also issued 3,783,444 shares of common stock to the Purchasers as repayment of the remaining \$435,950 aggregate principal amount and \$18,063 in accrued and unpaid interest thereon. On March 23, 2018, the Company paid off the remaining \$735,000 of principal and \$20,699 in interest due on the second tranche debt in cash with proceeds from the March 23, 2018 equity financing. The fair value of the conversion option liability was again revalued at March 23, 2018 using the Black-Scholes-Merton model using the following criteria: stock price of \$0.21 per share, expected life of 0.11 years, volatility of 288.16%, risk free rate of 1.69% and dividend rate of 0%, resulting in an increase of \$174,754 to the fair value of the conversion option liability and included in the change in fair value of warrants and conversion option liability in the statements of operations. The underlying debt was paid off in March of 2018 and the \$286,595 conversion option liability was written off to other income in the statements of operations.

December 2016 Convertible Notes

In December 2016, Napo entered into a note purchase agreement which provided for the sale of up to \$12,500,000 face amount of notes and issued convertible promissory notes (the Napo December 2016 Notes) in the aggregate face amount of \$2,500,000 to three lenders and received proceeds of \$2,000,000 which resulted in \$500,000 of original issue discount. In July 2017, Napo issued convertible promissory notes (the Napo July 2017 Notes) in the aggregate face amount of \$7,500,000 to four lenders and received proceeds of \$6,000,000 which resulted in \$1,500,000 of original issue discount. The Napo December 2016 Notes and the Napo July 2017 Notes mature on December 30, 2019 and bear interest at 10% with interest due each six-month period after December 30, 2016. On June 30, 2017, the accrued interest of \$125,338 was added to principal of the Napo December Notes, and the new principal balance became \$2,625,338. Interest may be paid in cash or in the stock of Jaguar per terms of the note purchase agreement. In each one year period beginning December 30, 2016, up to one-third of the principal and accrued interest on the notes may be converted into the common stock of the merged entity at a conversion price of \$0.925 per share. The Company assumed these convertible notes at fair value of \$11,161,000 as part of the Napo Merger. The \$1,035,661 difference between the fair value of the notes and the principal balance was being amortized over the twenty-nine (29) month period from July 31, 2017 to December 31, 2019. Interest expense is paid every nine months through the issuance of common stock. On March 16, 2018, \$534,775 of interest accrued through January 31, 2018 and \$169,950 of certain legal expenses were paid through the issuance of 285,694 shares of the Company's common stock. In August 2018, the Company paid \$479,808 of accrued interest through July 31, 2018 with the issuance of 320,743 shares of the Company's common stock. In January 2019, \$446,729 of accrued interest was paid through the issuance of 1,382,636 shares of the Company's common stock. At March 31, 2019 and December 31, 2018, the unamortized balance of the convertible note payable was \$10,446,751 and \$10,553,888, respectively.

Notes Payable

As of March 31, 2019 and December 31, 2018, the net Jaguar short-term notes payable was as follows:

	March 31, 2019 (unaudited)	December 31, 2018
December 2017 note payable	\$ 862,172	\$ 1,673,237
February 2018 note payable	315,123	2,359,750
March 2018 note payable	—	1,147,870
March 2019 note payable	800,000	—
	<u>\$ 1,977,295</u>	<u>\$ 5,180,857</u>
Less: unamortized discount and debt issuance costs	(718,749)	(335,282)
Net note payable obligation	<u>\$ 1,258,546</u>	<u>\$ 4,845,575</u>

December 2017 Note

On December 8, 2017, the Company entered into a securities purchase agreement (the "Securities Purchase Agreement") with CVP pursuant to which the Company issued a promissory note (the "Note") in the aggregate principal amount of \$1,587,500 for an aggregate purchase price of \$1,100,000. The Note carries an original issue discount of \$462,500, and the initial principal balance also includes \$25,000 to cover CVP's transaction expenses. The Company will use the proceeds for general corporate purposes. The Note bears interest at the rate of 8% per annum and matures on August 26, 2019.

On August 2, 2018, the Company and CVP amended the December 2017 Note agreement, extending the maturity date from September 8, 2018 to August 26, 2019, and limiting the aggregate amount that CVP is permitted to redeem on a monthly basis to \$500,000, which amount is the maximum aggregate amount for the Notes collectively. This amendment resulted in the Company accounting for the transaction as a troubled debt restructuring, under which the carrying amount of the note payable remained unchanged but interest expense is computed using a new effective rate

that equates the present value of the future cash payments specified by the new terms with the carrying amount of the note. The principal balance of the note is included in notes payable in the current liabilities section of the condensed consolidated balance sheet.

Between October 2018 and December 2018, the Company and CVP renegotiated the terms of the December 2017 Note agreement such that CVP agreed not to make any redemptions of the Note until March 2019. In consideration of this standstill arrangement, the Company paid CVP a total standstill fee of \$499,403 for all four CVP Notes. The standstill fee allocated to the December 2017 Note was \$141,737, of which \$85,737 increased the principal balance and \$56,000 was paid in cash. These modifications in whole represented four separate restructurings of the December 2017 Note agreement, resulting in two troubled debt restructurings accounted for under ASC 470-60 and two modifications accounted for under ASC 470-50. For the two restructurings resulting in troubled debt restructurings, the changes were accounted for prospectively and a new effective interest rate was determined that equated the present value of the future cash payments specified by the new terms with the carrying amount of the Note. For the two modifications that resulted in modification accounting, a new effective rate was determined at the date of modification that equated the revised cash flows to the carrying amount of the Note.

In March 2019, the Company and CVP amended the December 2017 Note agreement such that the Company prepaid principal and accrued interest of \$811,065 and \$178,755, respectively, in shares of the Company's common stock. The exchange of debt for common stock was considered a substantial change to the Note and therefore the exchange resulted in extinguishment accounting and a corresponding extinguishment loss of \$243,419. At March 31, 2019, the net carrying value of the December 2017 Note was \$862,172. At December 31, 2018, the net carrying value of the December 2017 Note was \$1,548,829.

February 2018 Note

On February 26, 2018, the Company entered into a securities purchase agreement with CVP, pursuant to which the Company issued to CVP a promissory note in the aggregate principal amount of \$2,240,909 for an aggregate purchase price of \$1,560,000. The Note carries an original issue discount of \$655,909, and the initial principal balance also includes \$25,000 to cover CVP's transaction expenses. The Company will use the proceeds for general corporate purposes and working capital. The Note bears interest at the rate of 8% per annum and matures on August 26, 2019.

Between October 2018 and December 2018, the Company and CVP renegotiated the terms of the February 2018 Note agreement such that CVP agreed not to make any redemptions of the Note until March 2019. In consideration of this standstill arrangement, the Company paid CVP a total standstill fee of \$499,403 for all four CVP Notes. The standstill fee allocated to the February 2018 Note was \$198,841, of which \$118,841 increased the principal balance and \$80,000 was paid in cash. These modifications in whole represented four separate restructurings of the February 2018 Note agreement, resulting in a debt extinguishment accounted for under ASC 470-50, two troubled debt restructurings accounted for under ASC 470-60 and a debt modification accounted for under ASC 470-50. For the debt extinguishment, the Company recorded an extinguishment loss of \$102,296. For the two troubled debt restructurings, the changes were accounted for prospectively and a new effective interest rate was determined that equated the present value of the future cash payments specified by the new terms with the carrying amount of the Note. For the modification that resulted in modification accounting, a new effective rate was determined at the date of modification that equated the revised cash flows to the carrying amount of the Note.

In March 2019, the Company and CVP amended the February 2018 Note agreement such that the Company prepaid principal and accrued interest of \$2,044,627 and \$203,866, respectively, in shares of the Company's common stock. The exchange of debt for common stock was considered a substantial change to the Note and therefore the exchange resulted in extinguishment accounting and a corresponding extinguishment loss of \$487,865. At March 31, 2019, the net carrying value of the February 2018 Note was \$315,123. At December 31, 2018, the net carrying value of the February 2018 Note was \$2,290,865.

March 2018 Note

On March 21, 2018, the Company entered into a securities purchase agreement with CVP, pursuant to which the Company issued to CVP a promissory note in the aggregate principal amount of \$1,090,341 for an aggregate purchase price of \$750,000. The Note carries an original issue discount of \$315,341, and the initial principal balance also includes \$25,000 to cover CVP's transaction expenses. The Company will use the proceeds to fully repay certain prior secured and unsecured indebtedness. The Note bears interest at the rate of 8% per annum and matures on September 21, 2019.

Between October 2018 and December 2018, the Company and CVP renegotiated the terms of the March 2018 Note agreement such that CVP agreed not to make any redemptions of the Note until March 2019. In consideration of this standstill arrangement, the Company paid CVP a total standstill fee of \$499,403 for all four CVP Notes. The standstill fee allocated to the March 2018 Note was \$95,529, of which \$57,529 increased the principal balance and \$38,000 was paid in cash. These modifications in whole represented four separate restructurings of the March 2018 Note agreement, resulting in a debt extinguishment accounted for under ASC 470-50, two troubled debt restructurings accounted for under ASC 470-60, and a debt modification accounted for under ASC 470-50. For the debt extinguishment, the Company recorded an extinguishment loss of \$223,824. For the two troubled debt restructurings, the changes were accounted for prospectively and a new effective interest rate was determined that equated the present value of the future cash payments specified by the new terms with the carrying amount of the Note. For the modification that resulted in modification accounting, a new effective rate was determined at the date of modification that equated the revised cash flows to the carrying amount of the Note.

Between January 2019 and March 2019, the Company and CVP amended the March 2018 Note agreement such that the Company prepaid principal and accrued interest of \$1,050,114 and \$85,681, respectively, in shares of the Company's common stock. These exchanges in whole represented four separate prepayments of principal and accrued interest, resulting in a three debt extinguishments and one debt modification accounted. For the debt extinguishments, the Company recorded an aggregate extinguishment loss of \$1,210,676. For the modification, a new effective rate was determined at the date of modification that equated the revised cash flows to the carrying amount of the Note. At March 31, 2019, the March 2018 Note had been fully extinguished. At December 31, 2018, the net carrying value of the March 2018 Note was \$1,005,880.

March 2019 Bridge Notes

In March 2019, the Company began entering into securities purchase agreements with selected accredited investors, pursuant to which the Company may issue up to \$5.5 million aggregate principal amount of promissory notes to such Investors. As an inducement for entering into the Securities Purchase Agreement, each Investor also received warrants exercisable for shares of common stock.

Upon the close of initial offering on March 18, 2019, the Company issued two short-term Promissory Notes of \$500,000 and \$300,000. The Notes bear interest at the rate of 12% per annum and mature in July 2019. Concurrent to issuing the Notes, the Company issued to each Noteholder a warrant pursuant to which the number of warrant shares is equal to 125% of the Note principal, divided by the exercise price. The exercise price is either (i) the price the Company issues common shares in its next public offering subject to a registration statement or (ii) if no such offering is consummated by the four-month maturity date of the Notes, then the exercise price is equal to the closing price of the Company's common stock on the Notes four-month maturity date. The warrants for the \$500,000 and \$300,000 notes had an issuance date fair value of \$557,946 and \$334,767, respectively. At March 31, 2019, the net carrying value of the March 2019 notes was \$81,249, or principal of \$800,000 offset by a discount of \$718,749.

Long-term Debt

On March 23, 2018, the Company paid off the remaining \$689,345 of principal, \$4,471 of interest, and the end-of-term payment of \$600,000 in cash with proceeds from the March 23, 2018 equity financing. Interest expense on the long-term debt was \$0 and \$99,300 for the three months ended March 31, 2019 and 2018, respectively.

Warrants

A summary of the outstanding warrant shares exercisable into shares of the Company's common stock for the three months ended March 31, 2019 and for the year ended December 31, 2018 is as follows:

	Three Months Ended March 31, 2019	Year Ended December 31, 2018
	(unaudited)	
Warrants outstanding, beginning balance	2,427,653	321,314
Issuances	2,638,412	2,166,588
Expirations and cancellations	(38,570)	(60,249)
Warrants outstanding, end of period	<u>5,027,495</u>	<u>2,427,653</u>

November 2016 Series A Warrants

In November 2016, the Company entered into a Securities Purchase Agreement with certain institutional investors pursuant to which the Company issued an aggregate of 111,111 shares of the Company's common stock. The investors also received warrants to purchase up to an aggregate of 111,111 shares of the Company's common stock, at an exercise price of \$11.25 per share, or the Series A Warrants, and the Placement Agent received warrants to purchase 8,889 shares of our common stock in lieu of cash for service fees with the same terms as the investors. The Series A warrants and placement agent warrants were initially valued using the Black-Scholes warrant pricing model using the following assumptions: 111,111 warrant shares with a strike price of \$11.25 per share and an expiration date of May 29, 2022; and 8,889 warrant shares to the placement agent with a strike price of \$11.25 and an expiration date of May 29, 2022; the expected life is 5.5 years, the volatility was 71.92% and the risk free rate was 1.87%. The warrants had an issuance date fair value of \$756,000 and were classified as a liability. As of March 31, 2019 and December 31, 2018, the warrant liability was valued at \$10,994 and \$7,388, respectively. The change of \$3,606 was recorded as a loss in the Company's statements of operations (see Note 3).

August 2018 Financing Warrants

In August 2018, in consideration of services provided, the Company issued a warrant to purchase 30,000 shares of common stock which were exercisable only in the event that the Company raised new financing of at least \$3 million, and expired five years from the date of issuance. The warrants were valued at \$17,582 using the Black-Scholes option pricing model as follows: exercise price of \$1.06 per share, stock price of \$1.06 per share, expected life of five years, volatility of 126%, and a risk-free rate of 3.83%. The warrants were classified in stockholders' equity. In October 2018, in a public offering, the Company met the \$3 million new financing threshold and the warrants became exercisable.

August 2018 License Transaction Warrants

In August 2018, in consideration of services provided, the Company issued a warrant the exercise of which was contingent upon either (i) the Company consummating a Licensing Transaction within six months of August 2018, the occurrence of which would result in the warrant becoming immediately exercisable for 66,667 shares of common stock, or (ii) the Company consummating a Licensing Transaction after six months and within twelve months of August 2018, the occurrence of which would result in the warrant becoming immediately exercisable for 33,333 shares of common stock. The warrant was valued at \$6,312 using the Black-Scholes option pricing model as follows: exercise price of

\$1.06 per share, stock price of \$1.06 per share, expected life of five years, volatility of 126%, and a risk-free rate of 3.83%. The warrants were classified in stockholders' equity.

October 2018 Underwriter Warrants

In October 2018, in consideration of services provided leading up to the Company's October 2018 public offering, the Company issued warrants to various service providers to purchase an aggregate of 1,200,000 shares of common stock at an exercise price of \$0.75 per common share. The warrants were valued at \$611,286 using the Black-Scholes option pricing model as follows: exercise price of \$0.75 per share, stock price of \$0.59 per share, expected life of five years, volatility of 138%, and a risk-free rate of 2.51%. The warrants were classified as liabilities pursuant to ASC 815-40 as there was potential cash settlement. As of March 31, 2019 and December 31, 2018, the warrant liability was valued at \$274,018 and \$212,988, respectively. The change of \$61,030 was recorded as a loss in the Company's statements of operations.

March 2019 Ladenburg Warrants

In March 2019, in consideration of services provided in the Company's March 2019 public offering of 1,331,332 common shares, the Company issued to Ladenburg Thalmann & Co. warrants to purchase an aggregate of 52,253 shares of common stock at an exercise price of \$0.25 per common share. The warrants were valued at \$13,028 using the Black-Scholes option pricing model as follows: exercise price of \$0.25 per share, stock price of \$0.27 per share, expected life of five years, volatility of 146%, and a risk-free rate of 2.21%. The warrants were classified in stockholders' equity.

March 2019 LOC Warrants

In March 2019, in consideration of a letter of credit cancellation related to the Company's office lease, the Company issued a warrant to purchase warrant shares equal to 75% of the \$122,000 principal amount of the Letter of Credit, divided by the exercise price. The exercise price is either (i) the price the Company issues common shares in its next public offering subject to a registration statement or (ii) if no such offering is consummated by the four-month maturity date of the warrant, then the exercise price is equal to the closing price of the Company's common stock on the warrants four-month anniversary date. The warrants were classified as liabilities pursuant to ASC 480-10 as at their issuance date settlement is in a variable number of the Company's common stock worth a fixed amount, a feature that does not represent a residual interest. The warrants were initially valued at \$116,297 using the Black-Scholes option pricing model as follows: exercise price of \$0.25 per share, stock price of \$0.28 per share, expected life of five years, volatility of 146%, and a risk-free rate of 2.23%. As of March 31, 2019, the warrant had a fair value of \$116,297.

March 2019 Promissory Note Warrants

In March 2019, concurrent to entering into Promissory Notes of \$500,000 and \$300,000, the Company issued to the two Noteholders warrants to purchase warrant shares equal to 125% of the Note principal, divided by the exercise price. The exercise price is either (i) the price the Company issues common shares in its next public offering subject to a registration statement or (ii) if no such offering is consummated by the four-month maturity date of the Notes, then the exercise price is equal to the closing price of the Company's common stock on the Notes four-month maturity date.

The warrant for the \$500,000 and \$300,000 Promissory Notes were valued at \$557,946 and \$334,767, respectively, using the Black-Scholes option pricing model as follows: contingent exercise price of \$0.47 per share, stock price of \$0.47 per share, expected life of five years, volatility of 146%, and a risk-free rate of 2.42%. The warrants were classified as liabilities pursuant to ASC 480-10 as at their issuance date their settlement is in a variable number of the Company's common stock worth a fixed amount, a feature that does not represent a residual interest. As of March 31, 2019, the warrant for the \$500,000 and \$300,000 Promissory Notes had a fair value of \$546,334 and \$327,800, respectively. The change of \$18,579 was recorded as a gain in the Company's condensed consolidated statements of operations.

8. Convertible Preferred Stock

In March 2018, the Company entered into a stock purchase agreement with Sagard Capital Partners, L.P. pursuant to which the Company, in a private placement, agreed to issue and sell to Sagard 5,524,926 shares of the Company's Series A convertible participating preferred stock, \$0.0001 par value per share, for an aggregate purchase price of \$9,199,002. Each share of preferred stock is initially convertible into nine shares of common stock at the option of the holder at an effective conversion price of \$2.775 per share, provided that, at any time prior to the time the Company obtains stockholder approval, as required pursuant to Nasdaq Rule 5635(b) any conversion of Preferred Stock by a holder into shares of the common stock would be prohibited if, as a result of such conversion, the holder, together with such holder's attribution parties, would beneficially own more than 19.99% of the total number of shares of the common stock issued and outstanding after giving effect to such conversion. Subject to certain limited exceptions, the shares of Preferred Stock cannot be offered, pledged or sold by Sagard for one year from the date of issuance. The conversion price is subject to certain adjustments in the event of any stock dividend, stock split, reverse stock split, combination or other similar recapitalization.

Holders of the Series A shares are entitled to participate equally and ratably with the holders of common stock shares in all dividends paid and distributions made to the holders of the common stock as if, immediately prior to each record date of the common stock, the shares of Series A then outstanding were converted into shares of common stock.

In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company or deemed liquidation event, the holders of Series A shares then outstanding shall be entitled to be paid in cash out of the assets of the Company before any payment shall be made to the holders of common stock or shares of any series or class of preferred or other capital stock then outstanding that by its terms is junior to the Series A in respect of the preferences as to distributions and payments upon such liquidation event by reason of their ownership, an amount per share of Series A equal to one times the Series A original issue price.

The redemption and liquidation value of the series A preferred stock is \$12,738,822 and \$9,199,002 respectively, as of March 31, 2019 and December 31, 2018. If a Redemption Event occurs as of the Measurement Date (the later of April 30, 2021 and the date on which the Company files its Form 10-Q for the three months ending March 31, 2021, but in no event later than September 30, 2021), the holders of at least a majority of the shares of Series A then outstanding may require the Company to redeem all Series A shares at a per share purchase price equal to \$2.3057; any one of the following conditions can result in a Redemption Event that is not solely within the Company's control: Revenues attributable to the Mytesi product for the six-month period ended March 31, 2021 are less than \$22.0 million or the average VWAP for the Company's common stock for the 30 days prior to a Measurement Date is less than \$1.00.

The effective conversion price is \$2.775 per share while the fair value of the Company's common stock at the commitment date was \$3.075 per share based on the closing price of common stock on March 23, 2018. As a result, the Company determined that there is a Beneficial Conversion Feature ("BCF") amounting to approximately \$995,000, which is computed by taking the difference between the closing price of the stock on March 23, 2018 and the conversion price multiplied by the as if converted 3,314,956 shares (5,524,926 preferred shares multiplied by the conversion factor of .6). The Company's Series A Preferred Stock does not have a stated conversion date and are immediately convertible at the issuance date. Based on the guidance above, the Company recorded a deemed dividend charge of \$995,000 for the accretion of the discount on the Series A Preferred Stock. The deemed dividend was a non-cash transaction and was reflected below net loss to arrive at net loss available to common stockholders on the Company's condensed consolidated statements of operations for the three months ended March 31, 2018.

In March 2019, the Company and Sagard Capital Partners, L.P. amended certain terms of the agreement, such that the conversion price was adjusted to \$0.2775 per share. The Company determined that the amendment represented an immaterial modification.

The preferred stock has been classified outside of stockholders' equity in accordance with authoritative guidance for the classification and measurement of potentially redeemable securities.

9. Stockholders' Equity

Common Stock

On May 18, 2018, the stockholders of Jaguar approved at the 2018 Annual Meeting of Stockholders of the Company and the Board approved, in accordance with the authority granted by the Company's stockholders at the Annual Meeting, a 1-for-15 reverse stock split of the Company's issued and outstanding shares of common stock. On May 29, 2018, the Company filed the Certificate of Second Amendment to its Certificate of Incorporation with the Secretary of State of the State of Delaware to effect the Reverse Stock Split, effective June 1, 2018.

On May 18, 2018, the stockholders of the Company approved at the Annual Meeting a proposal to decrease the number of authorized shares of common stock to 150,000,000 shares, contingent upon the approval of the Reverse Stock Split. On June 1, 2018, the Company filed a certificate of third amendment (the "Third Amendment") to its certificate of incorporation, ("COI"), with the Secretary of State of the State of Delaware to decrease the total number of authorized shares of common stock so that the total number of the shares that the Company has authority to issue is 210,000,000 shares, of which 150,000,000 shares are common stock, 50,000,000 are non-voting common stock and 10,000,000 shares are "blank check" preferred stock.

As of March 31, 2019 and December 31, 2018, the Company had reserved shares of common stock for issuance as follows:

	March 31, 2019 (unaudited)	December 31, 2018
Options issued and outstanding	2,843,754	2,944,148
Inducement options issued and outstanding	208,865	208,865
Options available for grant under stock option plans	809,084	162,892
RSU awards issued and outstanding	392,904	392,904
Warrants issued and outstanding	5,027,495	2,427,653
Convertible notes	759,396	759,396
Preferred Convertible Stock	33,149,556	3,314,956
Total	<u>43,191,054</u>	<u>10,210,814</u>

10. Stock Incentive Plans

2013 Equity Incentive Plan

Effective November 1, 2013, the Company's board of directors and sole stockholder adopted the Jaguar Health, Inc. 2013 Equity Incentive Plan (the "2013 Plan"). The 2013 Plan allows the Company's board of directors to grant stock options, restricted stock awards and restricted stock unit awards to employees, officers, directors and consultants of the Company. Following the effective date of the IPO and after effectiveness of any grants under the 2013 Plan that were contingent on the IPO, no additional stock awards will be granted under the 2013 Plan. Outstanding grants continue to be exercisable, however any unissued shares under the plan and any forfeitures of outstanding options do not rollover to the 2014 Stock Incentive Plan. As of March 31, 2019, there were 33,769 options outstanding.

2014 Stock Incentive Plan

In May 2015, the Company adopted the Jaguar Health, Inc. 2014 Stock Incentive Plan ("2014 Plan"). The 2014 Plan provides for the grant of options, restricted stock and restricted stock units to eligible employees, directors and consultants to purchase the Company's common stock. The 2014 Plan provides for automatic share increases on the first

day of each fiscal year in the amount of 2% of the outstanding number of shares of the Company's common stock on last day of the preceding calendar year. The 2014 Plan replaced the 2013 Plan except that all outstanding options under the 2013 Plan remain outstanding until exercised, cancelled or expiration. As of March 31, 2019, there were 2,809,985 options outstanding and 809,084 options available for grant.

Stock Options and Restricted Stock Units ("RSUs")

The following table summarizes incentive plan activity for the three months ended March 31, 2019 (*unaudited*):

	Shares Available for Grant	Stock Options Outstanding	RSUs Outstanding	Weighted Average Stock Option Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value*
Outstanding at December 31, 2018	162,892	2,944,148	392,904	\$ 5.81	9.24	\$ —
Additional shares authorized	545,797	—	—	—	—	—
Options granted	(4,800)	4,800	—	0.25	—	—
Options cancelled	105,195	(105,194)	—	5.36	—	—
Outstanding at March 31, 2019	<u>809,084</u>	<u>2,843,754</u>	<u>392,904</u>	<u>\$ 6.01</u>	<u>9.00</u>	<u>\$ —</u>
Exercisable at March 31, 2019		<u>1,130,584</u>		<u>\$ 8.95</u>	<u>8.82</u>	<u>\$ —</u>
Vested and expected to vest at March 31, 2019		<u>2,789,671</u>		<u>\$ 6.01</u>	<u>9.00</u>	<u>\$ —</u>

* Fair market value of JAGX common stock on March 31, 2019 was \$0.28 per share.

The intrinsic value is calculated as the difference between the exercise price of the underlying options and the fair market value of the Company's common stock for options that were in-the-money.

The weighted average grant date fair value of stock options granted was \$0.25 and \$2.55 per share during the three months ended March 31, 2019 and 2018, respectively.

The number of options that vested in the three months ended March 31, 2019 and 2018 was 523,602 shares and 235,026 shares, respectively. The grant date weighted average fair value of options that vested in the three months ended March 31, 2019 and 2018 was \$1,870,671 and \$251,060, respectively.

No options were exercised in the three months ended March 31, 2019 and 2018.

The Company granted 209,531 inducement options in fiscal year 2018 to new employees. These options are all non-statutory and were issued outside of the Company's 2014 Stock Plan. The weighted average grant-date fair value of the options was \$1.34 per share.

Stock-Based Compensation

The following table summarizes stock-based compensation expense related to stock options, inducement stock options and RSUs for the three months ended March 31, 2019 and 2018, and are included in the condensed consolidated statements of operations as follows:

	Three Months Ended March 31,	
	2019	2018
	(unaudited)	
Research and development expense	\$ 67,051	\$ 79,714
Sales and marketing expense	33,842	2,385
General and administrative expense	325,615	190,144
Total	<u>\$ 426,508</u>	<u>\$ 272,243</u>

As of March 31, 2019, the Company had \$2,308,797 of unrecognized stock-based compensation expense for options, inducement options and restricted stock units outstanding, which is expected to be recognized over a weighted-average period of 1.62 years.

The estimated grant-date fair value of stock option grants was calculated using the Black-Scholes - Merton option-pricing model using the following weighted-average assumptions:

	Three Months Ended March 31,	
	2019	2018
	(unaudited)	
Weighted-average volatility	108.3 - 108.5 %	87.4 - 92.4 %
Weighted-average expected term (years)	5.81	5.1 - 5.8
Risk-free interest rate	2.5 - 2.6 %	2.6 - 2.7 %
Expected dividend yield	—	—

401(k) Plan

The Company sponsors a 401(k) defined contribution plan covering all employees. There were no employer contributions to the plan from plan inception through December 31, 2018.

11. Net Loss Per Share Attributable to Common Stockholders

The following table presents the calculation of basic and diluted net income (loss) per share of common stock for the periods indicated:

	Three Months Ended March 31,	
	2019	2018
	(unaudited)	
Net loss attributable to common shareholders (basic and diluted)	<u>\$ (8,303,871)</u>	<u>\$ (6,691,637)</u>
Shares used to compute net loss per common share, basic and diluted	34,524,145	8,631,142
Net loss per share attributable to common shareholders, basic and diluted	<u>\$ (0.24)</u>	<u>\$ (0.75)</u>

Basic net loss per share is calculated by dividing net loss by the weighted-average number of common shares outstanding during the period. Diluted net loss per share is computed by dividing net loss by the weighted-average

number of common shares and common share equivalents outstanding for the period. Common stock equivalents are only included when their effect is dilutive. The Company's potentially dilutive securities which include stock options, convertible preferred stock and common stock warrants have been excluded from the computation of diluted net loss per share as they would be anti-dilutive. For all periods presented, there is no difference in the number of shares used to compute basic and diluted shares outstanding due to the Company's net loss position.

The following outstanding common stock equivalents have been excluded from diluted net loss per common share for the three months ended March 31, 2019 and 2018 because their inclusion would be anti-dilutive.

	March 31, 2019	March 31, 2018
	(unaudited)	
Options issued and outstanding	2,843,754	1,043,070
Inducement options issued and outstanding	208,865	—
Warrants to purchase common stock	5,027,495	321,335
Restricted stock units	392,904	392,923
Convertible preferred stock	33,149,556	3,314,956
Convertible debt	759,396	759,396
Total	42,381,970	5,831,680

12. Segment Information

Prior to the merger with Napo, the Company managed its operations as a single segment for the purposes of assessing performance and making operating decisions. The Company reorganized its segments to reflect the change in the organizational structure resulting from the merger with Napo. Post-merger, the Company manages its operations through two reportable segments—human health and animal health. The human health segment is focused on developing and commercializing human products and the ongoing commercialization of Mytesi™, which is approved by the U.S. FDA for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therapy. The animal health segment is focused on developing and commercializing prescription and non-prescription products for companion and production animals.

The Company's reportable segments net revenues and net loss consisted of:

	Three Months Ended March 31,	
	2019	2018
	(unaudited)	
Revenue from external customers		
Human Health	\$ 1,543,121	\$ 583,269
Animal Health	46,612	43,698
Consolidated Totals	<u>\$ 1,589,733</u>	<u>\$ 626,967</u>
Segment profit (loss)		
Human Health	\$ (5,511,092)	\$ (2,899,306)
Animal Health	(2,792,779)	(2,797,331)
Consolidated Totals	<u>\$ (8,303,871)</u>	<u>\$ (5,696,637)</u>

13. Subsequent Events

The Company completed an evaluation of the impact of subsequent events through May 20, 2019, the date these condensed consolidated financial statements were issued.

Oasis Equity Line

On April 1, 2019, the Company entered into another common stock purchase agreement (the “April CSPA”) with Oasis Capital relating to an offering (the “April Equity Line Offering”) of an aggregate of up to 20,000,000 shares (the “April Purchase Shares”) of the Company’s common stock, all of which are being offered in a primary offering consisting of an equity line of credit. Under the terms of the April CSPA, the Company has the right to “put,” or sell, the April Purchase Shares to Oasis Capital for an amount equal to the product of (i) the number of April Purchase Shares set forth in the applicable put notice (minus the deposit and clearing fees associated with such purchase) and (ii) a fixed price of \$0.28 per share or such other price agreed upon between the Company and Oasis Capital. The Company had the option to increase the equity line of credit by an additional 20,000,000 shares of common Stock by notifying Oasis Capital at any time after the effective date of the April CSPA.

Proposed Registered Offering

On May 10, 2019, the Company filed a Registration Statement under the Securities Act of 1933 on Form S-1 with the U.S. Securities and Exchange Commission (SEC) related to a proposed offering of its common stock and warrants up to a proposed maximum aggregate offering price of \$10.0 million dollars. All shares to be sold in the Offering are proposed to be sold by the Company. The Title of the Class of Securities to be registered is as follows: (i) Class A units consisting of Shares of common Stock, par value \$.00001 per share, and Warrants to purchase common stock; (ii) Class B units consisting of Series B Convertible Preferred Stock, par value \$0.0001 per share, and common stock issuable upon conversion of Series B Preferred Stock and Warrants to Purchase common stock. The number of shares to be offered and the price range for the offering have not yet been determined. Ladenburg Thalmann is the sole book-running manager.

A registration relating to these securities has been filed with the SEC but has not yet become effective.

Nasdaq Communication

On May 13, 2019, the Company received written notice from the Staff of the Listing Qualifications Department (the “Staff”) of The Nasdaq Stock Market LLC (“Nasdaq”) indicating that, based upon the Company’s continued non-compliance with the minimum \$1.00 bid price requirement for continued listing on The Nasdaq Capital Market, as set forth in Nasdaq Listing Rule 5550(a)(2) (the “Rule”), as of May 8, 2019, and notwithstanding the Company’s compliance with the quantitative criteria necessary to obtain a second 180-day period within which to evidence compliance with the Rule, as set forth in Nasdaq Listing Rule 5810(c)(3)(A), the Staff had determined to delist the Company’s securities from Nasdaq unless the Company timely requests a hearing before the Nasdaq Hearings Panel (the “Panel”).

The Company intends to timely request a hearing before the Panel, at which hearing the Company will request an extension within which to evidence compliance with all applicable requirements for continued listing on Nasdaq, including compliance with the Rule. The Company’s request for a hearing will stay any suspension or delisting action by the Staff at least pending the ultimate outcome of the hearing. The Company intends to take definitive steps in an effort to evidence compliance with the Rule; however, there can be no assurance that the Panel will grant the Company’s request for continued listing or that the Company will be able to evidence compliance with the Rule within any extension period that may be granted by the Panel.

The Staff’s determination follows the Company’s prior disclosure regarding its receipt of written notice from the Staff dated November 9, 2018, indicating that, because the Company’s bid price had closed below the minimum \$1.00 per share threshold for the previous 30-business day period and in accordance with the Nasdaq Listing Rules, the

Company had been provided a 180-day grace period, through May 8, 2019, to evidence compliance with the Rule. The Staff's prior correspondence further indicated that the Company may be eligible for a second 180-day grace period so long as the Company satisfied the continued listing requirement for market value of publicly held shares and all other requirements for initial listing on The Nasdaq Capital Market, with the exception of the bid price requirement, upon the expiration of the first grace period and the Company provided written notice of its intention to cure the deficiency during the second compliance period by effecting a reverse stock split if necessary. The Company satisfied the quantitative requirements to obtain a second 180-day grace period and submitted the requisite notice to the Staff; however, the Staff determined, based on its exercise of discretion, not to grant the Company a second 180-day grace period.

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

The following discussion and analysis of financial condition and results of operations should be read together with the condensed consolidated financial statements and the related notes included in Item 1 of Part I of this Quarterly Report on Form 10-Q, and with our audited consolidated financial statements and the related notes included in our Annual Report on Form 10-K for the year ended December 31, 2018.

The discussion and analysis below includes certain forward-looking statements related to our research and development and commercialization of our products in the U.S., our future financial condition and results of operations and potential for profitability, the sufficiency of our cash resources, our ability to obtain additional equity or debt financing, if needed, possible partnering or other strategic opportunities for the development of our products, as well as other statements related to the progress and timing of product development, present or future licensing, collaborative or financing arrangements or that otherwise relate to future periods, which are all forward-looking statements as defined by the Private Securities Litigation Reform Act of 1995. These statements represent, among other things, the expectations, beliefs, plans and objectives of management and/or assumptions underlying or judgments concerning the future financial performance and other matters discussed in this document. The words “may,” “will,” “should,” “plan,” “believe,” “estimate,” “intend,” “anticipate,” “project,” and “expect” and similar expressions are intended to connote forward-looking statements. All forward-looking statements involve certain risks, uncertainties and other factors described in our Annual Report on Form 10-K, that could cause our actual commercialization efforts, financial condition and results of operations, and business prospects and opportunities to differ materially from those expressed in, or implied by, those forward-looking statements. We caution investors not to place significant reliance on the forward-looking statements contained in this report. These statements, like all statements in this report, speak only as of the date of this report (unless another date is indicated), and we undertake no obligation to update or revise forward-looking statements.

Overview

We are a commercial stage pharmaceuticals company focused on developing novel, sustainably derived gastrointestinal products on a global basis. Our wholly-owned subsidiary, Napo Pharmaceuticals, Inc. (“Napo”), focuses on developing and commercializing proprietary human gastrointestinal pharmaceuticals for the global marketplace from plants used traditionally in rainforest areas. Our Mytesi (crofelemer) product is approved by the U.S. Food and Drug Administration (“FDA”) for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therapy. In the field of animal health, we are focused on developing and commercializing first-in-class gastrointestinal products for companion and production animals, foals, and high value horses.

Jaguar was founded in San Francisco, California as a Delaware corporation on June 6, 2013. Napo formed Jaguar to develop and commercialize animal health products. Effective as of December 31, 2013, Jaguar was a wholly-owned subsidiary of Napo, and Jaguar was a majority-owned subsidiary of Napo until the close of the Company's initial public offering on May 18, 2015. On July 31, 2017, the merger of Jaguar Animal Health, Inc. and Napo became effective, at which point Jaguar Animal Health's name changed to Jaguar Health, Inc. and Napo began operating as a wholly-owned subsidiary of Jaguar focused on human health and the ongoing commercialization of, and development of follow-on indications for, Mytesi.

We believe Jaguar is poised to realize a number of synergistic, value adding benefits—and an expanded pipeline of potential blockbuster human follow-on indications, a second-generation anti-secretory agent, as well as a pipeline of important animal indications for crofelemer, upon which to build global partnerships. As previously announced, Jaguar, through Napo, now controls commercial rights for Mytesi for all indications, territories and patient populations globally, and crofelemer manufacturing is being conducted at a multimillion-dollar commercial manufacturing facility that has been FDA-inspected and approved. Additionally, several of the drug product candidates in Jaguar's Mytesi pipeline are backed by strong Phase 2 evidence from completed Phase 2 trials.

Mytesi is a novel, first-in-class anti-secretory agent which has a basic normalizing effect locally on the gut, and this mechanism of action has the potential to benefit multiple disorders. Mytesi is in development for multiple possible follow-on indications, including cancer therapy-related diarrhea; orphan-drug indications for infants and children with congenital diarrheal disorders and short bowel syndrome (SBS); supportive care for inflammatory bowel disease (IBD); irritable bowel syndrome (IBS); and as a second-generation anti-secretory agent for use in cholera patients. Mytesi has received orphan-drug designation for SBS.

Financial Operations Overview

On a consolidated basis, we have not yet generated enough revenue to date to achieve break even or positive cash flow, and we expect to continue to incur significant research and development and other expenses. Our net loss was \$8.3 million and \$5.7 million for the three months ended March 31, 2019 and 2018, respectively. As of March 31, 2019, we had a total stockholders' equity of \$6.8 million, an accumulated deficit of \$102.9 million, and cash of \$2.6 million. We expect to continue to incur losses and experience increased expenditures for the foreseeable future as we expand our product development activities, seek necessary approvals for our product candidates, conduct species-specific formulation studies for our non-prescription products, establish API manufacturing capabilities and begin additional commercialization activities.

On January 7, 2019, Jaguar entered into a common stock purchase agreement with Oasis Capital, relating to an offering of an aggregate of up to 5,333,333 shares of common Stock via an equity line of credit. Under the terms of the purchase agreement, the Company has the right to "put," or sell, up to 5,333,333 shares of common stock to Oasis Capital for an amount equal to the product of (i) the number of shares set forth on the applicable put notice (minus the deposit and clearing fees associated with such purchase) and (ii) a fixed price of \$0.75 per share or such other price agreed upon between the Company and Oasis Capital. Jaguar had the option to increase the equity line of credit by an additional 8,000,000 shares of common stock by notifying Oasis Capital at any time after the effective date of the purchase agreement. In March 2019, Jaguar exercised this option. As of March 31, 2019, the Company had sold all of the 5,333,333 shares of common stock of the equity line and all 8,000,000 shares of common stock from the option to Oasis Capital.

Between January through March 31, 2019, Jaguar entered into exchange agreements with Chicago Venture Partners L.P., pursuant to which the Company issued to CVP 18,764,637 shares of common stock, with a fair value of \$6.1 million, in exchange for a reduction of approximately \$4.4 million in the principal amount of the CVP Promissory Notes and \$1.7 million in accrued interest thereon.

In March 2019, Jaguar began entering into securities purchase agreements with selected accredited investors, pursuant to which the Company intends to issue up to \$5.5 million aggregate principal amount of promissory notes to such Investors. As an inducement for entering into the Securities Purchase Agreement, each investor will also receive warrants exercisable for shares of the Company's common stock. As of March 31, 2019, two Notes with an aggregate principal of \$800,000 had been issued.

In March 2019, Jaguar entered into a securities purchase agreement with Oasis Capital pursuant to which Jaguar agreed to issue and sell, in a registered public offering by Jaguar directly to Oasis, an aggregate of 1,331,332 shares of common stock at an offering price of \$0.20 for gross proceeds of approximately \$266,266.

In March 2019, Jaguar issued 1,382,636 shares of common stock in lieu of a cash payment of \$0.4 million in interest expense on notes payable.

Revenues

Our product and collaboration revenue consist of the following:

- Revenues from the sale of our human drug Mytesi, which is sold through distributors and wholesalers.

- Revenues from the sale of our animal products branded as Neonorm Calf and Neonorm Foal. Our Neonorm and Botanical extract products are primarily sold to distributors, who then sell the products to the end customers.
- Revenues from our collaborative agreement with Elanco to license, develop and commercialize Canalevia. This agreement was terminated in January 2018.

See “Results of Operations” below for more detailed discussion on revenues

Cost of Revenue

Cost of revenue consists of direct drug substance and drug product materials expense, direct labor, distribution fees, royalties and other related expenses associated with the sale of our products.

Research and Development Expense

Research and development expenses consist primarily of clinical and contract manufacturing expense, personnel and related benefit expense, stock-based compensation expense, employee travel expense, and reforestation expenses. Clinical and contract manufacturing expense consists primarily of costs to conduct stability, safety and efficacy studies, and manufacturing startup expenses at an outsourced API provider in Italy.

We typically use our employee and infrastructure resources across multiple development programs. We track outsourced development costs by prescription drug product candidate and non-prescription product but do not allocate personnel or other internal costs related to development to specific programs or development compounds.

The timing and amount of our research and development expenses will depend largely upon the outcomes of current and future trials for our prescription drug product candidates as well as the related regulatory requirements, the outcomes of current and future species-specific formulation studies for our non-prescription products, manufacturing costs and any costs associated with the advancement of our line extension programs. We cannot determine with certainty the duration and completion costs of the current or future development activities.

The duration, costs and timing of trials, formulation studies and development of our prescription drug and non-prescription products will depend on a variety of factors, including:

- the scope, rate of progress, and expense of our ongoing, as well as any additional clinical trials, formulation studies and other research and development activities;
- future clinical trial and formulation study results;
- potential changes in government regulations; and
- the timing and receipt of any regulatory approvals.

A change in the outcome of any of these variables with respect to the development of a prescription drug product candidate or non-prescription product could mean a significant change in the costs and timing associated with our development activities.

We expect research and development expense to increase significantly as we add personnel, commence additional clinical studies and other activities to develop our prescription drug product candidates and non-prescription products.

Sales and Marketing Expense

Sales and marketing expenses consist of personnel and related benefit expense, stock-based compensation expense, direct sales and marketing expense, employee travel expense, and management consulting expense. We currently incur sales and marketing expenses to promote Mytesi and Neonorm calf and foal sales.

We expect sales and marketing expense to increase significantly as we develop and commercialize new products and grow our existing Mytesi and Neonorm markets. We will need to add sales and marketing headcount to promote the sales of existing and new products.

General and Administrative Expense

General and administrative expenses consist of personnel and related benefit expense, stock-based compensation expense, employee travel expense, legal and accounting fees, rent and facilities expense, and management consulting expense.

We expect general and administrative expense to increase in order to enable us to effectively manage the overall growth of the business. This will include adding headcount, enhancing information systems and potentially expanding corporate facilities.

Interest Expense

Interest expense consists primarily of non-cash and cash interest costs related to our borrowings.

Critical Accounting Policies and Significant Judgments and Estimates

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles, or U.S. GAAP, requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities, revenues and expenses, and related disclosures in the consolidated financial statements. Critical accounting policies are those accounting policies that may be material due to the levels of subjectivity and judgment necessary to account for highly uncertain matters or the susceptibility of such matters to change, and that have a material impact on financial condition or operating performance. While we base our estimates and judgments on our experience and on various other factors that we believe to be reasonable under the circumstances, actual results may differ from these estimates under different assumptions or conditions. We believe the following critical accounting policies used in the preparation of our consolidated financial statements require significant judgments and estimates. For additional information relating to these and other accounting policies, see Note 2 to our audited consolidated financial statements and the related notes included in our Annual Report on Form 10-K for the year ended December 31, 2018.

Revenue Recognition

The Company recognizes revenue in accordance with ASC Topic 606, *Revenue from Contracts with Customers* (“ASC 606”), which was adopted on January 1, 2018, using the modified retrospective method, which was elected to apply to all active contracts as of the adoption date. Application of the modified retrospective method did not impact amounts previously reported by the Company, nor did it require a cumulative effect adjustment upon adoption, as the Company's method of recognizing revenue under ASC 606 yielded similar results to the method utilized immediately prior to adoption. Accordingly, there was no effect to each financial statement line item as a result of applying the new revenue standard.

Practical Expedients, Elections, and Exemptions

We recognize revenue in accordance with the core principal of ASC 606 or when there is a transfer of control of promised goods or services to customers in an amount that reflects the consideration that we expect to be entitled to in exchange for those goods or services.

We used a practical expedient available under ASC 606-10-65-1(f)4 that permits us to consider the aggregate effect of all contract modifications that occurred before the beginning of the earliest period presented when identifying satisfied and unsatisfied performance obligations, transaction price, and allocating the transaction price to the satisfied and unsatisfied performance obligations.

We also used a practical expedient available under ASC 606-10-32-18 that permits us not to adjust the amount of consideration for the effects of a significant financing component if, at contract inception, the expected period between the transfer of promised goods or services and customer payment is one year or less.

We have elected to treat shipping and handling activities as fulfillment costs.

Additionally, we have elected to record revenue net of sales and other similar taxes.

Contracts

Effective January 16, 2019, Napo Pharmaceuticals, Inc. engaged Cardinal Health as its exclusive third party logistics distribution agent for commercial sales for the Company's Mytesi product and to perform certain other services which include, without limitation, storage, distribution, returns, customer support, financial support, EDI and system access support (Exclusive Distribution Agreement) .

In addition to the terms and conditions of the Agreement, Cardinal Health's purchase of products, and assumption of title therein, is set forth in the Title Model Addendum. The Title Model Addendum states that upon receipt of product at the 3PL Facility (Cardinal Health in La Vergne, Tennessee) from the Company, title and risk of loss for the Mytesi product purchased by Cardinal Health (excluding consigned inventory) shall pass to Cardinal Health, and title and risk of loss for consigned inventory shall remain with Client until purchased by Cardinal Health in accordance with this Addendum. Napo Pharmaceuticals, Inc. considers Cardinal Health the Company's exclusive customer for Mytesi products per the Cardinal Health Exclusive Distribution agreement.

Our Neonorm and Botanical extract products are primarily sold to distributors, who then sell the products to the end customers. Since 2014, we entered into several distribution agreements with established distributors such as Animart, Vedco, VPI, RJ Matthews, Henry Schein, and Stockmen Supply to distribute the Company's products in the United States, Japan, and China. The distribution agreements and the related purchase order together meet the contract existence criteria under ASC 606-10-25-1. Jaguar sells directly to its customers without the use of an agent.

Performance obligations

For the products sold by each of Napo and Jaguar, the single performance obligation identified above is our promise to transfer our Mytesi product to Distributors based on specified payment and shipping terms in the arrangement. Product warranties are assurance type warranties that does not represent a performance obligation.

Transaction price

For both Jaguar and our Napo subsidiary, the transaction price is the amount of consideration to which we expect to collect in exchange for transferring promised goods or services to a customer. The transaction price of Mytesi and Neonorm is the Wholesaler Acquisition Cost ("WAC"), net of discounts, returns, and price adjustments.

Allocate transaction price

For both Jaguar and our Napo subsidiary, the entire transaction price is allocated to the single performance obligation contained in each contract.

Point in time recognition

For both Jaguar and our Napo subsidiary, a single performance obligation is satisfied at a point in time, upon the FOB terms of each contract when control, including title and all risks, has transferred to the customer.

Disaggregation of Product Revenue

Human

Sales of Mytesi are recognized as revenue when the products are delivered to the Cardinal wholesaler. Net revenues from the sale of Mytesi were \$1,543,121 and \$583,269 for the three months ended March 31, 2019 and 2018, respectively.

Animal

The Company recognized Neonorm revenues of \$46,612 and \$43,698 for the three months ended March 31, 2019 and 2018, respectively. Revenues are recognized upon shipment which is when title and control is transferred to the buyer. Sales of Neonorm Calf and Foal to distributors are made under agreements that may provide distributor price adjustments and rights of return under certain circumstances.

Goodwill and Indefinite-lived Intangible Assets

Goodwill

Goodwill is tested for impairment on an annual basis and in-between annual tests if events or circumstances indicate that an impairment loss may have occurred. The test is based on a comparison of the reporting unit's book value to its estimated fair market value. We perform the annual impairment test during the fourth quarter of each fiscal year using the opening condensed consolidated balance sheet as of the first day of the fourth quarter, with any resulting impairment recorded in the fourth quarter of the fiscal year. If the carrying value of a reporting unit's net assets exceeds its fair value, the goodwill would be considered impaired and would be reduced to its fair value.

Indefinite-lived Intangible Assets

Acquired in-process research and development (IPR&D) are intangible assets initially recognized at fair value and classified as indefinite-lived assets until the successful completion or abandonment of the associated research and development efforts. During the development period, these assets will not be amortized as charges to earnings; instead these assets will be tested for impairment on an annual basis or more frequently if impairment indicators are identified. In connection with each annual impairment assessment and any interim impairment assessment in which indicators of impairment have been identified, we compare the fair value of the asset as of the date of the assessment with the carrying value of the asset on the condensed consolidated balance sheet. If impairment is indicated by this test, the intangible asset is written down by the amount by which the discounted cash flows expected from the intangible asset exceeds its carrying value.

Accrued Research and Development Expenses

As part of the process of preparing our condensed consolidated financial statements, we are required to estimate accrued research and development expenses. Estimated accrued expenses include fees paid to vendors and clinical sites in connection with our clinical trials and studies. We review new and open contracts and communicate with applicable internal and vendor personnel to identify services that have been performed on our behalf and estimate the level of service performed and the associated costs incurred for the service when we have not yet been invoiced or otherwise notified of the actual cost for accrued expenses. The majority of our service providers invoice us monthly in arrears for services performed or as milestones are achieved in relation to our contract manufacturers. We make estimates of our accrued expenses as of each reporting date.

We base our accrued expenses related to clinical trials and studies on our estimates of the services received and efforts expended pursuant to contracts with vendors, our internal resources, and payments to clinical sites based on enrollment projections. The financial terms of the vendor agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. Payments under some of these contracts depend on factors such as the successful enrollment of animals and the completion of development milestones. We estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we adjust the related expense accrual accordingly on a prospective basis. If we do not identify costs that have been incurred or if we underestimate or overestimate the level of services performed or the costs of these services, our actual expenses could differ from our estimates. To date, we have not made any material adjustments to our estimates of accrued research and development expenses or the level of services performed in any reporting period presented.

The Company expenses the total cost of a certain long-term manufacturing development contract ratably over the estimated life of the contract, or the total amount paid if greater.

Results of Operations

Comparison of the Three Months ended March 31, 2019 and 2018

	March 31,		Variance	Variance %
	2019	2018		
Product revenue, net	\$ 1,589,733	\$ 626,967	\$ 962,766	154 %
Collaboration revenue	—	177,389	(177,389)	(100)%
Total revenue	<u>1,589,733</u>	<u>804,356</u>	<u>785,377</u>	<u>98% %</u>
Operating Expenses				
Cost of revenue	864,943	464,161	400,782	86 %
Research and development expense	1,421,360	757,866	663,494	88 %
Sales and marketing expense	1,565,124	1,712,190	(147,066)	(9)%
General and administrative expense	3,513,414	2,998,400	515,014	17 %
Total operating expenses	<u>7,364,841</u>	<u>5,932,617</u>	<u>1,432,224</u>	<u>24 %</u>
Loss from operations	(5,775,108)	(5,128,261)	(646,847)	13 %
Interest expense	(547,130)	(602,022)	54,892	(9)%
Other income, net	6,384	297,500	(291,116)	(98)%
Change in fair value of warrant, derivative liability and conversion option liability	(46,057)	(263,854)	217,797	(83)%
Loss on extinguishment of debt	(1,941,960)	—	(1,941,960)	(100)%
Net loss	(8,303,871)	(5,696,637)	(2,607,234)	46 %
Deemed dividend attributable to preferred stockholders	—	(995,000)	995,000	(100)%
Net loss attributable to common stockholders	<u>\$ (8,303,871)</u>	<u>\$ (6,691,637)</u>	<u>\$ (1,612,234)</u>	<u>24 %</u>

Revenue**Gross sales and allowances**

Due to the Company's arrangements, including elements of variable consideration, gross product sales are reduced in order to reflect the expected consideration to arrive at net product sales. Deductions to reduce gross product sales to net product sales in the three months ended March 31, 2019 and 2018 were as follows:

	Three Months Ended March 31,		Variance	Variance %
	2019	2018		
Gross product sales				
Mytesi	\$ 2,143,513	\$ 795,740	\$ 1,347,773	169 %
Neonorm	46,612	43,698	2,914	7 %
Total gross product sales	2,190,125	839,438	1,350,687	161 %
Medicare rebates	(115,820)	—	(115,820)	100 %
Sales discounts - Mytesi	(347,449)	(107,045)	(240,404)	225 %
Sales returns - Mytesi	(32,146)	(30,020)	(2,126)	7 %
Wholesaler fee - Mytesi	(104,977)	(75,406)	(29,571)	39 %
Net product sales	<u>\$ 1,589,733</u>	<u>\$ 626,967</u>	<u>\$ 962,766</u>	<u>154 %</u>

Product revenue

Our gross product revenue of \$2,190,125 and \$839,438 for the three months ended March 31, 2019 and 2018, respectively, reflects revenue from the sale of our human drug Mytesi and our animal products branded as Neonorm Calf and Neonorm Foal.

Human

Sales of Mytesi are recognized as revenue when the products are delivered to the wholesalers. Our gross revenues from the sale of Mytesi were \$2,143,513 and \$795,740 in the three months ended March 31, 2019 and 2018, respectively.

Animal

We recognized Neonorm revenues of \$46,612 and \$43,698 for the three months ended March 31, 2019 and 2018, respectively.

Collaboration Revenue

Collaboration revenue is derived from our January 2017 licensing, development, co-promotion and commercialization agreement with Elanco US Inc. to license, develop and commercialize Canalevia. Elanco terminated the arrangement in January 2018 and all remaining deferred revenue was recognized at that time. We recognized collaboration revenues of \$0 and \$177,389 for the three months ended March 31, 2019 and 2018, respectively.

Cost of Product Revenue

	Three Months Ended March 31,		Variance	Variance %
	2019	2018		
<i>Cost of Product Revenue</i>				
Material cost	\$ 511,852	\$ 229,271	\$ 282,581	123 %
Direct labor	122,996	151,015	(28,019)	(19)%
Distribution fees	89,820	68,950	20,870	30 %
Royalties	55,265	11,496	43,769	381 %
Other	85,010	3,429	81,581	2379 %
Total	\$ 864,943	\$ 464,161	\$ 400,782	86 %

Cost of product revenue increased \$400,782 from \$464,161 in the three months ended March 31, 2018 to \$864,943 for the same period in 2019. The increase in cost of product revenue quarter over quarter was due to increased sales of Mytesi.

Research and Development Expense

	Three Months Ended March 31,		Variance	Variance %
	2019	2018		
<i>R&D:</i>				
Personnel and related benefits	\$ 554,000	\$ 586,133	\$ (32,133)	(5)%
Materials expense and tree planting	30,630	62,009	(31,379)	(51)%
Travel, other expenses	17,914	20,494	(2,580)	(13)%
Clinical and contract manufacturing	600,603	25,470	575,133	2,258 %
Stock-based compensation	67,051	79,714	(12,663)	(16)%
Other	151,162	(15,954)	167,116	(1,047)%
Total	\$ 1,421,360	\$ 757,866	\$ 663,494	88 %

Research and development expense increased \$663,494 from \$757,866 for the three months ended March 31, 2018 to \$1,421,360 for the three months ended March 31, 2019 due primarily to:

- Clinical and contract manufacturing expense increased \$575,133 from \$25,470 in the three months ended March 31, 2018 to \$600,603 in the same period in 2019 primarily due to an increase in contract manufacturing costs for enhanced manufacturing process improvements the Company is developing to reduce the cost of revenue.
- Personnel and related benefits decreased \$32,133 from \$586,133 in the three months ended March 31, 2018 to \$554,000 in the same period in 2019 due to changes in headcount and related salaries.
- Stock-based compensation decreased \$12,663 from \$79,714 in the three months ended March 31, 2018 to \$67,051 in the same period in 2019 primarily due to a decrease in the number of option grants and outstanding options.

- Other expenses, consisting primarily of consulting, formulation and regulatory fees, increased \$167,116 from \$15,954 in the three months ended March 31, 2018 to \$151,161 in the same period in 2019. Consulting expenses increased due to an increase in clinical trial consultants consistent with the temporary termination of clinical trials and an increase in R&D testing consultant work, net of an increase in Napo consulting expense. Formulation expenses were relatively constant in the comparative periods. Regulatory expenses decreased due to the Company receiving a waiver of fee payment from the FDA. Formulation expenses were relatively constant in the comparative periods.

Sales and Marketing Expense

	Three Months Ended March 31,		Variance	Variance %
	2019	2018		
S&M:				
Personnel and related benefits	\$1,041,398	\$ 631,864	\$ 409,534	65 %
Stock-based compensation	33,842	2,385	31,457	1,319 %
Direct Marketing Fees	355,765	1,032,078	(676,313)	(66)%
Other	134,119	45,863	88,256	192 %
Total	<u>\$1,565,124</u>	<u>\$1,712,190</u>	<u>\$(147,066)</u>	<u>(9)%</u>

Sales and marketing expense decreased \$147,066 from \$1,712,190 in the three months ended March 31, 2018 to \$1,565,124 in the same period in 2019 due primarily to:

- Direct marketing and sales expense decreased \$676,313 from \$1,032,078 in the three months ended March 31, 2018 to \$355,765 for the same period in 2019 due to a decrease in marketing programs for Mytesi.
- Personnel and related benefits increased \$409,534 from \$631,864 in the three months ended March 31, 2018 to \$1,041,398 in the same period in 2019 due to the expansion of our sales and marketing headcount in support of Mytesi.
- Stock based compensation expense increased \$31,457 from \$2,385 in the three months ended March 31, 2018 to \$33,842 in the same period in 2019 due to an increase in the volume of new options granted to new and existing employees.

General and Administrative Expense

	Three Months Ended March 31,		Variance	Variance %
	2019	2018		
G&A:				
Personnel and related benefits	\$ 448,444	\$ 406,043	\$ 42,401	10 %
Accounting fees	269,973	249,606	20,367	8 %
Third-party consulting fees and Napo service fees	551,531	397,817	153,714	39 %
Legal fees	758,731	729,570	29,161	4 %
Travel	53,508	74,254	(20,746)	(28)%
Stock-based compensation	325,615	190,144	135,471	71 %
Rent and lease expense	174,968	100,829	74,139	74 %
Public company expenses	187,292	197,528	(10,236)	(5)%
Other	743,352	652,609	90,743	14 %
Total	<u>\$3,513,414</u>	<u>\$2,998,400</u>	<u>\$515,014</u>	<u>17 %</u>

General and administrative expenses increased \$515,014 from \$2,998,400 in the three months ended March 31, 2018 to \$3,513,414 for the same period in 2019 primarily due to increases in legal fees, consulting expense and stock-based compensation expense:

- Other general and administrative expenses increased \$90,742 from \$652,609 in three months ended March 31, 2018 to \$743,351 in the same period in 2019.
- Consulting fees increased \$153,714 from \$397,817 in the three months ended March 31, 2018 to \$551,531 in the same period in 2019. This was due to employee turnover which was mitigated by independent consultants while the Company recruited for full time employees.
- Stock-based compensation expense increased \$135,471 from \$190,144 in the three months ended March 31, 2018 to \$325,615 in the same period in 2019 due to an increase in the volume of option grants to new and existing employees.
- Legal fees increased \$29,161 from \$729,570 in the three months ended March 31, 2018 to \$758,731 in the same period in 2019 mainly due to legal fees incurred in connection with financing activities during the quarter.
- Accounting fees increased by \$20,367 from \$249,606 in the three months ended March 31, 2018 to \$269,973 in the same period in 2019 due to additional complex debt transaction analysis.
- Rent and lease expense increased \$74,139 from \$100,829 in the three months ended March 31, 2018 to \$174,968 in the same period in 2019 is due to contractual increases in rent obligations and a result of amortizing our right of use asset in accordance with the adoption of ASC 842 Leases as of January 1, 2019.
- Public company expenses decreased by \$10,236 from \$197,528 in the three months ended March 31, 2018 to \$187,292 in the same period in 2019.

We expect to incur additional general and administrative expense as a result of operating as a public company and as we grow our business, additional insurance expenses, investor relations activities and other administrative and professional services.

Liquidity and Capital Resources

Sources of Liquidity

We have incurred net losses since our inception. For the three months ended March 31, 2019 and 2018, we had net losses of \$8.3 million and \$5.7 million, respectively, and we expect to incur additional losses in the near-term future. At March 31, 2019 we had an accumulated deficit of \$102.9 million. To date, we have generated only limited revenue, and we may never achieve revenue sufficient to offset our expenses.

We had cash of \$2.6 million as of March 31, 2019. We do not believe our existing cash and cash equivalents will be sufficient to meet our anticipated cash requirements for the next 12 months. Our independent registered public accounting firm has included an explanatory paragraph in its audit report included in our Annual Report on Form 10-K for the years ended December 31, 2018 and 2017 regarding our assessment of substantial doubt about our ability to continue as a going concern. Our condensed consolidated financial statements do not include any adjustments that may result from the outcome of this uncertainty.

We have funded our operations primarily through the issuance of equity and debt financing, in addition to sales of our commercial products. Our funding activities in the three months ended March 31, 2019 were as follows:

- In the first quarter of 2019, we issued 5,333,333 shares of its common stock via an equity line of credit. A further 8,000,000 shares of common stock were issued via an option to increase this equity line of credit. Total proceeds were \$2.5 million.
- Between January through March 31, 2019, we entered into exchange agreements with Chicago Venture Partners L.P., pursuant to which we issued to CVP 18,764,637 shares of common stock, with a fair value of \$6.1 million, in exchange for a reduction of approximately \$4.4 million in the principal amount of the CVP Promissory Notes and \$1.7 million in accrued interest thereon.
- In March 2019, we entered into a securities purchase agreement, pursuant to which we intend to issue up to \$5.5 million in notes payable. As of March 31, 2019, two notes with an aggregate principal amount of \$0.8 million had been issued.
- In March 2019, we entered into a securities purchase agreement, whereby we issued in a public offering 1,331,332 shares to an existing investor, for gross proceeds of approximately \$0.3 million.
- In March 2019, we issued 1,382,636 shares of our common stock in lieu of a cash payment of \$0.4 million in interest expense on notes payable.

We expect our expenditures will continue to increase as we continue our efforts to develop our products and continue development of our pipeline in the near term. We do not believe our current capital is sufficient to fund our operating plan through December 2019. We will need to seek additional funds through public or private equity or debt financings or other sources, such as strategic collaborations. Such financing may result in dilution to stockholders, imposition of debt covenants and repayment obligations or other restrictions that may affect our business. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. We may also not be successful in entering into partnerships that include payment of upfront licensing fees for our products and product candidates for markets outside the United States, where appropriate. If we do not generate upfront fees from any anticipated arrangements, it would have a negative effect on our operating plan. We plan to finance our operations and capital funding needs through equity and/or debt financing as well as revenue from future product sales. However, there can be no assurance that additional funding will be available to us on acceptable terms on a timely basis, if at all, or that we will generate sufficient cash from operations to adequately fund operating needs or ultimately achieve profitability. If we are unable to obtain an adequate level of financing needed for the long-term development and commercialization of our products, we will need to curtail planned activities and reduce costs. Doing so will likely have an adverse effect on our ability to execute on our business plan. These matters raise substantial doubt about the ability of the Company to continue in existence as a going concern within one year after issuance date of the condensed consolidated financial statements.

Cash Flows for the Three Months Ended March 31, 2019 Compared to the Three Months Ended March 31, 2018

The following table shows a summary of cash flows for the three months ended March 31, 2019 and 2018:

	March 31,	
	2019	2018
Total cash used in operations	\$(3,465,574)	\$(9,621,693)
Total cash used in investing activities	—	(6,527)
Total cash provided by financing activities	3,469,161	16,676,677
	<u>\$ 3,587</u>	<u>\$ 7,048,457</u>

Cash Used in Operating Activities

During the three months ended March 31, 2019, net cash used in operating activities of \$3,465,574 resulted from our net loss of \$8,303,871, adjusted for a reduction in the fair value of warrant liabilities of \$46,057, debt discounts and debt issuance costs of \$178,180, stock-based compensation of \$426,508, depreciation and amortization expenses of \$436,880, loss on the extinguishment of debt of \$1,941,960 and of changes in operating assets and liabilities of \$1,808,732.

During the three months ended March 31, 2018, cash used in operating activities of \$9,621,693 resulted from our net loss of \$5,696,637, adjusted by non-cash accretion of end of term payment, debt discounts and debt issuance costs of \$403,824, stock-based compensation of \$272,243, change in the fair value of warrants, conversion option and derivative liability of \$267,854, common stock issued in exchange for services rendered of \$6,425, depreciation and amortization expenses of \$329,561, interest paid on the conversion of debt to equity of \$20,496, net of changes in operating assets and liabilities of \$5,225,459.

Cash Used in Investing Activities

During the three months ended March 31, 2018, cash used in investing activities of \$6,527 consisted of cash used to purchase property and equipment.

Cash Provided by Financing Activities

During the three months ended March 31, 2019, net cash provided by financing activities of \$3,469,161 primarily consisted of \$2,769,161 in net proceeds received from the issuance of common stock and \$800,000 in proceeds received from the issuance of notes payable, offset by \$100,000 in repayments of notes payable.

During the three months ended March 31, 2018, cash provided by financing activities of \$16,676,677 primarily consisted of \$1,305,774 and \$750,100 received in separate PIPE ("Private Investment in Public Entity") financings, \$14.0 million in net proceeds from the Sagard financing, including \$5,000,000 in net proceeds received from the issuance of common stock and \$9,000,002 in net proceeds received from the issuance of convertible preferred stock, \$2,310,000 received in the issuance of non-convertible debt, offset by \$1,689,199 in principal payments of our long-term debt.

JOBS Act

In April 2012, the JOBS Act was enacted. Section 107 of the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this extended transition period, and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Not applicable.

Item 4. Controls and Procedures

Disclosure Controls and Procedures

Our management, Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2019. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are

designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms.

Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not comprehensively effective at the reasonable assurance level as of March 31, 2019. This conclusion was based on the material weakness in our internal control over financial reporting further described below.

Material Weakness

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim consolidated financial statements will not be prevented or detected and corrected on a timely basis. In connection with our preparation of our annual financial statements for the year ended December 31, 2018, we identified a material weakness in our internal control over financial reporting related to staff turnover in our accounting department. We did not maintain a sufficient complement of internal personnel with appropriate knowledge, experience and/or training commensurate with our financial reporting requirements. We relied on outside consulting technical experts and did not maintain adequate internal qualified personnel to properly supervise and review the information provided by the outside consulting technical experts to ensure certain significant complex transactions and technical matters were properly accounted for, specifically with respect to accurately reflecting all potential accrued services on the balance sheet at December 31, 2018. In addition, we identified inadequate internal technical staffing levels and expertise to properly supervise and review the information of the outside consulting technical experts to properly apply ASC 815-40 for liability classification of certain warrants and ASC 470-50 and ASC 470-60 to properly reflect the accounting impact to multiple modifications of the Company's debt instruments. We have concluded that we must implement new or improved controls in our financial statement close process and policies in reviewing information received from our outside consulting technical experts.

Remediation Efforts to Address Material Weakness

We have prepared a preliminary remediation plan to address the underlying causes of the material weakness described above. The preliminary remediation plan includes:

- Reassessing the design and operation of internal controls over financial reporting, including interim and annual accruals cutoff procedures and review procedures related to information received from our outside consulting technical experts;
- Hiring and training of permanent accounting personnel to further educate the staff on the accounting of significant complex transactions and technical accounting matters;
- Increasing staffing levels and expertise to implement this remediation plan

We cannot assure you that the measures we may take in response to this material weakness will be sufficient to remediate such material weakness or to avoid potential future material weaknesses.

Internal Control over Financial Reporting

Based on their evaluation as of the end of the period covered by this Quarterly Report on Form 10-Q, our Chief Executive Officer and Chief Financial Officer have concluded that, as of such date, our disclosure controls and

procedures were not effective due to the existence of a material weakness in the design of our internal controls over financial reporting relating to staff turnover in our accounting department.

A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim consolidated financial statements will not be prevented or detected in a timely basis. We plan to enhance existing controls and design and implement new controls applicable to staff, to ensure that our staff is accurately trained to properly understand and review financial transactions. We plan to devote significant time and attention to remediate the above material weakness as soon as reasonably possible. As we continue to evaluate our controls, we will make the necessary changes to improve the overall design and operation of our controls. We believe these actions will be sufficient to remediate the identified material weakness and strengthen our internal control over financial reporting; however, there can be no guarantee that such remediation will be sufficient. We will continue to monitor the effectiveness of our controls and will make any further changes management determines appropriate.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting that occurred during the period covered by this Quarterly Report on Form 10-Q that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. — OTHER INFORMATION

Item 1. Legal Proceedings.

On July 20, 2017, a putative class action complaint was filed in the United States District Court, Northern District of California, Civil Action No. 3:17-cv-04102, by Tony Plant (the “Plaintiff”) on behalf of shareholders of the Company who held shares on April 12, 2017 and were entitled to vote at the 2017 Special Shareholders Meeting, against the Company and certain individuals who were directors as of the date of the vote (collectively, the “Defendants”), in a matter captioned Tony Plant v. Jaguar Animal Health, Inc., et al., making claims arising under Section 14(a) and Section 20(a) of the Exchange Act and Rule 14a-9, 17 C.F.R. § 240.14a-9, promulgated thereunder by the SEC. The claims alleged false and misleading information provided to investors in the Joint Proxy Statement/Prospectus on Form S-4 (File No. 333-217364) declared effective by the Commission on July 6, 2017 related to the solicitation of votes from shareholders to approve the merger and certain transactions related thereto. The Company accepted service of the complaint and summons on behalf of itself and the United States-based director Defendants on November 1, 2017. The Company has not accepted service on behalf of, and Plaintiff has not yet served, the non-U.S.-based director Defendants. On October 3, 2017, Plaintiff filed a motion seeking appointment as lead plaintiff and appointment of Monteverde & Associates PC as lead counsel. That motion was granted. Plaintiff filed an amended complaint against the Company and the United States-based director Defendants on January 10, 2018. The Defendants filed a motion to dismiss on March 12, 2018, for which oral arguments were held on June 14, 2018. The court dismissed the complaint on September 20, 2018. Plaintiff was entitled to amend the complaint within 20 days from the date of dismissal. On October 10, 2018, Plaintiff amended the complaint to focus on the Company’s commercial strategy in support of Equilevia and the related disclosure statements in the Form S-4 described above. On November 6, 2018, the Defendants moved to dismiss the second amended complaint. The Defendants argue in their motion that the complaint fails to state a claim upon which relief can be granted because the omissions and misrepresentations alleged in the complaint are immaterial as a matter of law. Plaintiff’s memorandum of law in opposition to the Defendants’ motion to dismiss is due on December 21, 2018. If the Plaintiff were able to prove its allegations in this matter and to establish the damages it asserts, then an adverse ruling could have a material impact on the Company. The Company believes that it is not probable that an asset has been impaired or a liability has been incurred as of the date of the condensed consolidated financial statements and the amount of any potential loss is not reasonably estimable.

Other than as described above, there are currently no claims or actions pending against us, the ultimate disposition of which could have a material adverse effect on our results of operations, financial condition or cash flows.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

In January through March 31, 2019, Jaguar entered into exchange agreements with Chicago Venture Partners L.P. pursuant to which the Company issued 18,764,637 shares of common stock in the aggregate to CVP in exchange for a reduction of approximately \$4.37 million in the principal amount of the CVP Notes. The shares of common stock that were exchanged for portions of the secured promissory notes were issued in reliance on the exemption from registration provided under Section 3(a)(9) of the Securities Act.

On March 18, 2019, Jaguar began entering into securities purchase agreements (each, a “Securities Purchase Agreement”) with selected accredited investors (each, an “Investor”), pursuant to which the Company intends to issue up to \$5.5 million aggregate principal amount of promissory notes (collectively, the “Notes”) to such Investors. As an inducement for entering into the Securities Purchase Agreement, each Investor also received warrants exercisable for shares of common stock (the “Investor Warrants”). The offering closed on March 18, 2019, and \$800,000 aggregate principal amount of Notes were issued in offerings and the proceeds from such offerings were paid to the Company.

The offers, sales, and issuances of the securities described above were deemed to be exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act, Regulation D or Regulation S promulgated thereunder as transactions by an issuer not involving a public offering. The recipients of securities in each of these transactions acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these transactions. Each of the

recipients of securities in these transactions was an accredited or sophisticated person and had adequate access, through employment, business or other relationships, to information about us.

Item 6. Exhibits

<u>Exhibit No.</u>	<u>Description</u>
3.1	Third Amended and Restated Certificate of Incorporation of Jaguar Health, Inc. (f/k/a Jaguar Animal Health, Inc.) (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K (No. 001-36714) filed on August 1, 2017).
3.2	Certificate of Second Amendment of the Third Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Form 8-K of Jaguar Health, Inc. filed June 1, 2018, File No. 001-36714).
3.3	Certificate of Third Amendment of the Third Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.2 to the Form 8-K of Jaguar Health, Inc. filed June 1, 2018, File No. 001-36714).
3.4	Certificate of Amendment to the Certificate of Designation of Series A Convertible Participating Preferred Stock (incorporated by reference to Exhibit 3.1 to the Form 8-K of Jaguar Health, Inc. filed March 15, 2019, File No. 001-36714).
4.1	Specimen Common Stock Certificate of Jaguar Health, Inc. (incorporated by reference to Exhibit 4.1 to the Form 8-K of Jaguar Health, Inc. filed June 1, 2018, File No. 001-36714).
4.2	Form of 75% Coverage Promissory Note (incorporated by reference to Exhibit 4.1 to the Form 8-K of Jaguar Health, Inc. filed March 22, 2019, File No. 001-36714).
4.3	Form of 125% Coverage Promissory Note (incorporated by reference to Exhibit 4.2 to the Form 8-K of Jaguar Health, Inc. filed March 22, 2019, File No. 001-36714).
4.4	Form of Common Stock Warrant (incorporated by reference to Exhibit 4.3 to the Form 8-K of Jaguar Health, Inc. filed March 22, 2019, File No. 001-36714).
4.5	Form of Placement Agent Warrant (incorporated by reference to Exhibit 4.1 to the Form 8-K/A of Jaguar Health, Inc. filed March 26, 2019, File No. 001-36714).
4.6	Form of LOC Common Stock Warrant (incorporated by reference to Exhibit 4.1 to the Form 8-K of Jaguar Health, Inc. filed April 4, 2019, File No. 001-36714).
10.1	Common Stock Purchase Agreement, dated January 7, 2019, by and between Jaguar Health, Inc. and Oasis Capital, LLC (incorporated by reference to Exhibit 10.1 to the Form 8-K of Jaguar Health, Inc. filed January 8, 2019, File No. 001-36714).
10.2	Form of Securities Purchase Agreement (incorporated by reference to Exhibit 10.1 to the Form 8-K of Jaguar Health, Inc. filed March 22, 2019, File No. 001-36714).
10.3	Form of Registration Rights Agreement (incorporated by reference to Exhibit 10.2 to the Form 8-K of Jaguar Health, Inc. filed March 22, 2019, File No. 001-36714).
10.4	Securities Purchase Agreement, dated March 24, 2019, by and between Jaguar Health, Inc. and the Investor (incorporated by reference to Exhibit 10.1 to the Form 8-K of Jaguar Health, Inc. filed March 25, 2019, File No. 001-36714).
10.5	Common Stock Purchase Agreement, dated April 1, 2019, by and between Jaguar Health, Inc. and Oasis Capital, LLC (incorporated by reference to Exhibit 10.1 to the Form 8-K of Jaguar Health, Inc. filed April 1, 2019, File No. 001-36714).
10.6	Letter of Credit Cancellation & Warrant Issuance Agreement, dated March 29, 2019, by and between Jaguar Health, Inc. and the letter of credit beneficiary named therein (incorporated by reference to Exhibit 10.1 to the Form 8-K of Jaguar Health, Inc. filed April 4, 2019, File No. 001-36714).
31.1*	Principal Executive Officer's Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Principal Financial Officer's Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification Pursuant to 18 U.S.C. § 1350 (Section 906 of Sarbanes-Oxley Act of 2002).
32.2**	Certification Pursuant to 18 U.S.C. § 1350 (Section 906 of Sarbanes-Oxley Act of 2002).
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation 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

* Filed herewith.

** In accordance with Item 601(b)(32)(ii) of Regulation S-K and SEC Release No. 34-47986, the certifications furnished in Exhibits 32.1 and 32.2 hereto are deemed to accompany this Form 10-Q and will not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 (the “Exchange Act”) or deemed to be incorporated by reference into any filing under the Exchange Act or the Securities Act of 1933 except to the extent that the registrant specifically incorporates it by reference.

SIGNATURE

Pursuant to the requirements 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.

Date: May 21, 2019

JAGUAR HEALTH, INC.

By: /s/ Karen S. Wright
Karen S. Wright
Chief Financial Officer
Principal Financial and Accounting Officer

**PRINCIPAL EXECUTIVE OFFICER'S CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Lisa A. Conte, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Jaguar Health, Inc. for the quarter ended March 31, 2019;
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 Rules 13a-15(f) and 15d-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 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 (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
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.

Date: May 21, 2019

/s/ Lisa A. Conte

Lisa A. Conte
President and Chief Executive Officer
(Principal Executive Officer)

**PRINCIPAL FINANCIAL OFFICER'S CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Karen S. Wright, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Jaguar Health, Inc. for the quarter ended March 31, 2019;
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 Rules 13a-15(f) and 15d-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 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 (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
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.

Date: May 21, 2019

/s/ Karen S. Wright

Karen S. Wright
Chief Financial Officer
(Principal Financial and Accounting Officer)

**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 Jaguar Health, Inc. (the "Company") on Form 10-Q for the quarter ended March 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned officer of the Company certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to such officer's knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange 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.

Date: May 21, 2019

/s/ Lisa A. Conte

Lisa A. Conte
President and Chief Executive Officer
(Principal Executive Officer)

**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 Jaguar Health, Inc. (the "Company") on Form 10-Q for the quarter ended March 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned officer of the Company certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to such officer's knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange 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.

Date: May 21, 2019

/s/ Karen S. Wright

Karen S. Wright
Chief Financial Officer
(Principal Financial and Accounting Officer)
